CHAPTER I

INTRODUCTION

1.1 BACKGROUND

The increase of the Green House Gas emission, which already occurred since the 19th century, provided a very significant impact toward the global warming. The high emission increase caused a very drastic climate change and caused impacts in form of a long dry season, flood, storm, and increase of the seawater level. This caused very large losses to the world population living in the surroundings of the coastal areas and mountain areas in form of the global environment quality decrease as well as threat toward the availability of natural resources in the future.

In accordance with Stern Review (2006), the deforestation and forest degradation provided the contribution of approximately 18% to the global emission and 75% of such amount is from the developing countries. This condition is a serious threat toward the living sources of the local community, function of the river basins as well as the existence of biodiversity. As such, the decrease of the total carbon emission from the forestry sector is important because it is not only supporting the world efforts to limit the increase of the earth temperature of not more than 2 Celcius degree, but it also provides other benefits for the interest of the community, ecosystem and biodiversity.

According to Stern, a quick action to reduce the emission from this sector should immediately be taken. The international support to assist the developing countries in reducing the emission from this sector should also be provided.

Susilo Bambang Yudhoyono, the President of Indonesia, has made the commitment to reduce the green house gas emission of 26% in 2020 from the BAU (*business as usual/*without action plan)[1] emission level. The largest part of this green house gas emission is assumed of originating from the forestry level and land use, as they are the largest emission sources in Indonesia.

[1] Speech of President Susilo Bambang Yudhoyono at the G20 meeting in Pittsburgh, United States of America on 25 September 2009.

The tropical forest in Indonesia is the third widest in the world after Brazil and the Democracy Republic of Congo. However, on the other hand, the forest loss rate is relatively very rapid due to the high deforestation and forest degradation. Therefore, Indonesia has a very important position in making the Reducing Emissions from Deforestation and Degradation Plus, or abbreviated REDD+, program successful.

In order to realize the reduction of the green house gas emission in accordance with the above target, it is necessary to prepare various interventions and action plans in accordance with the climate change mitigation program policy at various ministries/institutions and local governments, among others the Coordinating Ministry of Economy, Ministry of Forestry, Ministry of Energy and Mineral Resources, Ministry of Communication, Ministry of Industry, Ministry of Agriculture, Ministry of Public Works, Ministry of Environment, Meteorology, Climatology and Geophysical Agency, Ministry of Marine and Fishery and Ministry of National Development Planning/Bappenas.

The deforestation issue itself occured under the "Reduction of Emission from Deforestation in Developing Countries (RED)" agenda at the 11th Conference of Parties-COP on the Nations Framework Conventions on Climate Change (UNFCCC) in Montreal in 2005 and was positively responded by many countries. In various forums under UNFCCC, including COP and Subsidiary Body (SB), many parties viewed that the RED scheme should actually involve the participation of all countries. The largest challenge in this issue is how to overcome the national condition differences at each country fairly and proportionally by considering the forestry issue solution approach under the climate convention.

The REDD Plus (REDD+) term occurred at the time of the 13th climate change conference (COP 13) in 2007 in Bali. This term, which is contained in the *Bali Action Plan* paragraph 1 b (iii), was for the first time used in the Ad Hoc Working Group of the Long Term Cooperation Action under the convention at the 6th session in Bonn on 12 June 2009 (footnote of the FCCC/AWGLCA/2009/8 document, 19 May 2009). In this document, the action under paragraph 1 b (iii) *Bali Action Plan* that contains

the issue related to the policy and positive incentive approach on issues related to the reduction of emission caused by the reduction of forest and forest cover damage in the developing countries and the importance of the conservation role, conserved forest management and increase of the forest carbon stock in the developing countries are commonly referred to as REDD+. The REDD+ term is also contained in the *Copenhagen Accord* as the result of the 15th COP meeting in 2009 in Copenhagen.

In order to anticipate the global negotiation in UNFCCC, particularly that is related to REDD+, the Indonesian Government has made the cooperation with several partners to develop the REDD Demonstration Activities (DA). The Indonesian Government feels that it is necessary to draw up the REDD+ National Strategy as the base in carrying out the preparation, implementation, monitoring and evaluation of the program and activities related to REDD+.

The REDD+ National Strategy is basically an inseparable part of the National Mid Term Development Plan (RPJMN) document for 2010-2014 and the National Long Term Development Plan (RPJPN) document for 2005-2025. This REDD+ National Strategy is then clarified into the REDD+ National Action Plan as the working document, which is the base for various Ministries/Institutions as well as Local Governments in the preparation, implementation, monitoring and evaluation of the program and activities for the reduction of emission from the forestry sector and land use. (the agreement is needed from the stakeholders in deciding the position of the National Strategy whether to be included in the Green House Gas National Action Plan or as the carbon credit).

1.2 VISION AND OBJECTIVE

Vision:

Conserved forest management, which contributes to the increase of carbon saving and decrease of the green house gas emission in the framework of the sustainable development.

Objective:

The REDD+ National Strategy in the mid term (until 2010) is intended for the:

- Increase and perfection of the planning, particularly that is related to the spatial structuring, land use, and spatial utilization licensing process at the provincial and regency/city levels.
- The reduction of the Green House Gas emission, particularly from the forestry sector and land change (LULUCF) through the reduction of deforestation and forest degradation equal to ……. Million tons CO2 or …… % from the BAU scenario, and to create a foothold for a more substantial reduction of emission with further investment.
- Increase of carbon stock through conserved forest management activities, forest conservation, restoration of the ecosystem, and forest rehabilitation, equal to ……..tons CO2.
- Improvement of the community welfare by enhancing the participation role and involvement of the community, living inside and in the surroundings of the forest area, in the management of the forest area.
- Improvement of the biological natural resources management through the conservation of the ecosystem with high value, protecting the biodiversities and preserving the river basin function.
- Capacity improvement of the institution and human resources and its funding at the national, provincial and regency/city levels, particularly in the conserved forest management program and conservation of the protected area.

1.3 LEGAL BASE

The legal base that is used to draw up the National Strategy and National Action Plan for REDD+ consists of:

1. Article 4 paragraph (1) of the 1945 Constitution of the Republic of Indonesia;
2. Law Number 6 of 1994 concerning the Ratification of the United Nations Framework Convention on Climate Change;
3. Law Number 41 concerning Forestry;
4. Law Number 17 of 2003 concerning State Finances;

5. Law Number 17 of 2004 concerning the Ratification of the Kyoto Protocol on the United Nations Framework Convention on Climate Change:
6. Law Number 25 of 2004 concerning the National Development Planning System;
7. Law Number 18 of 2004 concerning Plantation;
8. Law Number 17 of 2005 concerning the Long Term Development Plan (RPJP) of 2005-2025;
9. Law Number 31 of 2009 concerning Meteorology, Climatology and Geophysics;
10. Law Number 32 of 2009 concerning Environment Protection and Management;
11. Law Number 41 of 2009 concerning Sustainable Food Land Protection;
12. Government Regulation Number 2 of 2006 concerning the Method of Loan Procurement and/or Grant Receipt and Passing On Of Foreign Loan and/or Grant;
13. Government Regulation Number 26 of 2008 concerning the National Spatial Plan;
14. Government Regulation Number 10 of 2010 concerning the Method of Change of Forest Area Allocation and Function;
15. Government Regulation Number 15 of 2010 concerning Implementation of Spatial Structuring;
16. Government Regulation Number 24 of 2010 concerning Forest Area Use;
17. Presidential Regulation Number 5 of 2010 concerning the National Mid Term Development Plan (RPJMN) of 2010-2014;

1.4 **SCOPE**

The REDD+ National Strategy contains the causes of deforestation and forest degradation and the identification of strategy that is needed in the framework of reducing the emission as well as increase of the carbon absorption and storage from the forest conservation activities, conserved forest management and various efforts to increase the productivity of the production forest and plant forest. Due to the consideration of the existing strategy from the sectors of agricultural, mining and other land use, the scope of the REDD+ National Strategy is equal to LULUCF (*land use, land use change and forestry*).

The REDD+ National Strategy is also the guidance for the ministries/institutions and local governments as well as other stakeholders to prepare the programs that support the implementation of REDD+.

The position of the National Strategy itself is not as part of the *Nationally Appropriate Mitigation Actions – NAMA's*), either that are funded by the domestic as well as the foreign funding, so that this REDD+ activity will be counted as the carbon credit that can be traded with the mechanism agreed upon.

1.5 INTERPRETATION

Considering the various definitions related to RFEDD+, LULUCF and AFOLU, forest, deforestation, degradation, peat and forest area, the REDD+ National Strategy and National Action Plan need to specify the working definitions that are used. It is expected that this specified interpretation becomes the reference in the preparation of the strategies, programs and activities in the REDD+ National Strategy and National Action Plan. A number of interpretations related to REDD+ are as follows:

- **REDD+**.

  The REDD Plus (REDD+) definition is based on the Bali Action Plan paragraph 1 b (iii), namely the policy and positive incentive on issues related to the reduction of emission caused by the decrease of the forest and forest cover damage in the developing countries, conservation role, conserved forest management and increase of forest carbon stock in the developing countries.

- **Forest**

  According to Law Number 41 of 1999, the forest is an ecosystem unity in form of land spread containing biological natural resources, dominated by trees in their association with the environment nature, one and the other are inseparable.

- **Forest Area**. Forest area is a certain area appointed and or determined by the government to maintain its existence as a permanent forest (Law Number 41 of 1999 concerning Forestry).

- **Deforestation**

According to the definition agreed upon by the Indonesian Government and FAO, Deforestation is the change of the forest into another land allocation or long term reduction of the tree canopy cover below the minimum ambient limit of 10 percent. This may occur caused by human or the nature, and FAO added that the temporary elimination of the forest cover for wood harvest is not included in deforestation.

- **Degradation**

  According to FAO, the forest Degradation is the change in the forest, which negatively affects structure and function of stand or site, so that it reduces the capacity to supply production and/or service.

- **LULUCF**.

  LULUCF (*Land use, land use change, and forestry*) is the land and forest use transfer sector that causes the green house gas emission, due to human activities (IPCC).

- **AFOLU**.

  AFOLU (*Agriculture, Forestry and Other Land Use*) are the sectors of Agriculture, Forestry, and Other Land Users that play a role in the green house gas emission. This term is applied in the General Guidelines of Green House Gas Inventory (IPCC Guideline 2006).

- **Lahan Gambut**.

  The peat land is one of the wetland types with quite high organic materials sedimentation (Mitsch & Gosselink, 1986 and Lyon and Carthy, 1995). The peat land has higher capacity to store carbon (*carbon stock*) than the mineral land due to its soil morphology characteristic. The carbon contents below the peat land surface may reach between 300-6.000 t C per hectare. The deeper the peat may cause the more carbon amount that can be stored. The peat land in Sumatera and Kalimantan tends to be deeper compared to the peat land in Papua (BAPPENAS, 2010).

CHAPTER II

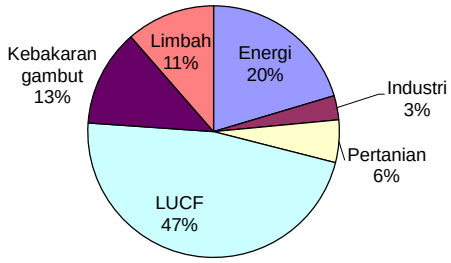
CONDITION AND PROBLEMS ANALYSIS

2.1 EMISSION FROM THE LAND AND FOREST USAGE IN INDONESIA

2.1.1 At National Level

The Forest plays a major role in the global carbon cycle. The forest can act as an emitter or an emission remover. The result of inventorization on national Green House Gas (GHG) of 2000 base year shows that the forestry sector is the GHG emitter (net emitter). The emission mainly comes from deforestation, forest degradation and wildfire, including moss (2nd National Communication, 2009).

Indonesia "Net Emitter"
Emisi GRK Nasional (base year 2000)



Sektor	Gg CO2e
Energi	280938
Industri	42815
Pertanian	75420
LUCF (tidak termasuk kebakaran gambut)	649254
Kebakaran Gambut	172000
Limbah	157328
Total tanpa LUCF	535730
Total dengan LUCF (termasuk kebakaran gambut)	1 356 984

Source: Ministry of Environment, 2009 (Second National Communication)

Picture 1. Forestry Sector Emission Profile

Kebakaran Gambut : Moss Fire
Limbah: Waste
Energi: Energy
Industri: Industry
Pertanian: Agriculture

Sector	Gg CO2e
Energy	280938
Industry	42815
Agriculture	75420

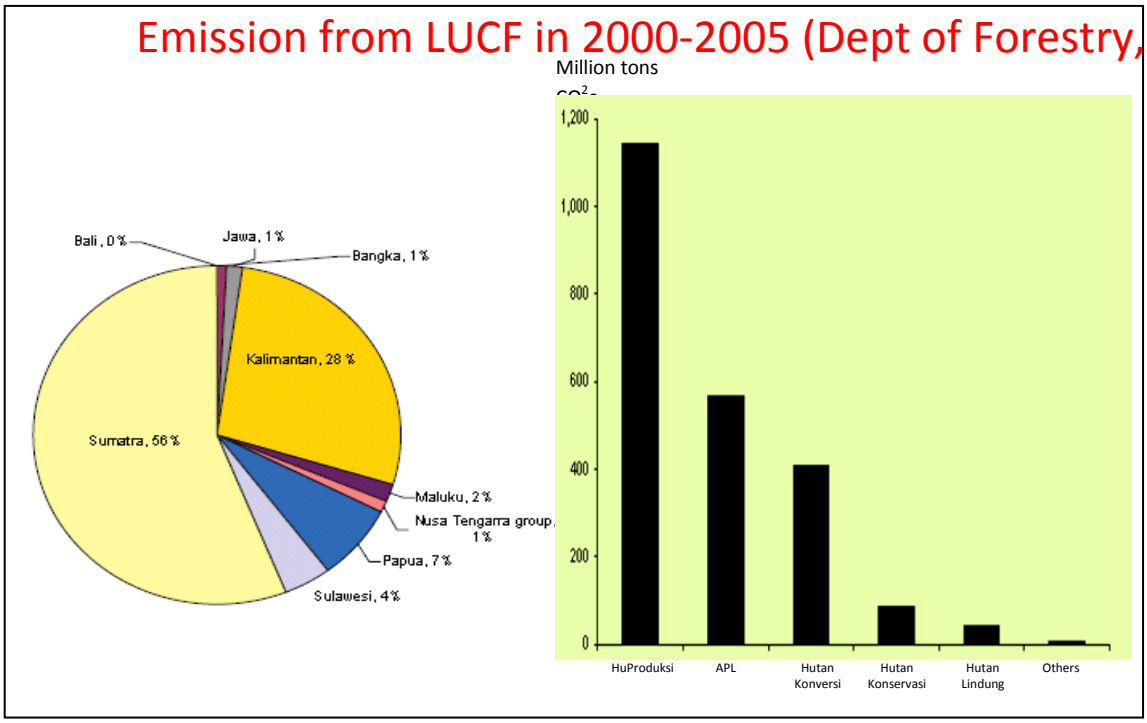
LUCF (excluding moss fire)	649254
Moss fire	172000
Waste	157328
Total without LUCF	535730
Total with LUCF (including moss fire)	1 356 984

Source: Ministry of Environment, 2009 (Second National Communication)

In the year ....., the forestry sector contributed as much as 48% of the national GHG emission. This number is especially high amongst other sectors. In order to ave bigger role in lives on Earth, Indonesia has committed to decreasing the emission level by 26% by 2020 at its own expense with 41% financed by international aid. The forestry sector's roles become very important because it must contribute as much as 14% to decrease emission by 26%. The target specified by the Government must be realized on field and can be measured, reported, made transparent and verified by independent party. The quantification of the attempt to decrease emission must be carried out by means of reducing the sources of emission in the forestry sector, which are distinguished into focus and locus of programs and activities.

2.1.2 At Sub-National Level

Out of the forestry sector's 48% of contribution towards national GHG emission, the emission at sub-national level varies from one island to the other, and also among provinces and regencies. Seen from a broader view, the emission rate came from the Land Use, Land Use Change and Forestry sectors (LULUCF) in 2000-2005, which reached a deforestation rate of 5.45 million ha or an average of 1.1 million ha per year. Aside from deforestation, the GHG of the LULUCF sector also came from the moss field fire and moss land conversion in the forest area for plantations.



Picture 2. Forestry Sector Emission Profile at Sub-National Level

X axis (from left to right): Production Forest, Miscellaneous Usage Area, Conversion Forest, Conservation Forest, Wildlife Reserves, Others

2.2 DEFORESTATION AND FOREST DEGRADATION CONDITIONS

The trigger of deforestation and forest degradation comes from the inside and outside of the forestry sector. From the forestry sector, the trigger of deforestation and forest degradation can be classified into 4 (four) activities: 1) Illegal logging or improper forest management, 2) Forest fire, 3) Changes in the natural forest (mineral soil and moss) for the construction of Industrial Vegetation Forest (HTI) and 4) the weak law enforcement in the forest concession management. Beyond the forestry sector, deforestation and forest degradation can be triggered by the following factors: 1) forest clearing by the people, 2) land fire (non-forest area), 3) expansion of settlement, 4) regional expansion, 5) extensification of plantation (coconut palm, rubber, cacao, coffee), 6) extensification of farm land, 7) opening of fresh water fishery in mangrove forests, 8) increase of pasture land, 9) mining and 10) development of infrastructures.

There might be more factors involved, and basically those can be categorized as symptom/phenomena which causes deforestation and forest degradation. The main cause of deforestation and forest degradation must be studied further considering the high possibility of interconnection between one factor and the other so that the problem can be understood in a more objective and complete manner. The completeness and depth of understanding on this problem highly affects the decision-making process to manage the issue.

2.2.1 Deforestation and Forest Degradation Conditions

Indonesia owns a vast land territorry which is divided into forest area and other usage area as much as 187.787 million hectares. Based on the land or forest coverage, the area covered by forest amounts to 100.740 million hectares, whereas the land area without forest coverage is as much as 87.047 million hectares. According to the existing legal status, the Indonesian territory is divided into 2 functions: forest area with a total of 132.399 million hectares and other usage area with a total of 55.388 million hectares.

Table 2.1. Land Coverage Recalculation Table

Land Coverage	Forest Area		Other Usage Area		Total	
	Area (ha)	%	Area (ha)	(%)	Area (ha)	%
1	2	3	4	5	6	7
Forest	92.328 (Primer= 43,801; (LOA=48,526)	49	8,412	4	100.740	54
Non-forest	40.071	21	56,976	25	87.047	46
Total	132.399	71	55,388	29	187.787	100

Source : Ministry of Forestry, 2008, processed for Landsat Satellite Image 7 ETM+ year 2005/2006

Out of the total 132,399 million hectares of forest area, the forest coverage in the forest area amounts to 92,328 million hectares or 49% of the Indonesian land territory. Meanwhile, the forest area which is not covered by trees amounts to 40.071 million hectares or 21% of the Indonesian land area. The forest coverage area in the other usage area amounts to 8.412 million hectares or 4% of the Indonesian

territory. Meanwhile, area which is not covered by trees amounts to 49,976 million hectares or 25% of the total Indonesian territory.

Based on the data obtained by the Ministry of Forestry in 2006, the changes in land coverage from forest to deforested area amount to 42.263 million hectares. Most area (36%) changed to weeds. 26% changed to farm land, whereas the rest consists of bushes, wetlands, housing and other usages.

The level of deforestation every year in Indonesia varies from one period to the next. During the 1990-1996, the average deforestation rate in Indonesia was 1.87 million hectares. This rate continued to increase rapidly during the period of 2000-2003 and continued to increase by 1.17 million hectares per annum during the 2003-2006 period. From the result of data history analysis, the deforestation rate in Indonesia can be projected to 1.125 million hectares per annum. In case of forest degradation, based on the Ministry of Forestry's data in 2010, the average forest degradation rate in indonesia caused by logging activities is .626 million hectares per annum.

2.2.2 GHG Emission Potentials from the Agricultural Sector

(there must be a calculation of emission from forest conversion to farm land). The agricultural sector is generally the sector which will be significantly impacted by the climate change, especially in terms of crop. However, the agricultural sector also produces GHG emission. Without Action Plan (BAU) on non-moss rice field will result in a CH4 and N2O in puddle condition (anaerobics), whereas the rice on moss land emits CH4. Since plantations on moss field only need anaerobic condition, the main GHG emission released is CO2. The cumulative GHG in the agricultural sector is estimated to be 117 million tons of CO2e without any Action Plan (BAU). The agricultural sector also has

Table 2.2. Estimated Needs for Main Crops in 2020.

No.	Commodity	Estimated Needs in 2020 (million ton)
1	Rice	37.021*
2	Corn	18.940**
3	Soybean	2.381**
4	Sugar	2.530

* Rice, equal to 68.8 million ton gkg. **dried seeds

the potentials to donate significant level of carbon emission if there are new land clearings in forested areas or moss areas at the depth of below 3 meter. Therefore, to support the fulfillment of Indonesian GHG emission decrease target by 26% or 41% in 2020, the agricultural sector must carry out several policies to decrease GHG emission. Based on BPS data (year .....), the total agricultural land area is 69.15 million ha, whereas data from the Ministry of Forestry in 2008 (table 2.1) shows that the Other Usage Area (APL) including for agriculture, settlement, infrastructure, etc. as much as 55.388 million hectares.

From the data on land usage since 1986 to 2004, it seems that the rice field area has not had much development, and even decreased from 8.5 million ha in 1993 to 7.7 million ha in 2004. A rapid areal expansion occurred in the plantation sector, from 8.77 million ha in 1986 to 19.3 million ha in 2006. The expansion occured in the plantation sector from 8.77 million ha in 1986 to 19.3 million ha in 2006. The expansion occured in several exported commodities such as coconut palm, rubber, coconut, cacao, coffee and pepper. The largest development occured in the coconut palm plantations from 593,800 ha in 1986 to around 6.3 million ha in 2006. The major areal expansion has been occuring since 1996. The cacao plantation land area also developed from 95,200 ha in 1986 to 1.2 million ha in 2006.

In the context of food sustainability, the 2020 main crops sustainability data can be seen in Table 2.2. Meanwhile, in order to fulfill the needs for crops, an estimated land area addition of 1.6 million ha of rice fields and 2.4 million ha of dry land will be required in 2020.

Table 2.3. The Needs to Add New Land for National Crop Sustainability up to 2020.

Type of land	Available land in 2008 (x 1000 ha)	Needs for additional land up by 2020 (x 1000 ha)
1. Rice field	6,841	1,614
2. Dry land	5,500	2,419
Total	12,341	4,033

Through proper overlaying between the land suitability map and the land usage map (NLA, 2002-2004), the unused land distribution data shows that the unused lands are overgrown with weeds and bushes, both in dry and mangrove swamps. Regardless of the ownership status, the land is assumed as a potential land available for agricultural development. The result of spatial analysis shows that around 30.67 million ha is unused land (deemed as available), which consists of 8.28

million ha of land for the expansion of single-season wetlands farm (rice fields), 7.08 million ha for single season crop dry land farm, and 15.31 million ha for the annual crop farms is readily available in Table 2.4

Table 2.4. Amount of Land Area Suitable and Available for Wet Lands and Dry Lands Areal Expansion.

Island	Single-season wetlands			Single Season Dry Lands*	Annual dry lands**	Total
	Swamp	Non-Swamp	Total			
	..... 000 ha					
Sumatra	354.9	606.2	960.9	1.312.8	3.226.8	6.499.4
Java	0	14.4	14.4	40.5	159,0	213.9
Bali and NT	0	48.9	48.9	137.7	610.2	796.7
Kalimantan	730.2	665.8	1.396.0	3.639.4	7.272.0	12.307.4
Sulawesi	0	423.0	423.0	215.5	601.2	1.239.6
Maluku+ Papua	1.893.4	3.539.3	5.432.7	1.739.0	3.441.0	10.612.7
Indonesia	2.978.4	5.297.6	8.275.8	7.083.8	15.310.1	30.669.7

Source: Agricultural Research & Development Body (2007)

Notes : * Single-season dry lands are also suitable for annual crop

** Annual dry lands on dry lands and partly moss

An estimated two third (20.3 million ha) of the available lands are in the forestry area (outside the wildlife reserve) which is currently overgrown by weeds and bushes. The largest lands can be found in Kalimantan, Papua and Maluku and Sumatra, as shown in Table 2.5. The unused land in the form of 10.3 million ha found in the agricultural area (not in forest area). As such, until 2020 the needs for crop lands (1.6 million ha of wet lands and 2.4 million ha of dry lands) can still be fulfilled from the existing agricultural lands without any needs for a new forest conversion (clearing).

Table 2.5. Lands available for agriculture in agricultural and forestry areas

No.	Islands	Cultivation Area		Total (ha)
		Agriculture	Forestry	
1.	Sumatra	2,741,632	2,757,776	5,499,408
2.	Java	129,022	84,868	213,890
3.	Bali and Nusa Tenggara	515,874	280,872	796,746
4.	Kalimantan	3,907,977	8,399,413	12,307,390
5.	Sulawesi	682,192	557,412	1,239,604
6.	Maluku+Papua	2,331,106	8,281,545	10,612,651
Indonesia		**10,307,803**	**20,361,886**	**30,669,689**

Source: BBSDLP (2008)

Other estimations in the agricultural sector consist of around 94.1 million ha of lands suitable for agriculture, which will not disrupt the ecological balance of the river basin, whereas lands converted to new agricultural lands amount to 63.7 million ha out of the total Indonesian territory. As such, the agricultural sector is still optimistic that it can expand the agricultural area around 30.4 million hectares with 24 million ha in the form of fertile lands for rice fields, plantations and the development of other commodities, whereas the other 6.4 million ha are inundation rice fields, lowlands and peat moss which still require special innovation. Furthermore, to this day there is a quite large amount of abandoned farmlands, totaling 12.4 million ha.

By referring to the comparison between the Forestry Ministry data and Agricultural Sector Data above, an estimated 19 million hectares of overlaying area will exist. Next, from the estimated agricultural area expansion up to 2020, the overlaying of area will expand to 39 million hectares. Data obscurity will be higher if Miscellaneous usage sector is also accounted for outside the forestry and agriculture, such as mining, infrastructures, etc. This condition shows the unaligned sectors and the weakness of data and information, so that various land usage decisions become highly inaccurate.

2.2.3 Deforestation and Degradation on Peat Moss

Peat Moss lands have important roles in maintaining the stability of the ecosystem caused by the high amount of water retention and the high amount of carbon deposit (C) in the peat moss, as well as the high biodiversity of peat moss. If the peat moss is converted, the carbon contained within will oxydize due to decomposition, resulting in a fire which emits CO2, the most important green house gas.

The high number and growth rate of Indonesian population (around 1.3% per annum) and the lack of potential dry lands for the development of agriculture made the peat moss popular for agriculture, especially in provinces/regencies where most of the soil consists of peat moss. In provinces and regencies dominated by peat moss

(such as Riau Province, Kubu Regency and West Kalimantan Province), the usage of peat moss lands is also diversified for various purposes, including cut-burn traditional farming activities.

From the various usages of peat moss farmlands, the cut and burn traditional farming system emits the highest amount of CO2 where the soil is burnt for fertilization. The attempts to reduce emission can be carried out through the following means: peat moss fire control in the traditional farming system to become a permanent agricultural system, the forest clearing control, rehabilitation of bushes, and the expansion of agribusiness are only carried out on weedlands/bushlands.

The C Emission from the peat moss land is considered as a very serious global problem because the amount can be several times higher than the emission produced by mineral lands. Peat moss emission is also a local problem, because the peat moss layer is increasingly thinner, and eventually loses its function as hydrological buffer. Due to the high potentials of CO2 emission from peat moss land, peat moss conversion to agricultural lands was limited by the Government. Minister of Forestry's Regulation No. 14 year 2009 restricted the clearing of peat moss lands with the following criteria for agricultural purposes: (1) peat moss with layer thickness of more than 3 m, (2) Young peat moss (fibrist adulthood level) and (3) peat moss with a substratum of quartz sand with acidic sulphate potentials.

2.3 THE MAIN CAUSE OF DEFORESTATION AND FOREST DEGRADATION

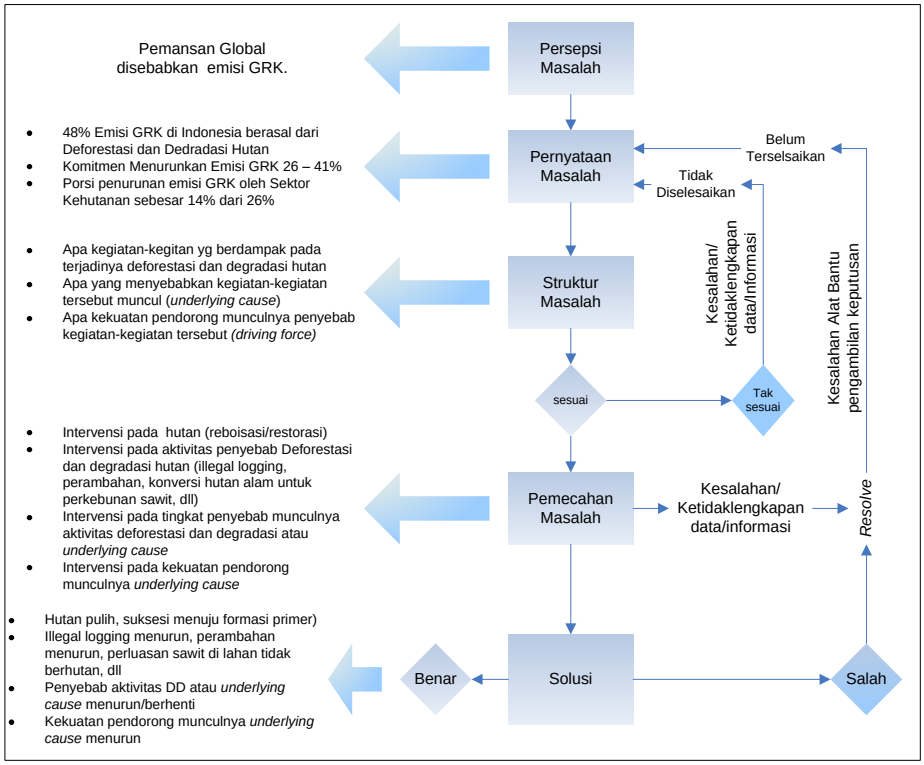
2.3.1. Problem Analysis Frame

The analysis of deforestation and forest degradation in the attempts to implement this REDD+ aims to provide data, information and knowledge on phenomenas or symptoms deemed as promblems of deforestation and degradation of the forest so that alternative solutions for decision making. This process is important for the decision makers to carry out two main things: 1) identifying the problem at hand and formulate it, and 2) Selecting the proper decision-making tool (Wallace, 1994).

In order to make the proper decision, the decision makers must be able to understand a problem of the problem, because the decision will go wrong if the

formulation of problem or the data and information is not suitable nor complete. After the problem has been formulated correctly, an aiding tool will be chosen. This aiding tool helps determine what decision to make for a given problem. The principle of the decision-making tool must be understood properly and completely in order to avoid wrong solution due to unsuitable decision-making tool or the needs for another aiding tool, regardless of whether the aiding tool has been used in a proper manner or not. (Carrier and Wallace, 1994)

Picture 3. Problem Formulation Frame



Global Warming Caused by GHG Emission

- 48% of GHG Emission in Indonesia comes from Deforestation and Forest Degradation
- Commitment to Reduce GHG Emission by 26 – 41%
- The portion of GHG Emission reduction in the Forestry Sector is 14% out of 26%
- Activities which have impacts on deforestation and forest degradation
- Driving forces of the activities
- Intervention on the forest (replanting/restoration)

- Intervention on the activities which cause Deforestation and Forest Degradation (Illegal logging, clearing, conversion from natural forest to coconut palm plantations, etc.)
- Intervention on the level of deforestation and degradation driving force of underlying cause
- Intervention on the driving force of underlying cause
- The forest recovers, succession to primary formation
- Illegal logging decreases, forest clearing decreases, coconut palm expansion on deforested lands, etc.
- Causes of DD activity or underlying causes decrease/stop.
- Underlying cause's driving force decreases

Chart

Persepsi: Perception of Problem

Pernyataan Masalah: Declaration of Problem

Struktur Masalah: Problem Structure

Sesuai: Suitable

Pemecahan Masalah: Solution to Problem

Solusi: Solution

Benar: True

Belum terselesaikan: Not yet finished

Tidak diselesaikan: Unfinished

Kesalahan/ketidaklengkapan data/informasi: Incomplete Data/Information Error

Tak Sesuai: Unsuitable

Kesalahan Alat Bantu Pengambilan Keputusan: Aiding Tool Error

Resolve

Salah: Wrong

In the attempts to implement this REDD+, diagnosis or formulation of problems on deforestation and forest degradation must be carried out systematically and

logically. The simple formulation of deforestation and forest degradation issue in the REDD+ context is as follows:

1. Perception of problem, which refers to the forest condition and its impacts, such as forest damages which cause significant increase in GHG emission,
2. Statement of problem, which refers to the perception of problem and adopts the territorial context that Indonesia as a GHG emitter and absorber commits to decreasing the sources of emission and increases carbon absorption.
3. Structure of problem, which refers to the statement of problem that the attempts to decrease the sources of emission focus on the decreasing level of deforestation and land degradation. Deforestation problem categories must be made in this stage:
    a. Direct activities of deforestation and land degradation, be it planned (changes in forest coverage due to conversio to other purposes outside of forestry or in the forestry sector itself) or planned (changes in forest coverage due to illegal public activities. The following activities are included in this category:
        - Planned and unplanned deforestation (expansion of plantations, mining, clearing, etc.) and
        - wDegradation of forest coverage quality (illegal logging, excessive harvesting, etc.)
    b. The underlying causes of deforestation and forest degradation include:
        - Weak layout plan,
        - Weak forest management capacity
        - Weak governance, and
        - Unclear tenurial.
    c. The driving force is the macro conditions which drive direct activities on deforestation and forest degradation. The category includes:

- Global wood demand exceeding the production capacity of preservation forest management,
- Economic growth target,
- Weak leadership

4. Problem-solving, which refers to the structure of problem. The locus of each problem category must be identified and a suitable intervention aiding tool must be identified. The DPSIR framework (driving force-pressure-state-impact-response), as stated in Picture 5 helps in seeing the directions of necessary intervention.

   The framework provides directions for strategy, that the strategy must be able to facilitate all needs of actions or intervention at all levels in the successfully formulated structure of problem. If not, the strategy is stated as unintegrated or comprehensive. The framework also states the needs for investment in the problem locus, so that the selection of instrument can be stated in a relevant manner.

Driving Force (Kekuatan Pendorong)

Lead to -> Pressure (Tekanan)

Underlying Cause on Forests (Terhadap Hutan)

Intervention on the driving force of forest degradation (Intervensi pada kekuatan pendorong munculnya penyebab-penyebab terjadinya perusakan hutan)

Intervention on the causes of forest degradation activities (Intervensi pada penyebab munculnya aktivitas yang merusak hutan)

Direct intervention on forest-damaging activities (illegal logging, clearing, conversion, etc.)

Direct Intervention on the forest: Rehabilitation and Restoration (Intervensi langsung pada hutan: Rehabilitasi dan restorasi)

Activities (Aktivitas)

CONDITION (KEADAAN)

Changes in Forest Coverage and Degradation of Forest Quality (Perubahan Tutupan Hutan dan Penurunan Kualitas Hutan)

Resulting in Problem (Menghasilkan masalah)

IMPACT (DAMPAK)

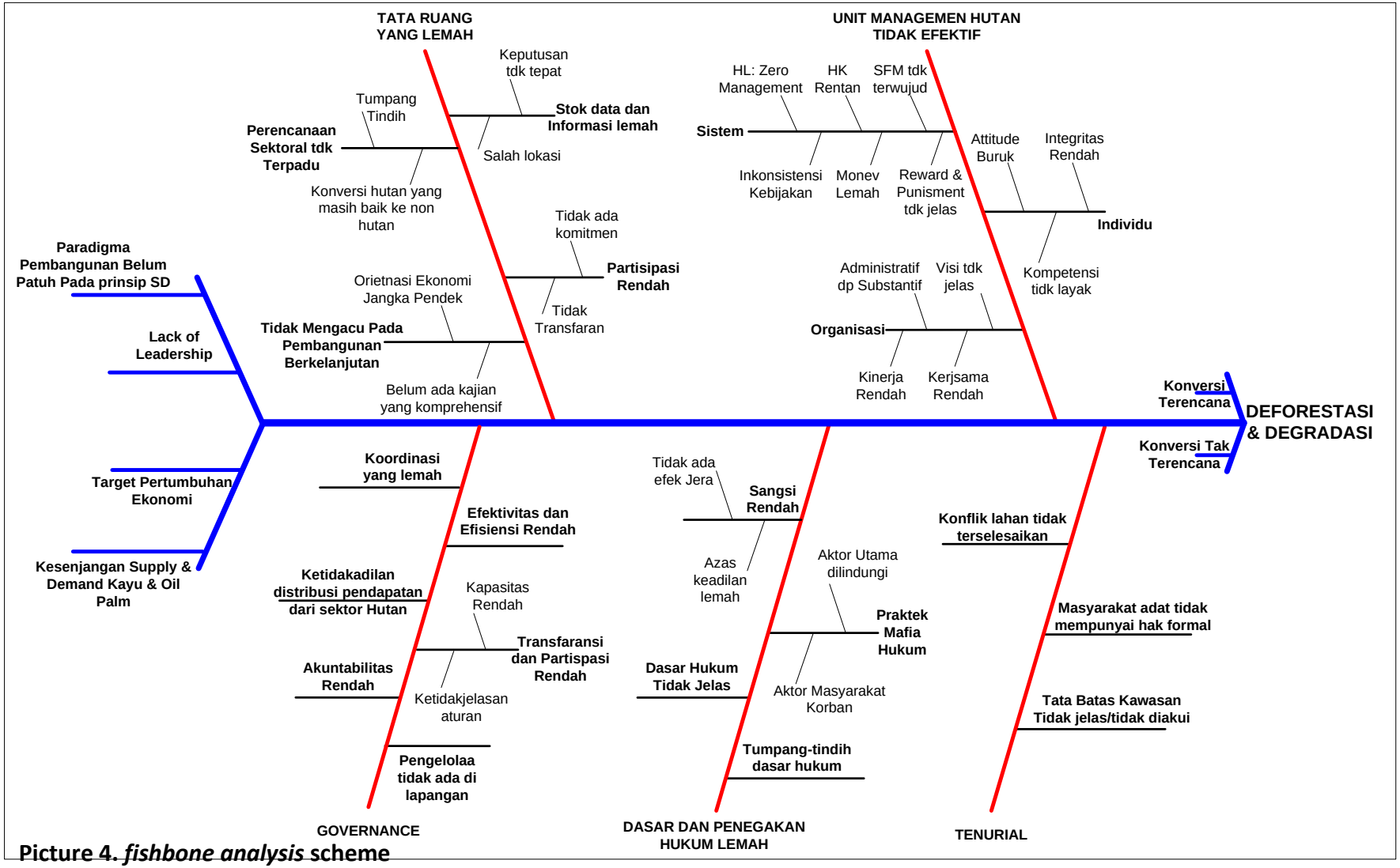
Increasing GHG Emission (Peningkatan Emisi GRK)

Producing needs-response-action-feedback (Menghasilkan kebutuhan respon-tindakan-feedback)

Strategy -> Program -> Activity (Strategi -> Program -> Kegiatan)

RESPONSE (RESPONSE)

Picture 5. DPSIR Framework
(*driving force – pressure – state – impcat - response*)



Picture 4. *fishbone analysis* scheme

WEAK LAYOUT (TATA RUANG YANG LEMAH)

Wrong decision (Keputusan tdk tepat)

Weak data and information stock (Stok data dan informasi lemah)

Wrong location (salah lokasi)

Overlapping (Tumpang Tindih)

Unintegrated Sectoral Planning (Perencanaan Sektoral Tidak terpadu)

Conversion of Good Forest Back to Non-Forest (Konversi Hutan yang masih baik ke non hutan)

No Commitment (Tidak Ada komitmen)

Low participation rate (Partisipasi Rendah)

Untransparent (Tidak transparan)

Short-term Economic orientation (Orientasi Ekonomi Jangka Pendek)

Does not refer to Continuous Development (Tidak mengacu kepada pembangunan berkelanjutan)

No comprehensif study (tidak ada kajian yang komprehensif)

Development Paradigm Does not Comply With the Principles of SD (Paradigma Pembangunan Belum Patuh Pada Prinsip SD

Lack of Leadership

Economic Growth Target (Target Pertumbuhan Ekonomi)

Wood & Palm Oil Supply & Demand Discrepancy (Kesenjangan Supply & Demand Kayu & Oil Palm)

GOVERNANCE

Weak coordination (Koordinasi yang lemah)

Low effectiveness and efficiency (Efektivitas dan Efisiensi Rendah)

Injustice of income distribution from Forestry Sector (Ketidakadilan distribusi pendapatan dari sektor Hutan)

Low Accountability (Akuntabilitas Rendah)

Low capacity (Kapasitas Rendah)

Low Transparency and Participation (Transparansi dan Partisipasi Rendah)

Unclear regulations (Ketidakjelasan aturan)

No field management (Pengelola tidak ada di lapangan)

WEAK LEGAL BASIS AND ENFORCEMENT (DASAR DAN PENEGAKAN HUKUM LEMAH)

Overlapping of Legal Basis (Tumpang Tindih Dasar Hukum)

Unclear Legal Basis (Dasar Hukum Tidak Jelas)

Victim Society Actor (Aktor Masyarakat Korban)

Praktek Mafia Hukum (Legal Mob Practices)

Weak Principles of Justice (Azas Keadilan Lemah)

Main Actor is Protected (Aktor Utama dilindungi)

Low Penalty (Sangsi Rendah)

No Discouragement Effect (Tidak ada Efek Jera)

TENURIAL

Unclear/Unacknowleged Boundaries (Tata Batas Kawasan Tidak Jelas/Tidak Diakui)

Tribal society does not have formal rights (Masyarakat adat tidak mempunyai hak formal)

Land Conflicts Are Unfinished (Konflik Lahan Tidak Terselesaikan)

Unplanned Conversion (Konversi Tak Terencana)

Planned Conversion (Konversi Terencana)

DEFORESTATION & DEGRADATION (DEFORESTASI & DEGRADASI)

Low cooperation (Kerjasama Rendah)

Low Performance (Kinerja Rendah)

Organization (Organisasi)

Unclear Visions (Visi tidak jelas)

Administrative dp Substantive (Administratif dp Substantif)

Undecent Competence (Kompetensi tidak layak)

Individuals (Individu)

Low Integrity (Integritas Rendah)

Bad Attitude (Attitude buruk)

Unclear Reward & Punishment (Reward & Punishment Tidak Jelas)

Weak monev (Monev Lemah)

Inconsistency of Wisdom (Inkonsistensi Kebijakan)

System (Sistem)

Immaterialm SFM (SFM tdk terwujud)

Vulnerable HK (HK Rentan)

HL: Zero Management

2.3.2 Weak Layout

The Layout Plan is compiled as a guide to the provincial and regency government for the execution of long-term development as well as an interest facility for stakeholders of various levels, starting from the central government, provincial government, regency, private sector and the public and aims to optimize the available space by maintaining the balance between the purpose of increasing regional growth rate, the needs for development and the environmental supporting capability. (Siagian and Komarudin, 2009).

However, in its practices, there are several issues which caused the RTRW Instrument to not be able to facilitate various needs of sustainable development. In several regions, the RTRW document even becomes a document which causes deforestation through planned conversion. These issues are caused by various things, including the following things:

- *First*, the general orientation of development has not integrated the principles of sustainable development, so that the plans for space allocation focuses more on short-term economic orientation and lacks focus on comprehensive considerations, especially in regards to the aspects of conservation and environmental supporting capacity.
- *Second,* sectoral development planning which is not yet capable of being a document which independently integrates various sectoral interests. At the moment, each institution generally makes their own annual plans by allocating land resources separately. The same goes to economic and infrastructure development planning, which lacks integration so as to enable overlapping in the allocation of space and deforestation of good-conditioned forested areas.
- *Third,* limited availability and access to biophysical spatial as well as verified and accurate social economic information and data. Generally the planner does not use methodology which distributes the information to decision-makers with priority choices, including the carbon issue. An example of the consequence of such decision-making is an RTRW (regency or provincial level) which specifies the degraded forest

areas as forest areas, and those with middle-good conditioned forests into the conversion plan. Forest conversion in such manner will result in a staggering amount of emission.

- *Four,* the participation in the current regional layout planning process. The compilation of RTRW is a top-down process and has not completely implemented the principles of basic transparency and participation so that the people who know the real conditions on field cannot give constructive inputs to the document. The lack of participation and transparency eases the unplanned lands usage field activity in RTRW, such as land clearing by the people to make plantations, farmlands, settlements, mining without license, etc. This is a general reflection of sociability of Indonesian people, who often channel their dissatisfactions in ways that harm the forest resources or the environment.

2.3.3. Tenurial

Forest lands with its diversity of ownership rights, status and faction have become battlefields for stakeholders with various interests which are not yet finished by now. Conflicts and disagreements on who should be controlling and managing forest and State Forest Area are sources of various anxieties, which often result in vandalisms. The sources of these anxieties can be found in the interpretation of definitions and forest locations in Indonesia and its authority. Different interpretations cause basic differences on the roles of controlling the forest resources by different actors and institutions. Conflicts over the role of controlling area and natural resources caused by unclear tenurial rights must be finalized through a serious attempt in a clear action strategy.

Legal dualism on the acknowledgement of traditional rights in forest area and non-forest area becomes one of the tenurial issues. The inexistence of formal rights for traditional societies result in the inability to make a natural resource-based decision in their traditional territory weakens their potential abilities in supervising forest area. At the same time, procedures which enable them to be acknowledged as legal society seem very difficult and long. Other triggers for the increasing tenurial conflicts are the implementation of unsynchronized sectoral policies and unclear regional boundaries on field due to the prolonged forest area legalization.

2.3.4. Ineffective Forest Management Unit

Indonesian forest area reaches 133.6 million ha (Baplan 2008), and around 15% of it is conservation forest (HK), 22% of it is wildlife reserve (HL), 46% of it is production forest (HP) and 17% of it is convertible production forest (HPK). According to satellite data in 2007, the forested area amounts to 85.9 million ha and the deforested area is around 39.1 million ha. The amount of convertible forest (HPK) is around 22.7 million ha, and only 10.7 million ha is still forested.

Forest management is carried out in almost all forest in vulnerable manner. The weakness of forest management unit occurs at all levels in the forest management system, forest management organization or among individuals who work in the forestry sector in various forest functions. The following section shall explain various forest management unit problems based on the level.

2.3.4.1. Weak Forest Management System

Problem in the management system level consists of regulation frame, policy, and environmental conditions which do not support and hinder the achievement of preservation management purpose. Starting from the weak data and information in compilation of plans, forest management on all forest functions become invalid and difficult to achieve sustainable state. The process of establishing forest boundaries, which will show where and how vast the forest area is, acknowledged and respected by all parties, have not been carried out. Almost all production forests and wildlife reserves outside Java do not have clear party in charge, resulting in open access and triggering planned and unplanned deforestation and forest degradation.

1. Weak Production Forest Management

   The condition of 57.7 million hectares of production forest areal continues to decrease, as can be seen in the following statement (Purnama & Daryanto, 2006):

   a. Natural Forest incurred with IUPHHK for Natural Forest/HPH in relatively good condition (Category I): 28.27 million Ha

b. Natural Forest incurred with relatively “good” condition, but is open for access and is not incurred with management rights (Category II): 12.98 million Ha.

c. Damaged forest area and open-access due to lack of management (Category III): 7.14 million Ha.

d. Damaged forest area which is already reserved for Vegetation Forest IUPHHK (Category IV): 9.31 million Ha.

In the field of forest management, in 2007 only 115 units out of 486 units of HPH recorded in 1992 (24%) survived internal and external problems.

Production Natural Forest Management is still far from the laws and principles of Sustainable Forest Management (SFM). The business players at forestry sector tends to think about the aspects of business rather than production preservation. The harvesting techniques no longer pay attention to the reduced Impact Logging/RIL. Harvesting is carried out excessively (over-cutting), and the amount of waste and degree of forest damages on Log Over Area/LOA will be very high.

2. Management of Vulnerable Wildlife Reserves and Conservation Forest

The forest protection attempt for wildlife reserve and conservation forest also has several problems. In the wildlife reserve, the authority of central and regional governments is not clear, and the forest seems to be owned by no one and is open for access by anybody. In such conditions, the opportunity of deforestation increases. In the conservation forest management, 527 units of land and sea conservation areas have been formed today, including 50 units of National Park (TN), 118 units of Natural Tourism Park (TWA), 22 units of Grand Forest Park (Tahura), 14 units of Hunting Grounds (TB), 248 units of Natural Reserve (CA) and 75 units of Wildlife Reserve (SM). Sea conservation areas include 7 units of National Park, 5 units of Natural Conservation, 2 units of Wildlife Reserve and 14 units of Natural Tourism Park. The weak management capacity becomes the main challenge of today. For example, of all the conservation area units, only 34.4% have Management Plan, mostly TN and TWA. Meanwhile, only 8.4% conservation area units have management zonation/blocks. All

21 National Model Parks have Management Plan, but 19% among them are not yet legalized.

3. **Unclear Policy, Monitoring and Evaluation as well as Reward and Punishment**

   There are no effective and efficient provisions of law as a basis for solving the problem of forestry which keeps on developing from time to time. The provisions of law fulfills the needs of bureaucrats in conducting their administrative duties rather than solving the problems faced by forest managers on field. Aside from that, lack of alternative solutions on field is also a problem because most regulations contain restrictions as a form of control over the forest degradation.

   On the other side, inconsistency of policy also occurs on a regular basis. Top programs under the decision of technical officials will always be changing, depending on the current authorized official, just like the National Model Park establishment program which is currently abandoned and unevaluated although a good amount of budget has been allocated for it. In terms of production forest, the issuance of RKT license on several companies in large volumes contradict with the spirit of natural forest exploitation limitations and even set aside the information on violations committed by the license applicant.

2.3.4.2. Weak Institutionalism

The unrealized institutional performance which became the cause of weak public services related to the licensing and procurement of forestry economy, and the lack of real priorities for the reinforcement of forest management organization at field/base level. Such condition became the cause of limited information on forestry resources as a basis for compiling any plans or decision-making. Furthermore, the institutional problem – caused by its regulation by national government policy through Law No. 32/2004 and its derivatives – is related to the weak coordination between the Ministry of Forestry and non-Forestry sectors or the Provincial/Regency/City Governments, in terms of stipulating and running regional forestry policy or reinforcement of social institution with the opportunity of obtaining license for usage of forest production.

At management organization level, most of the time and energy available are spent for administrative rather than substantive problems. The performance of the organization is only measured from the absorption of budget and report documents, not until the assessment of output, result, impact and real benefits on field. Such condition drives a more exclusive work method in the organization and hinders any attempts of establishing cooperation inside the organization or strategic cooperation with other parties which potentially support the management.

Result of RAPPAM study in 2005 by Directorate General of PHKA and WWF on the Technical Execution Unit (UPT) of National Park Hall shows that the effectiveness of management in every UPT is very low seen from the input, process, output and planning, which results in low management performance.

In the production natural forest management organization, the performance of entrepreneurs have not reached a satisfactory level, indicated by low ecolabel or national standard issues by the Government. There are only 6 LEI standard and 5 FSC standard management units which have received ecolabeling certificates. The graduation rate of the execution of independent obligatory assessment using Government Standard is 73 units out of 138 units of HPH.

2.3.4.3. Weak Individual Capacity

Capacity problem at individual level consists of competence (capacity, qualification and knowledge), behavior and attitude and integrity (work thics and motivation) from people working in the organization as the spear-end of forest management on field. Problems at individual level under relatively normal conditions are usually caused by internal situation in the organization which does not support the development of individual capacity. There is even a condition where people in the organization tends to become pragmatic and always seek for opportunities to fulfillt heir personal interests.

2.3.5. Governance

The analysis of problem related to forest management will be based on the combination of indicators specifically developed to assess good forest governance through The Governance

of Forests Initiative/GFI Framework with indicators developed in assessing general governance called 'Partnership Governance Index'.

In assessing the forest governance, there are four important issues which must be assessed: tenurial, layout, forest management and forest revenue distribution. As is obvious in the previous discussion, in the context of Indonesia all four issues become the underlying causes of deforestation and forest degradation. In this section, the focus of problem analysis is good governance principles, which in this document will be focused on (a) coordination, (b) transparency, participation, (c) accountability, (d) effectiveness and efficiency, (e) fairness aspect, and (f) the absence of management on field.

2.3.5.1. Coordination

There are several issues in coordination: first, the unclear authority and responsibility between the central and regional government. The case of Kampar Cape becomes an example of this condition, where the Ministry of Forestry issues RKT for Vegetation Forest (HTI) to the HTI company with ecolabeling certificate through self approval (Minister of Forestry's Regulation No. P.62/Permenhut-II/2008 articles 13), whereas at the same time the Forestry Agency has stopped issuing policies for RKT licensing in natural forests, which also have impacts on the halt of SKSHH issuance.

As an illustration of this unclarity, the data released by Forestry Planology Body mentioned that the total APL area is 55 million hectares, whereas BPS data concerning farmlands area is around 69 hectares. As such, there is now around 14 million hectares of forest areas converted into farmlands unknown by the Ministry of Forestry. We can imagine that the data and information unclarity has become the setting of almost all decision makings and the quality is certainly very low[2].

According to data by the Directorate General of Forestry Planology (2008), during the period of 8 years (1997-2005), there has been a reduction of forest coverage to clearings by 480,000 Ha or 17% of the total conservation area. Meanwhile, based on the result of recalculation by the Directorate General of Planology in 2008, the land coverage area in

2 Dunn (1994) in the Public Policy Analysis mentions that policy are science and knowledge applicable for solving problems in a given spatial and temporal context. Meanwhile, science and knowledge are the metamorphosis of data and information.

conservation forest is 15.197 million ha or 77.1% of the terrestrial conservation area of 19.698 million ha and annual deforestation rate in conservation forest area of 55.6 thousand ha/annum or 4.7% out of 19.698 million ha. Even though there are problems as stated above, the conservation area is relatively intact compared to the production forest area and protection forest since it requires clear and independent management unit.

2.3.5.2. Transparency, Participation and Accountability

The absence of transparency and participation of stakeholders also result in the minimum knowledge of the society, especially those living in the forest area, to be involved in the decision making process in the licensing process and to conduct supervision for the said violation of license. This results in not only the inavailability of more reliable data during the decision making process, but also misuse of authority by the decision makers, the authorized officials, in an undetected licensing process which is not adequately supervised by the people.

The entire process eases violation in terms of licensing process and license execution.

The limited transparency and participation of the of the society are caused by at least 2 factors: unclear regulations and weakness of public capacity to participate in the decision making process.

2.3.5.3. Fairness Aspect

The injustice distribution of income from forestry sector, between the central and regional governments and the people living around the forest result in injustice between stakeholders. The injustice cause high deforestation and forest degradation rate.

2.3.6. Unclear Legal Basis and Enforcement

2.3.6.1. Legal Basis

The national political changes period also results in the new stake for forestry development, especially with the birth of Law No. 41/1999 concerning Forestry. The Law of Forestry attempts to restore the forest governance to the arrangement and management system as a whole, but not many stepped up from the licensing uniformity. This built tension between the central and regional governments, which has not been resolved until now. The

appearance of Layout Law No. 24/92 which is then renewed by Law No. 26/2007, which has not been able to solve various problems of overlaying on field.

The provisions of law in the field of forestry generally have various problems of deforestation and forest degradation. The existing problem can be classified into: first, the development paradigm issue based on the exploitation of natural resources, low level of clarity and/or inharmony at provisions of law level, and incomplete regulations to ensure good governance, which provides opportunities for misconduct. The examples of such problems can be seen as follows:

First, the development paradigm based on the management of natural resources, including the forest resources for the sake of economic growth. The regulation which supports the paradigm includes overlapping regulations on an area/land similar to forest with mining and farmlands. With the issuance of the regulation, the investment interest is made as first priority compared to the environmental damage, and forests caused by open-mine activity in protection forest.

This paradigm is also obvious in the regulations related to the changes in purpose and function of the forest area, especially if related to the law enforcement. Several provisions of law have the potentials to prevent the attempts of saving the primary forest through regulations which enable opportunities for land conversian in all forest area, including the protection forest and conservation area.

Second, the unclear and unsynchronized regulations in the field of forestry can be seen in the unclear definition of the forest and forest area in the Law of Forestry itself or other provisions of law. The lack of clearly measured definition on forest in the Law of Forestry have impacts on the execution of various executive laws. For example, the provisions on lease license for forest area with lease license for mining require clear definition on forest. The lack of definition will of course have negative impacts on the land swap attempt for forest area so as to heighten the deforestation and forest degradation rate.

At the end, the differences in definition and protection and legal actions towards t he forest or the forest area have potentials in creating problems at field. For example, forest-covered area is not included in the forest resources management planning just like forests in forest areas. Moreover, in the layout context the above legal matters provide larger opportunities

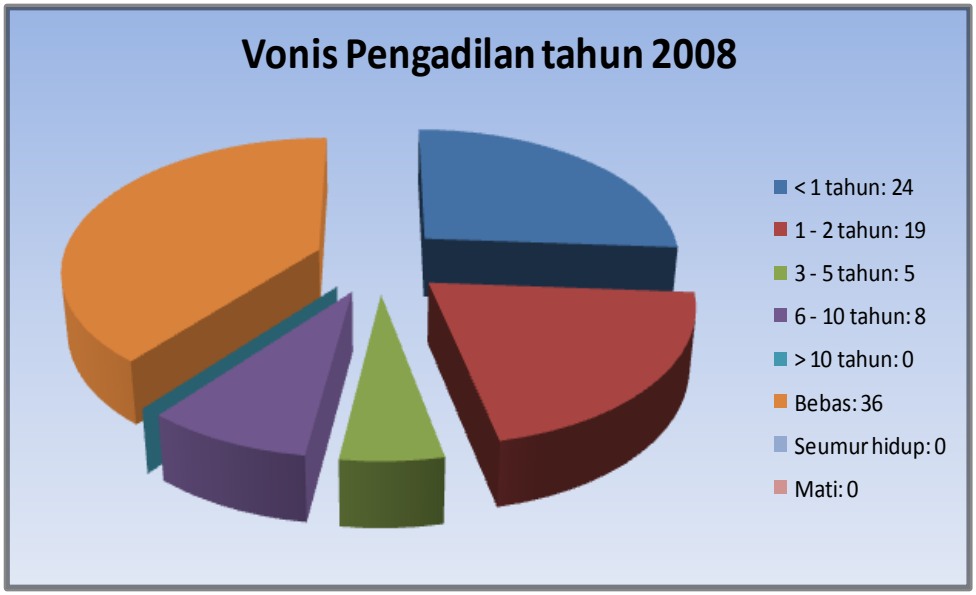
for the regions, especially newly created territories which demand conversions from forest areas to other purposes in accordance to the Law on Layout.

Third, incomplete set of rules which enable misconducts during its execution, especially in relation to the procurement of licencing for other activities in the forest area. The Agricultural Law, for example, provides the Regional Leader with the authority to issue plantation licences in their areas. Even though the Forestry Law regulated that plantations should undergo changes of purpose of forest area beforehand, this is apparently irrelevant on field. There are two legal matters concerning this issue: first, the unsynchronized provisions of law, because Agricultural Law does not tell of a specific requirement to obtain licence for other purposes from the Ministry of Forestry, and second, the incomplete set of rules with the lack of regulations on penalties for mistaken licence issuer (non-corruption). This matter is made worse by the unclear regional boundaries and indications of corruption and collusion during the licensing process. Unscynchronized, complicated licensing process related to various other sectors and government institutions require strong coordination between institutions. Incompleteness at this regulation level also occurs because the provisions of law do not give authority to the proper party or with proper incentives. For example, the procurement of authority to the Governor to conduct forest area boundary governance through Government's Regulation No. 38/2007 in relation to the decentralization caused problems at implementation level because the resources are scattered among the Central and Regional Governments. On the other hand, the Central Government does not provide the Governor with the necessary supporting resources to implement such policy. In relation to incomplete regulation, The Forestry Law has not been able to give adequate penalty for the main actor of illegal logging, but is only limited to physical perpetrators. On the other side, the implementation of other Laws such as Law on Money Laundry Crime, Law on Corruption or Law on Environment which are more prepared to take a hold of the main actor of forestry crime is still very minimum.

2.3.6.2. Poor Law Enforcement

The condition of law enforcement in Indonesia is at a critical level. The public's trust towards law enforcement institutions is very low due to legal mob practices. In this case, the

legal mob modus operandi in the forestry sector is allegedly carried out before and after a proceeding.



Picture 6. Law Enforcement in the Illegal Logging Sector in 2008
Source: Annual Report by Supreme Court of the Republic of Indonesia, 2008.

Court's Decision in 2008

<1 year: 24

1-2 years: 19

3-5 years: 5

6-10 years: 8

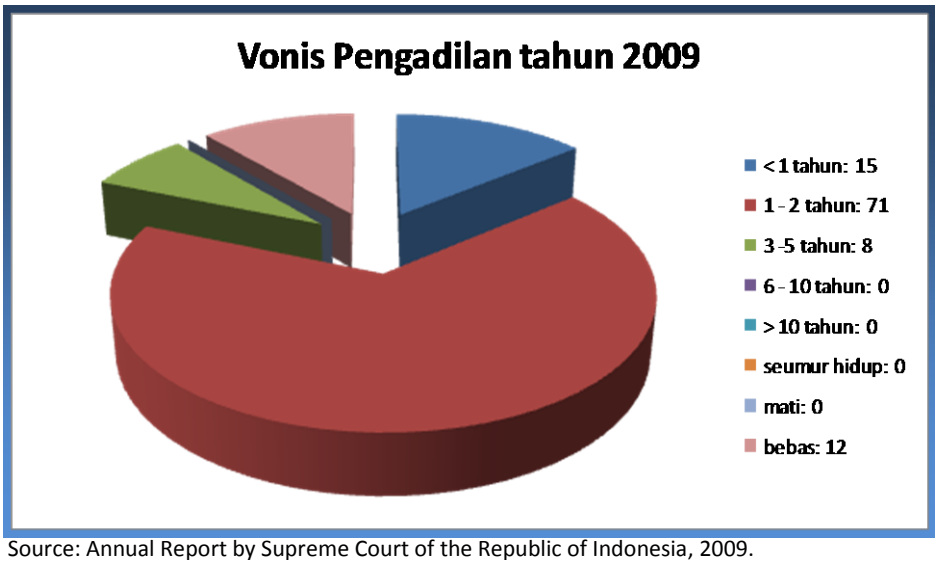
>10 years: 0

Free: 36

Lifetime in prison: 0

Death sentence: 0

Before any proceeding, the modus includes the changes of purpose and function of forest area, licensing, and exploitation of forest resources (procurement and execution of licence). Basically, the process includes various cases where law enforcement agents are involved by protecting the perpetrators. This resulted in a high rate of illegal logging and extensive forest damages.



Source: Annual Report by Supreme Court of the Republic of Indonesia, 2009.

Picture 7. Law Enforcement in the Illegal Logging Sector in 2009

At the time of proceeding, the law enforcement process often includes investigation, lawsuit and decision making vulnerable to legal mob practices. This caused the forestry crime rate punishment to be few in number and the majority of the actors playing on field. The following data can be used as an illustration on the low level of punishment incurred to the processed illegal logging actor.

The available data has not yet been able to prove how far the allegations of the captured perpetrator being not related closely enough to the mastermind. However, based on reports to the Legal Mob Eradication Task Unit, there are strong indications that the main perpetrator of the forestry crime has not been touched by the law.

2.4 EDD+ Implementations Preparation Conditions in Indonesia

The Reduction of Emission from Deforestation and Forest Degradation (REDD) as an international mechanism which will be implemented in Indonesia requires special attention on several things which are required for the mechanism to be able to run. The requirements come from either the mechanism agreed at international level from Indonesian internal condition and situations. For that reason, there are two main things which must be examined in REDD+ implementation in Indonesia: 1) The fulfillment of requirements for

REDD+ execution discussed in official international meetings, 2) Establishment of conditioning situations to increase sink and decrease deforestation and forest degradation. Several prerequisites for REDD+ implementations up to this time has not been stipulated and agreed as follows:

1. Stipulation of activity limits,
2. Types of activity,
3. Required Level of Reference Emission,
4. Handling of carbon leak,
5. Mechanism for Supervision, Reporting and Verification (MRV)
6. Distribution of Benefits.

BAB III

REDD+ NATIONAL STRATEGY

Considering the complexity of problems in this sector, the reduction of emission is carried out through the integrated and comprehensive (multi aspect) carbon low development strategy (upstream to downstream). Such approach considers the emission source reduction principle and simultaneously increases carbon (sink) storage. This national strategy is carried out through the compliance of the REDD+ application prerequisite, improvement and strengthening of the enabling conditions, intervention in the framework of the management perfecting and improvement of the main sector, namely the forestry sector (production forest, protection forest, and conservation forest) and the supporting sector (plantation and agriculture, mining, and other land use sectors), as well as the mainstreaming of the strategy and action plan at all institutional levels, either at the national, provincial, regency or management unit levels.

3.1. STRATEGY OF COMPLYING WITH THE PREREQUISITE

3.1.1. Program of Preparing the Regulations related to the implementation of REDD+

In order to support the implementation of the above main program, the following activities are needed:

1. Acceleration of the establishment of the legal base and strong guidelines for the implementation of REDD+ at the national and Sub-national levels.
2. Establishment of the REDD Institution at the national and sub-national levels with the duty scope of REL/RL. MRV, Registration and Fund management.

3.1.2. Program for the Establishment / Development of the REDD+ Methodology

To support the implementation of this program, the following activities are needed:

1. Preparation of the Implementation Instructions and Technical Guidelines to determine the RL at the National and Sub-National levels.

2. Improvement of capacity in the evaluation and determination of RL, particularly at the sub-national level.
3. Development of the MRV System at the national and sub-national levels.
4. Preparation of the MRV examples that have been implemented domestically or abroad.

3.2. STRATEGY FOR THE COMPLIANCE OF THE ENABLING CONDITION

The strategy for the compliance of the enabling condition is intended to respond to the problems that are the causes and motivation power for the activities of damaging the forest as the source of emission. Several categories that are included in this strategy are as follows:

3.2.1. Program FOR Improvement of the Land Use Sector Development Plan

The low carbon economic development for Indonesia will need several strengthening processes, particularly related to the Spatial Plan. The Regency Level Local Government holds an important role in integrating the village level Spatial Plan (RTRW) until the national level, and the decision making at the inter sector land use. The plan strengthening at the regency level will give a strong capital for the plan improvement at levels below, namely district, village, community levels, as well as to the levels above, namely the provincial and national levels. Based on the above mentioned matters, this plan strengthening program consists of several main activities, namely as follows:

1. Completion of the Spatial Plan, which includes the following activities:
    a. Completion of spatial data and information, particularly the biophysical and socio-economic data, that are of high quality, transparent and legal for the analysis materials for the conformity of the land allocation from the aspect of area status including the traditional area data.
    b. Completion of the integrated mechanism and institution for the spatial analysis and its mapping at the national or regional levels.
    c. Determination of the institution as the centre and responsible instrument for the collection, analysis, and preparation of the data recommendation and spatial information.

d. Application of the integrated spatial plan process between the sectors.

e. Postponement/moratorium of the licenses, including the allocation change license and/or forest area function, until the completion of the area boundary structuring.

f. Completion of the RTRW at several priority provinces and regencies that have high deforestation and degradation potential.

g. Development of the stakeholders' involvement mechanism and process in the determination of spatial plan, from the village level to the regency, provincial and central levels.

2. Completion of planning at the '*land-use*' level.

a. Preparation of the spatial data and information of the land use at the landscape levels of island, province, regency and village, having high quality, transparent and legal.

b. Development and determination of the land use justification by conducting the suitability analysis of the land allocation based on the supporting capacity and accommodation capacity.

c. Planning, determination and implementation of protection toward areas with important ecological values to be stabilized as protected areas that are mutually related to the natural or semi-natural corridors.

d. Planning, determination, and extending of license in the economic activity central areas, which supports the sustainable management with the low carbon production system and utilization of conserved natural resources within the representing landscape matrix.

e. Determination of the socio-cultural components that facilitates the participation of the community in the planning and decision making, and provides the opportunity to obtain the spatial for various socio-cultural needs.

f. Input of low carbon development issues in the completion of the development plan at each level through the already existing mechanisms (*musrenbang, musrenprop, musrenkab*).

g. Determination of the top down and bottom up planning mechanisms in the development using the land resources.

3. Completion of plan at the forest management unit level:
    a. Strengthening of the actual, legal and with high quality forest condition and potential data and information as the basis to implement the forest structuring and preparation of the forest management plan, rehabilitation of forest and reclamation as well as the forest protection and nature conservation.
    b. Acceleration of the establishment of the Forest Management Unit (KPH) institution.
    c. Planning, determination and protection of areas with with high conservation values at the Production Forest Area (KPHP) either at the plant forest or natural forest.
    d. Planning of the forest area allocation for the development of the plant forest is determined at the forest area that has experienced deforestation and degradation.
4. Completion and strengthening of the spatial and non-spatial planning at the village level:
    a. Participative, transparent and legal spatial and non-spatial data and information strengthening as the regional and national development basis.
    b. Participative strengthening of the village development plan by taking account of the balance of the growth aspect, economic development and welfare as well as the environment supporting capacity.
    c. Strengthening of the village government institution.
    d. Strengthening of the village development plan as the base for the preparation of regional and national development plan.

3.2.2. Management Strengthening Program

The management strengthening program related to the low carbon development policy in the forestry sector or application of REDD+, covers the following main activities:

1. Improvement of the transparency and accountability in the policy making process in the forestry sector, commencing from putting in order the legislative regulations, regulation implementation guidelines, licensing followed by the potentially affected people capacity improvement.

2. Improvement of the participation space for stakeholders in the preparation and implementation of various policy instruments such as the spatial, forest management, and others.
3. Consistently application of Law Number 14/2008 concerning the Public Information Transparency, particularly at the government agency in the related sectors, namely Forestry, Agriculture, Energy, Public Works and others.
4. Improvement of the public participation involvement in the above mentioned overall decision making process is necessary to make the amendment of the related legislative regulations so as to be able to integrate effective participation principles, among others to ensure that the participation mechanism is operationally regulated as well as the obligation to implement the accountability of the decision masking.
5. Improvement of the public capacity in the long term will be strongly related to the public education quality improvement.
6. Monitoring of the above activities through the transparent mechanism and available technology.

3.2.3. Basic Strengthening Program and Law Enforcement

1. Completion of a strong, clear, harmonious legal framework related to the management of forest and sector resources, particularly that are related to REDD+ through:
    a. Development of the *climate friendly legal framework (*CFLF) principles in the *sustainable development* context at the forestry sector;
    b. Review of all legislative regulations that are related to the forest resources based on the CFLF principles;
    c. Implementation of the amendment and/or establishment of legislative regulations that are related to the forest resource management in order to conform with the CFLF principles;
    d. Formulation of the legal construction that is precise, clear and in line concerning the rights of the tradition community in the forest area;

    Strengthening of the legal enforcement related to the forest resources through:

    a. Explicit legal enforcement toward the perpetrators of the forestry crime;

b. Establishment of the *One Roof Enforcement System* (ORES) for the forestry crime;

c. Establishment of the *Green Bench* so that the judges have high integrity and more understand about the sustainable development principles, who handle environment cases including the Natural Resources;

d. Capacity improvement of the legal enforcement apparatuses so as to understand various regulations that can be used to eradicate forestry crime;

e. Perfection of various regulations related to the forest resources management so as to be harmonious and to enable severe punishment of the main perpetrators in the forest crime, among others Law Number 41/1999 concerning Forestry, Law Number 32/2009 concerning Environment and various Laws related to the Corruption and Money Laundering Crime Eradication;

f. Perfection of various regulations to minimize the law mafia practice in the law enforcement process, among others the Civil Code (KUHP) and the Law of Procedure Code (KUHAP), Law Number 13/2006 concerning the Protection of Victim and Reporter Witness, Law Number 15/2002 concerning Money Laundering Crime in order to ensure the implementation of the constructive *check and balances* mechanism as well as enabling the reversal authentication mechanism for the corruption perpetrators as well as sufficient *justice collaborators* protection;

g. Implementation of the bureaucracy reformation at the law enforcement institutions, particularly which are related to the forestry sector.

3.2.4. Stakeholders Involvement Program

There are at least two stakeholders group in this REDD+ implementation, which will determine the success in the field, namely as follows:

1. Stakeholders at the national level, consisting of the central government, national private sector, national universities, non-government organizations at the national level, and others.

2. Stakeholders at the sub-national level, consisting of the provincial government, regency government, forest management unit, local universities, local society organizations and others.

By taking account of the complexity potential due to the many stakeholders that are involved in this REDD+ implementation, it is necessary to design such format of the stakeholders involvement since the beginning. In the REDD+ implementation, the form of cooperation or partnership is directed to four partnership types, which are preceded by the preparation of the Free, Prior Informed Concern and commitment of women involvement, commencing from the planning until the monitoring and evaluation. Those activities are as follows:

1. Application of the FPIC principle in the REDD+ implementation, including the commitment of women involvement, commencing from the planning until the monitoring and evaluation.
2. Improvement of awareness, uniform understanding, and support of the stakeholders toward the implementation of REDD+.
3. Improvement of the stakeholders' role in designing and problem solving.
4. The involvement of stakeholders in the REDD+ implementation at the site level through various forms of cooperation is as follows:
    a. *Contributory Partnership*) , namely the *support sharing* cooperation where the contributor agrees to the proposal and decides to distribute fund at the REDD+ program or project. The contributor may be the government, private sector or others.
    b. *Operational Partnership* Development, namely the *working sharing* cooperation where the parties consisting of the government, local government, private sector and the community agree to cooperate and share resources in the REDD+ activity implementation.
    c. *Consultative Partnership* Development, namely the advisory cooperation where certain parties that are considered competent provide the input of policy,

strategy, design, evaluation and adjustment in order to accelerate the REDD+ implementation in Indonesia.

d. Collaborative Partnership Development, namely the cooperation in the decision making process, where the parties cooperate in the formulation of policies, planning, implementation, evaluation and adjustment of the REDD+ implementation with the authority, ownership and risks in the framework of sharing.

3.3. SECTOR DEVELOPMENT COMPLETION STRATEGY

3.3.1. Forestry Sector Development Strengthening Program

The Forest Management Unit (KPH) is the forest management area in accordance with its principal function and allocation, that can be efficiently and conserve managed. The Forest Management Unit is an important part of the strengthening of the forest management system of the national government, provincial government and regency/city government. The main activities in this KPH development are as follows:

1. Emission source reduction activities, covering several activities as follows:
   a. Establishment of the KPH institution at the Central and Regional levels, with the objective to effectively manage the forest so as to be able to reduce deforestation and forest degradation, with the following provisions:
      - The KPH organization that is established at the central level is the KPHK organization,
      - The KPH organizations that is established at the regency level are the KPHL and KPHP organizations as the materialization of the accountable decentralization implementation.
   b. Implementation of the forest structuring activity in the KPH area, consisting of the border structuring, forest inventory, division in blocks or zones, division into plots and sub-plots, and mapping.
   c. Preparation of the Long Term Forest Management Plan and Short Term Forest Management Plan at each KPH.

d. Application of the reduced impact logging, SVLK, and certification at the production forest, managed by the IUPHHK license holder in order to reduce the forest degradation.

2. Activity of the carbon (sink) stock improvement and protection, covering several activities as follows:
   a. Improvement of the reforestation in the forest deforestation areas, that is transparent, accountable and participative, particularly inside the forest area.
   b. Implementation of the *enrichment planting* at the de-gradated areas, particularly inside the forest area.
   c. Implementation of the forest restoration at the conservation areas and at the IUPHHK-Restoration areas.
   d. Improvement of the peat land restoration efforts that is deforested, transparently. accountably and participative, particularly inside the forest area.
   e. Improvement of the mangrove forest rehabilitation, transparently, accountable and participative, particularly inside the forest area.
   f. Implementation of the former mine land reclamation, transparently, accountable and participative, particularly inside the forest area.
3. Effectiveness improvement of law enforcement in the KPH area.
   a. Capacity improvement of the forestry civil servant investigator.
   b. Improvement of cooperation with the law enforcement apparatuses.
4. Activity of the peat management perfection at the forest area:
   a. Application of the *best practices management* in accordance with the prevailing provisions for the extending of new license in the Limited Production Forest area, which has peat of less than 3 meters.
   b. Application of the non-burning technique for the clearance of peat forests.
   c. Application of good water structure management in managing the peat forest.
   d. Application of the ameliorant use in the land conservation of the peat land in the forest.
   e. Implementation of rehabilitation at all de-gradated forest areas through the hydrology rehabilitation (such as the canal blocking).
   f. Development of the peat fire handling located inside the forest area.

g. Restructuring of the peat forest in the other use areas and conversion of the production forest into the protected or conservation areas.
h. Restructuring of the remaining peat land that has not been extended the license or concession.
i. Re-allocation (*land swap*) of the concession licenses located in the peat forest into the mineral land.

3.3.2 Agriculture Sector Development Strengthening Program

The main priority of the agriculture development in facing the climate change is the adaptation action program in order to minimize the negative impacts of the climate change toward the national food endurance. In addition, the agriculture development has also the potential to provide contribution in mitigating the Green House Gas emission, either at the peat land or at the mineral land, with the condition that the Green House Gas emission mitigation is not reducing the productivity and is not harming the farmers. If the application of the emission mitigation technology causes losses, either in form of the production cost increase or reduction of the production, then the compensation fund needs to be allocated in order to cover such losses, either from domestic sources as well as fund from the carbon trade. The strengthening of the agriculture sector related to the Green House Gas mitigation consists of:

1. Perfection of the agriculture planning:
   a. Planning of the agriculture and plantation, projection of its expansion and extending of license not at the forest area and other areas (other use areas), which forest cover is still in good condition (potential of carbon storage of more than 100 tons/ha.
   b. Planning, determination, and protection of areas with high conservation values at the plantation areas, particularly the oil palm plantation.
   c. Application of the postponement/moratorium of the plantation license at areas with high conservation values, such as the peat land.

d. Development of the monitoring system and evaluation of the oil palm plantation development in order to monitor the oil palm plantation spatial aspect as the basis to improve the periodical planning.

2. Application of the agriculture intensification for food plants, superior varieties, and people's plantation as well as for cattle breeding.
3. Utilization of unused land or abandoned land.
4. Application of the *land swap* policy at the APL area in the mineral land from the land with high C stock (>100 t C/ha) into the land with low C stock (<35 t C/ha).
5. Application of the intermittent irrigation system at rice fields.
6. Expansion of the agriculture land at the mineral and non-forestry land.
7. Perfection of the license extending method by considering the carbon emission.
8. Provision of incentive to the plantation concession holders who transfer from the natural forest land to the non-forest land (land swap).
9. Application of the emission mitigation activity at the cattle breeding sub-sector through the improvement of the cattle food technology as well as the utilization of cattle dung into biogas and compost.
10. Improvement of the peat land management. The quite significant emission reduction can be achieved through various programs:
    a. Obedience toward the Regulation of the Minister of Agriculture Number 14/2009 concerning the peat land use for the expansion of the oil palm plantation, where the opening of the plantation at the peat land is conducted very selective, which 70% of such land extent complies with the criteria: Peat with thickness of < 3 m, sapris or hemis maturity level, and its sub-stratum is not quartz or acid sulfate.
    b. Control of the peat burning method. The peat burning often occurs within the circles of small farmers with the objective to obtain nutrient from the peat burning ashes. If the peat has the C storage of 500 t/ha/m, the burning of 1 cm peat has the potential to cause around 5 ton C/ha emission or 18 t t CO_2-e/ha. If the farmers are provided the subsidy for fertilizer at the peat land, then the emission from fire can be gradually eliminated.

c. The structuring of the drainage/water use. The drainage depth is strongly affecting the CO_2 emission through the peat decomposition. In this regard, the drainage depth needs to be minimized until the level that is reducing the production.
d. Use of ameliorant. Various waste substances, such as steel crust, which contains high Fe and Si has the potential to bind (chelating) simple organic acid so that the decomposition of such organic acid is not easy. The use of this substance at the peat land, in addition to having the potential to reduce emission, it may also solve the problem of steel crust disposal, which is currently classified as toxic and hazardous waste (B3).

3.3.3 Mining Sector Completion Program

The reduction of the carbon absorption capacity at the mining sector occurs due to the forest conversion into the mining area, which is in general directly cut down. The mining, which in general openly causes the reclamation activity is difficult to be implemented. The regulation, which declares that the mine owner has the obligation to implement the reclamation, is seldom carried out, so that there is no carbon absorption from reclamation.

The mining perfection program consists of two activities, namely as follows:

1. Mine planning
    a. Planning of the mining exploration and exploitation should be avoided at the forest area and other areas which still have forest cover in good condition.
    b. Planning, determination and protection of areas with high conservation values at the mining area.
    c. Development of the mining implementation monitoring system.
2. Improvement of the mine licensing and control, consisting of several activities, namely:
    a. Application of the KP license extending rationalization in the forest area through the determination of the emission threshold that is allowed at the KP licensing in order to press the emission level and simultaneously determine the the requirement of the carbon stock increase at the former mining area.

b. Law enforcement toward the KP license holder who violates the emission level threshold and the reclamation requirement.
c. Law enforcement toward mining without license.
d. Application of the 'open mining' minimizing.

3. Improvement of the former mining forest reclamation, consisting of several activities, namely:
   a. Improvement of the forest and land reclamation efforts.
   b. Development of the alternative livelihood, which is economic and with low emission for the citizens in the surroundings of the mine area.

3.3.4 Sustainable Completion of other land use sectors Program

3.3.5

1 The completion of the infrastructure development plan that has considered the carbon emission aspect.

2 Increase of clarity of sectors related to the long term that considers the carbon emission aspect.

CHAPTER IV

THE MAINSTREAMING OF NATIONAL STRATEGY (”STRANAS”) AND NATIONAL ACTION PLAN (”RAN”) REDD+ ON THE DEVELOPMENT PROCESS CENTRALLY REGIONALLY

Stranas and RAN REDD+ are pointed at continuing, consolidating and completing various efforts and policies in emission reduction originated from deforestation and forest degradation in order to have a concrete impact on global warming prevention and sustainable development survival. The Strategy and Action Plan as aforesaid has been formulated through active involvement of several stakeholders, such as: civil society and the business circles, beside the Government’s active role, but further more than that, the stakeholders involvement inclusively has to be maintained constantly in each development cycle stages.

The general principles which shall have to be taken into account in the implementation of the abovementioned mainstreaming are:

a. The National Strategy and National Action Plan REDD+ constitute a part of the national planning system and budgeting and, therefore, should be synergetic with the existing plan documents.
b. The National Strategy and National Action Plan REDD+ constitute an inseparable part of the Gas Green House National Action Plan.
c. Planning with approaches like technocratic, political, participating, top-down, and bottom-up.
d. Problem handling with holistic and systematic approaches.

For that matter, it is deemed necessary to implement mainstreaming towards several strategies and action plan mentioned in the Stranas and RAN REDD+ documents. Mainstreaming of Stranas and RAN REDD+ are carried out through the following programs:

4.1 INTEGRATING PROGRAM OF STRANAS REDD+ INTO THE PLANNING AND BUDGETING PROCESS

The National Strategy and National Action Plan REDD+ are documents as guidance of series of strategic activities and integrated to the related sectors and are inseparable document of policies embodied in the Medium Term Development Plan *("RPJM")* especially the National Medium Term Development Plan Year *("RPJMN")* 2010 – 2014 and the Long Term Development Plan *("RPJP")* Year 2005 – 2025. This matter is an attempt to make sure of the availability of reasonable resources for the Stranas and RAN REDD+ implementation.

However, the process of Stranas and RAN REDD+ formation shall be executed after RPMN 2010 – 2014 is composed, so that an arrangement gap substance arouse related to the emission reduction originated from deforestation and forest degradation in the RPJMN 2010 – 2014**.** Furthermore**,** since the planning system and budgeting have presently applied the Medium Term Expenditure Framework (MTEF), the consequence would then be *resource envelope* as determined in the RPJMN framework binding during the planning period. This certainly shall have an effect on the allocation in the Strategic Planning *("Renstra")* and Working and Budgeting Plan *("RKA")* of the Ministry/Institution of which its nomenclature and limit referred to RPJMN. In the end, the substance which has already been regulated in Stranas and RAN REDD+ is probable not accommodated in Renstra and the related RKA K/L.

In order to have that matter anticipated and surmounted at national level, it is deemed necessary to execute gap analysis between the covered substance in Stranas and RAN REDD+ with the related arrangement at RPJMN 2010 – 2014. Whereas the condition at regional level would be better if the composition of Stranas and RAN REDD+ process be ahead of the five year planning cycle (RPJMD) which vary in each region, depending on the election of their regional head cycle. Stranas and RAN REDD+ may directly mainstreamed and integrated in the RPJMD which has not been established. Another more ideal condition is a RAN REDD+ being arranged before RPJMD and RKA-SKPD is formed. But on the contrary when it has been formed, it is required to carry out a gap analysis as it is also prevailing in the RPJMN 2010 – 2014.

The output of the gap analysis shall afterwards be communicated with the responsible institution in the field of planning and budgeting both at central and regional level. This matter has been done to direct toward Stranas and RAN REDD+ with RPJMN 2010 – 2014 and made it completed with recommendation obtained from the gap analysis. Those recommendations would at its time be utilized as the base to enrich details of activities and

to sharpen the achievement indicator in the Working and Budgeting Plan of the Ministry/Institution/Regional Working Unit.

In that way, integration of Stranas and RAN REDD+ into the Planning and Budgeting Process shall be executed through the main activity:

4.1.1 The arrangement of Gap Analysis between Action Plan REDD+ and National Medium Term Development Plan

4.1.2 The arrangement of Gap Analysis between Action Plan REDD+ Medium Term Development Plan of 31 Provinces

4.1.3 Coordination and Rectification of the Gap Analysis Output with the Central and Regional Planning and Budgeting Institution

4.1.4 The arrangement of Working and Budgeting Plan of the Ministry/Institution/Regional Working Unit based on the Gap Analysis Output

4.1.5 The integration of Stranas and RAN REDD+ into RPJMN 2015 – 2019

4.1.6 Stipulating *Abatement Cost* as Material in the Fund Allocation of RPJMN 2015 – 2019

4.2 PROGRAM FOR STRENGTHENING OF THE DATABASE SYSTEM AND INFORMATION

Main activities to strengthen database system and information are:

4.2.1 The formation and collection of database and information system related to REDD+.

4.2.2 Maintenance and updating of database and information system related to REDD+.

4.2.3 Data collection and related information to the implementation of Stranas REDD+ Centrally and Regionally.

4.2.4 Integrating data research output and the latest information already being processed and analyzed into the database and Information System REDD+.

4.2.5 Building maintenance and updating database system and dynamic and participating forestry information.

4.3 PROGRAM OF REDD+ APPLICATION IN SAMPLE AREA

The implementation of RAD REDD+ has to go along with incentive giving for the province/district having commitment towards sustainable development in particular emission reduction in the form of facilitating the program implementation. Apart from that, being limited in possessing resources both at central and regional level in the application of

REDD+ forced the issue of REDD+ application facilitation is selected based on priority scale by taking into account a region having the highest possibility of success level. A readiness criteria should be stipulated for that purpose which later on become a base for election of province/district being facilitated. Determination of a Province must be paid attention to the feasibility study carried out by each region.

Therefore, the main activity in determining a REDD+ application area are:

4.6.1. Criteria and indicator making to be used in evaluating readiness of a region to implement REDD+

4.6.2. The mechanism arrangement to determine the sample area (demonstration activities) of REDD+ at district level

4.4 THE RED+ MECHANISM APPLICATION IN DEVELOPMENT PLANNING

The implementation of this REDD+ is one of the strategic efforts to increase the ability and synergy of the central and regional level in identifying, analyzing and handling of deforestation and forest degradation in a more comprehensive and systematic way.

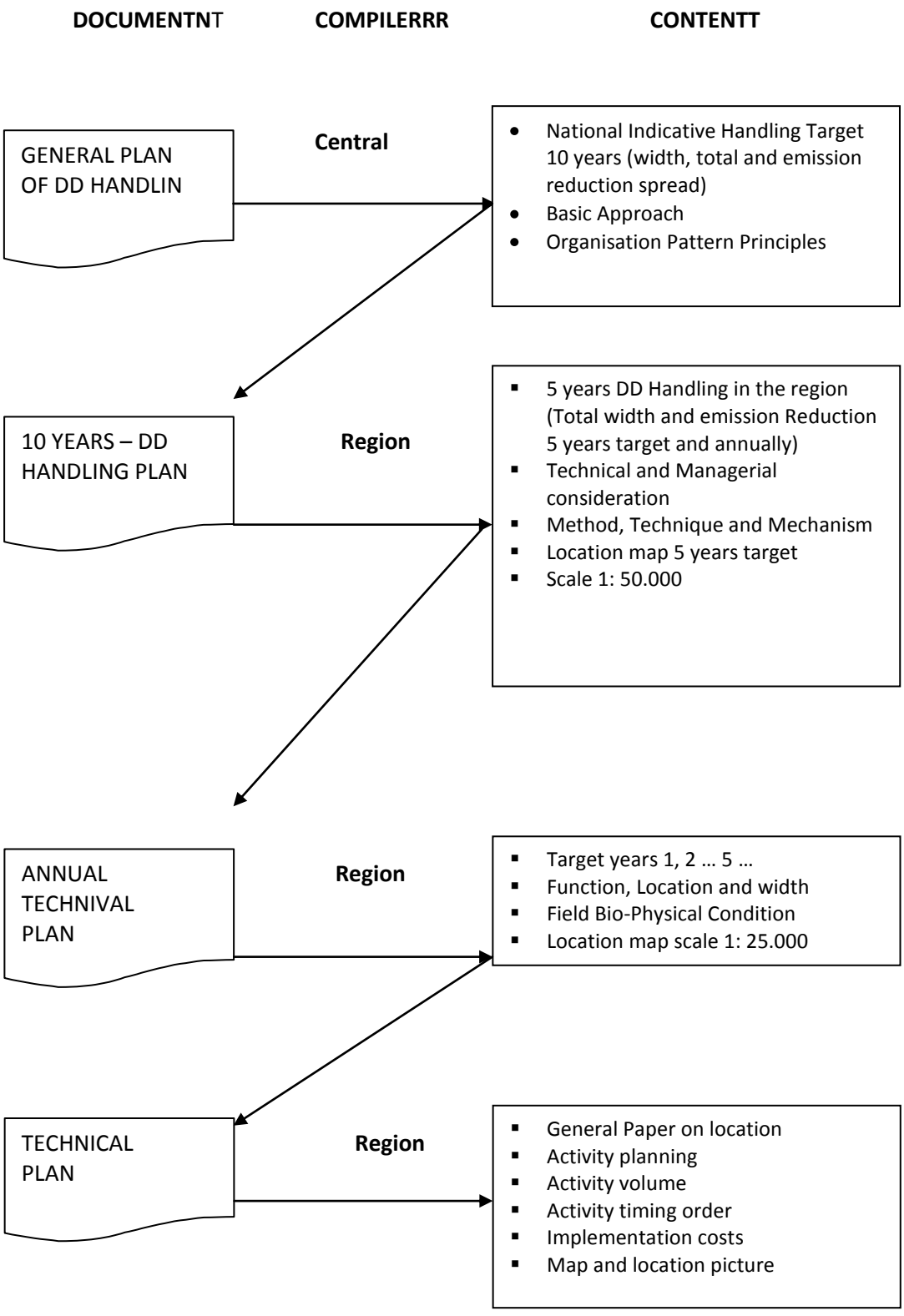
In order that the activity concerned could reach its optimum aim and target, an effective planning is required as reference at national central as well as sub-national level. This planning system must show participation and domain spaces of those aforesaid planning.

Hierarchy, mechanism and planning mechanism are as follows:

1. Planning hierarchy

   The REDD+ Plan referred to National Planning System with hierarchy:

   General Plan of the Implementation of Deforestation and Degradation Handling (10 years), Deforestation and Degradation Handling Plan – 5 years, Annual Technical Plan *("RTT")* and Technical Activity Planning. Picture 8 constitutes the hierarchy of Emission Deduction Plan from DD.



Picture 8. Hierarchy of emission reduction plan of DD

2. The Mechanism of Planning Arrangement

The planning arrangement of DD handling is executed in an integrated manner from top down and bottom up by the following mechanism:

a. At National Level

1. Based on a study output of a national level institution a 26 – 41% emission reduction target may arise with a location spread which should be handled/applied by REDD+ of an indicative nature. Afterwards out of this data the General Plan of Handling containing indicative target handling DD 10 Years (2010 – 2020).
2. Location plan and width target is compiled based on the Value of Handling Priority of Deforestation and Forest Degradation obtained from the weighted output on the stipulated criteria and scoring on each parameter of any indicator (criteria, parameter indicator to be determined first).
3. Value of Handling Priority of Deforestation and Forest Degradation to be mentioned in the General Plan based on the biggest sequence until the smallest one indicating DD handling priority to be suggested in the activity planning and budgeting of the central government.

b. Planning at Regional Level

1. The 10 Years Clearing Handling Plan is compiled based on the General Plan in each region, by means of priority to be handled for 10 years based upon priority value assessment individually executed by the region (regional indicative priority value) completed by technical and managerial considerations, method and its location map in the scale of 1 : 50.000.
2. With reference to the 10 Years Handling Plan of Deforestation and Forest Degradation as aforesaid, the Annual Technical Plan (*RTT)* is compiled based on regional indicative priority values.

c. Compatible mixing of DD Handling Allocation

1. Indicative allocation by the Central level is mixed compatible with RTT as proposed by the region and being discussed in the Consultation Meeting of Technical Planning and Handling of Deforestation and Forest Degradation

both regionally and centrally to obtain area accuracy, regional commitment and related parties of the DD handling planning.

2. The determination of target allocation considered : the performance of development implementation in the region, performance of forest management implementation, institutional and regional commitment and parties in the region, other funding resources and specific considerations.
3. Technical Consultation Output became material proposals at Central level to be brought forward or obtaining budget approval.
4. The discussion output and budget approval become material for the arrangement of the implementation of documents of definitive nature.

d. The arrangement of Technical Activity Plan

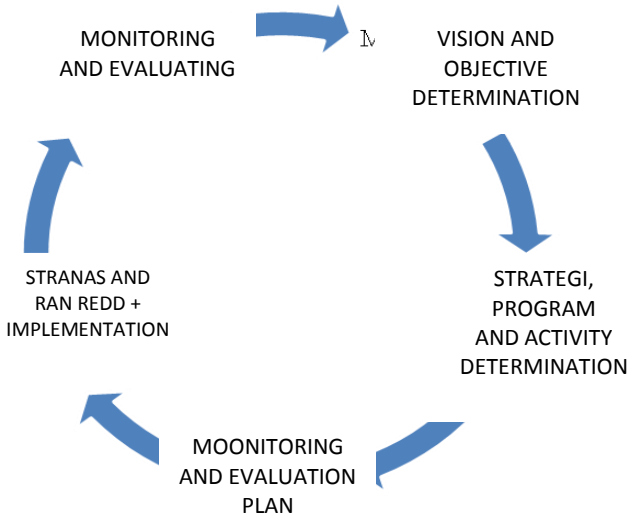
The technical activity plan is made compatible with the type of activity to be carried out. The technical plan is composed before implementation of its activity in the field (T-0 or T-1) adjusted with the budget approval result. In general the contents of documents on technical activity handling plan of deforestation and degradation are as follows:

1. Introduction
2. General condition of the location
3. REL
4. Profile of the DD Case
5. DD Handling Activity Plan
6. Activity Schedule Plan
7. Expenditure Plan
8. Money
9. Location Map and supporting maps

CHAPTER V

MONITORING AND EVALUATING

To assure the implementation of National Strategy (*Stranas*) and National Action Plan *(RAN)* REDD+ to run smoothly, the monitoring and evaluating working outline need to be composed as monitoring guidance and evaluated by Stranas and RAN REDD+. The output of monitoring and evaluation by Stranas and RAN REDD+ are expected to be made as feedback for the improvement of Stranas and RAN REDD+ 2010 – 2020 documents. Thus, Stranas and RAN REDD+ documents become living ones which are always renewable in conformity with the identified requirements. Picture 9 is the monitoring and evaluating working channel of Stranas and RAN REDD+.



5.1 MONITORING AND EVALUATING OBJECTIVES

The monitoring and evaluating working plan of Stranas and RAN REDD+ have some main objectives as follows:

- To guarantee achievement of the stipulated target and objective;
- To provide accurate information within early detection of performance achievement;
- To sharpen decision making;
- Follow-up settlement of obstruction being faced;
- To increase efficiency and effectiveness of Stranas and RAN REDD+ implementation; and

- To increase transparency and accountability of the Stranas ands RAN REDD+ implementation;

5.2 THE MONITORING AND EVALUATING SCOPE

Monitoring and evaluating in this case covered all aspects regulated and compiled in the National Strategy and REDD+ National Action Plan among others:

- Achievement of vision and objective.
- The implementation of REDD+ National Strategy consisting of prerequisite fulfilling strategy, condition fulfilling strategy, sector completeness strategy utilizing log frame of Stranas REDD+ as reference to measure the success of Stranas REDD+
- Mainstreaming of Stranas REDD+ at the implementation on all levels..

5.3. MONITORING AND EVALUATING MECHANISM

The implementation of monitoring and evaluating is executed by the REDD+ /MRV Executor Institution holding *robust, transparent, and participatory* principles involving civil society organizations in particular the customary/traditional community in executing monitoring and evaluating. The active involvement of external components can be accommodated in the form of working groups coordinated by the REDD+ Executor Institution in Indonesia. In the execution of monitoring and evaluating technology may be used to build up application that would be able to analyze spatial and non-spatial data where monitoring and evaluating output is accessible anytime by stakeholders so that the application of REDD+ became more transparent.

In this way, monitoring and evaluating mechanism enabled a feedback process which is *"iterative"* to make alterations and compatibility of Stranas REDD+ as a result of which a management cycle would happen producing input for adjustment of strategy, program and action plan at certain periods.

CHAPTER VI

CLOSURE

REDD + is one of the attempts to mitigate climate change. As a new approach related to forest management in specific and the management of sustainable natural resources in general, it requires the proper understanding and implementation. An approach which begins with a global commitment to reduce emission surely deserves special attention from Indonesia, notwithstanding the national interest and benefits. This approach must be considered as a complimentary approach to the existing approach with the principles in the attempt to perfect and improve the existing policies or strategy.

As a part of Indonesian commitment to willingly contribute to the reduction of global emission, the REDD+ national strategy is compiled with the basis of emission reduction from deforestation and forest degradation and at the same time improves the carbon sink and maintains the forest stock. The strategy is based on studies on issues and source of problem, so that it displays priority strategy and the program which must be carried out until 2020. An approach with perfection and conditioning continued with the improvement of natural resources management in its proper sector is expected to be able to provide high effectiveness.

The Implementation of National Strategy will only be effective if it enters the planning system at central and regional level. Therefore, the mainstreaming of REDD+ national strategy in the planning system is a form of certainty.