



MINISTRY OF FORESTRY
DIRECTORATE GENERAL OF FORESTRY PLANNING
**DIRECTORATE OF AREA MANAGEMENT AND PREPARATION OF
FOREST AREA UTILISATION**

Forest Management Unit Development **(FMU)**

Concept, Legislation
and Implementation



Jakarta, October 2011



giz

Published by :

Directorate of Area Management and Preparation of Forest Area Utilisation

In cooperation with:

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
FORCLIME Forest and Climate Change Programme

Written by :**The Team of Bogor Agriculture Institute (IPB)**

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FOREWORD

Minister of Forestry



The Forestry Law, Law No. 41/1999, mandates that the management of forests shall be implemented at the management unit level, i.e., the smallest unit that can be managed efficiently and sustainably according to its main function and purpose.

Academics, bureaucrats and practitioners, and most stakeholders in the forest sector, believe that forest management at the field level, known as Forest Management Unit (FMU), is a system that can better guarantee the sustainability of forest functions and benefits, in terms of economic, ecological and social aspects.

Although the mandate for a forest management system described above was only explicitly set out in legislation promulgated in 1999, the concept of managing forests at the level of the smallest unit has been under development in Indonesia for a long time, and has already been implemented on the island of Java. Outside the island of Java, before the reform era arrived, forest management had also adopted the FMU concept, even though the system was not adopted in its entirety. With the arrival of the reform era, in line with the policy of decentralisation and greater regional autonomy, institutional arrangements for forest management also changed. However, in fact, the existence of forest management institutions has not yet been felt at the field level. Foresters believe that a forest management unit at the site level is a prerequisite for sustainability. Therefore, the government sees the need to quickly align the forest management system to "restore its original mission," and this will be done through the FMU.

The Government has determined that the development of FMU should become a national priority, stipulated in the National Medium-Term Development Plan (RPJMN) and the Strategic Plan of the Ministry of Forestry for 2010-2014. Realising

a forest management organisation in the form of an FMU will further encourage implementation of true decentralisation, optimisation of public access to forest resources as one way to resolve conflicts, facilitation and certainty in investment, handling areas still without a unit manager, or in other words, areas not subject to permits, and efforts to improve the success of forest rehabilitation and protection. The importance of achieving the priority target of FMU development has made this one of the items in the Presidential Programme for Equitable Development set out in Presidential Instruction No. 3 of 2010.

Based on the above explanation, the Ministry of Forestry sees the need to publish the book "*Forest Management Unit Development – Concept, Legislation and Implementation.*" This book will become an important source of information for stakeholders at both central and regional levels in understanding, directing, executing and overseeing the development of FMUs. Such an understanding, is essential, particularly for policy makers and political decision makers.

May God Almighty always guide the Indonesian people in our efforts to achieve sustainable forest resources.

Minister of Forestry,

A stylized signature of Zulkipri Hasan in black ink.

Zulkipri Hasan

PREFACE

Director General of Forestry Planning



The use of forest resources outside Java, which began four decades ago, has given national development huge benefits. Although to date, the main product has largely taken the form of timber, with a smaller portion consisting of non-timber products, forest resources have made a substantial contribution to national economic development.

After a fairly long period of benefits for national development, there is now a substantial negative impact. For example, in terms of ecology, the utilisation of resources has affected the forest's function as an environment with a high quality of biodiversity. In terms of society, land tenure issues have arisen. And in terms of the economy, there is currently no certainty as to the sustainability of production.

After a very long and convoluted journey involving various challenges to forest management, "the dream" of Indonesian foresters is to have a foundation for forest management that assures the principle of sustainability, to be realised step-by-step through the Forest Management Unit (FMU) as a unit of forest management at the site level. Indonesian foresters believe that the FMU is the answer to sustainable forest management that adheres to the three basic principles, namely the management of the ecology, society and economy.

The political and legal basis for FMU development is explicitly mandated in Law No. 41 of 1999, which changed the basis for forest management outside Java from concessions to FMUs. But the FMU development process has faced various obstacles. FMU development applies not only to the domain of foresters, it is also the domain of all levels of government, ranging from policy makers to technical institutions in the field. In order to accelerate the establishment of FMUs, the Ministry of Forestry has stipulated FMU development as

one of the priorities for forestry development, establishing measurable targets in the 2010-2014 Strategic Plan (RENSTRA).

The current period of the RENSTRA can be considered as the initial stage of the physical development of FMUs. As with any process, the initial stage is a difficult and critical period. It begins with the need for an understanding among the parties of basic concepts and FMU development regulations. Although the basic concepts and legal principles of FMU development have been widely discussed by stakeholders in various forums, nonetheless, in order to obtain one integral understanding it is necessary to have a document that discusses the issues mentioned comprehensively. Therefore, the Ministry of Forestry has now published a book about the FMU concept that meets academic convention, but is presented in simple and 'popular' language, with the title "Forest Management Unit Development: Concept, Legislation and Implementation."

The preparation and publication of this book is the result of cooperation between the Ministry of Forestry, the IPB Faculty of Forestry and the GIZ Forests and Climate Change (FORCLIME) Programme, a cooperation between Indonesia and Germany in the field of forestry. We would like to thank everyone who has contributed in the preparation of this book, and hope that this book will be useful.

Director General of Forestry Planning

A handwritten signature in black ink, appearing to read 'Bambang Soepijanto'. The signature is stylized and somewhat cursive.

Bambang Soepijanto

PREFACE

Director Forest and Climate Change Programme (FORCLIME)



Effective political institutions and administrative structures are needed if the state is to fulfil its responsibility for good governance of natural resources. To this end the state must ensure that laws, policies, rules and regulations as well as opportunities

for public consultation and participation are established and enforced which are geared towards meeting societal needs and which are conducive to sustainable forest management. Good governance of natural resources also requires that management is accountable to society, and that individual rights (including women's rights) and communal rights are respected. Moreover, the state has to guarantee equitable access to public resources. This is, in brief, why German Development Cooperation has supported and continues to support the Government of Indonesia to develop and implement the concept of Forest Management Units (FMU). The development of FMUs, as operational units of manageable and controllable size directly responsible for forest management at the field level and responsive to local needs and interests, is a significant step towards improved governance in the Indonesian forest sector. The FMU concept constitutes a milestone in the process of decentralisation and devolution of power, and is characterised by a clear division between sovereign and operational functions.

So far the FMU concept has only been documented in the relevant regulations and decrees, in workshop proceedings and project reports. The book "Forest Management Unit Development – Concept, Legislation and Implementation" for the first time presents the concept in a comprehensive way. It explains the rationale and policies behind this administrative reform, the objectives and functions of an FMU and its management system. It also discusses social and governance aspects and analyses current challenges in establishing FMUs

based on an assessment of experiences made so far. It offers proposals of how to address these by policies, strategies and actions. The book thus synthesises and integrates pieces of the concept from scattered sources with early implementation experience in a presentation of the conceptual framework both from a policy and a technical perspective. It provides a good basis for discussion of the concept with stakeholders and for the next steps to be taken to make FMUs an operational reality in the field.

PROGRAMME DIRECTOR
GIZ FORESTS AND CLIMATE CHANGE
PROGRAMME (FORCLIME)

A handwritten signature in black ink, appearing to read 'R. Krezdorn', written in a cursive style.

ROLF KREZDORN

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LIST OF ACRONYMS

AAC	: Annual Allowable Cut jatah produksi tahunan	BPKH	: Balai Pemantapan Kawasan Hutan <i>Forest Area Consolidation Centre</i>
APBD	: Anggaran Pendapatan dan Belanja Daerah <i>Regional Revenues and Expenditures Budget</i>	BPN	: Badan Pertanahan Nasional <i>National Land Agency</i>
APBN	: Anggaran Pendapatan dan Belanja Negara <i>State Revenues and Expenditures Budget</i>	BPS	: Badan Pusat Statistik <i>Central Bureau of Statistics</i>
APHI	: Asosiasi Pengusaha Hutan Indonesia <i>Association of Indonesian Forest Concession Holders</i>	BUMN	: Badan Usaha Milik Negara <i>State Owned Enterprise / SOE</i>
Baplan	: Badan Planologi Kehutanan (now : Dirjen Planologi) <i>Forestry Planning Agency (now: Directorate General of Forestry Planning)</i>	DAS	: Daerah Aliran Sungai <i>watershed</i>
Bappeda	: Badan Perencanaan Pembangunan Daerah <i>Regional Development Planning Agency</i>	BPK	: Bina Produksi Kehutanan (Ditjen) (now : Bina Usaha Kehutanan) <i>Directorate General of Forest Production (now: Business) Development</i>
Bappenas	: Badan Perencanaan Pembangunan Nasional <i>National Development Planning Agency</i>	DKN	: Dewan Kehutanan Nasional <i>National Forestry Council</i>
BDH	: Bina Desa Hutan <i>Community Development Program conducted by Concession Holder</i>	DR	: Dana Reboisasi <i>Reforestation Fund</i>
BLU	: Badan Layanan Umum <i>Public Service Agency</i>	FORETIKA	: Forum Pimpinan Lembaga Pendidikan Tinggi Kehutanan <i>Leader Forum of Forestry Higher Education</i>
BP2HP	: Balai Pemantauan Pemanfaatan Hutan Produksi <i>Production Forest Utilisation Monitoring Centre ¹</i>	FSC	: Forest Stewardship Council
BPDAS	: Balai Pengelolaan Daerah Aliran Sungai <i>Watershed Management Centre</i>	GDP	: Gross Domestic Product
BPDAS-PS	: Badan Pengelolaan Daerah Aliran Sungai - Perhutanan Sosial <i>Watershed Management - Social Forestry Agency</i>	Gerhan	: Gerakan Rehabilitasi Lahan dan Hutan <i>Land and Forest Rehabilitation Movement</i>
		GR	: Government Regulation
		GRK	: gas rumah kaca <i>greenhouse gas</i>
		HCVF	: High Conservation Value Forest
		HD	: Hutan Desa <i>Village Forest</i>
		HKm	: Hutan Kemasyarakatan <i>Community Forest</i>
		HL	: hutan lindung <i>protection forest</i>

¹ [these centers are technical units of the Ministry of Forestry in the regions]

HPH	: Hak Pengusahaan Hutan <i>Forest Concession Right</i>	KPHP	: Kesatuan Pengelolaan Hutan Produksi <i>Production Forest Management Unit</i>
HPK	: Hutan Produksi Konversi <i>Conversion Production Forest</i>	KPHK	: Kesatuan Pengelolaan Hutan Konservasi <i>Conservation FMU</i>
HR	: Human Resources	KPHL	: Kesatuan Pengelolaan Hutan Lindung <i>Protection Forest Management Unit</i>
HTHR	: Hutan tanaman hasil rehabilitasi <i>Rehabilitated plantation forest</i>	LHP	: Laporan Hasil Produksi <i>Report of Production Result</i>
HTI	: Hutan Tanaman Industri <i>Industrial forest plantation</i>	LSM	: Lembaga Swadaya Masyarakat <i>Non Government Organisation / NGO</i>
HTR	: Hutan Tanaman Rakyat <i>Community Plantation Forest</i>	MRV	: <i>Measuring, Reporting and Verification</i>
IFCA	: Indonesia Forest Climate Alliance	NSPK	: Norma, Standar, Prosedur dan Kriteria <i>Norms, Standards, Procedures and Criteria</i>
IHMB	: Inventarisasi Hutan Menyeluruh Berkala <i>Periodic Comprehensive Forest Inventorying</i>	PAD	: Pendapatan Asli Daerah <i>Locally Generated Revenues</i>
IPHHK	: Izin Pemanfaatan Hasil Hutan berupa Kayu <i>Timber Harvesting Permit</i>	PAK	: Pembagian Areal Kerja <i>Divisions of Work Areal into Parcels/ Sub-parcels</i>
IUPHHBK	: Izin Usaha Pemanfaatan Hasil Hutan bukan Kayu <i>non-timber forest product utilisation business permit</i>	PHKA	: Perlindungan Hutan dan Konservasi Alam <i>Forest Protection and Nature Conservation (DG)</i>
IUPHHK	: Izin usaha pemanfaatan hasil hutan kayu <i>Timber Forest Product Utilisation Permit</i>	PHL	: Pengelolaan Hutan Lestari <i>Sustainable Forest Management</i>
IUPHKm	: Izin Usaha Pemanfaatan Hutan Kemasyarakatan <i>Community forest utilisation business permit</i>	PHTUL	: Pengelolaan Hutan Tanaman Unggulan Lokal <i>Locally Superior Plantantion Management</i>
IUPJL	: Izin Usaha Pemanfaatan Jasa Lingkungan <i>Environmental Services Utilisation Permit</i>	PNBP	: Pendapatan Negara Bukan Pajak <i>Non-Tax State Revenues</i>
IUPK	: Izin Usaha Pemanfaatan Kawasan <i>Forest Area Utilisation Permit</i>	Pokja	: Kelompok Kerja <i>Working Group</i>
KBNK	: Kawasan Budidaya Non Kehutanan <i>Non-forestry utilisation area</i>	PRONA	: Program National Agraria <i>Agrarian National Program</i>
KDHTK	: Kawasan Hutan Dengan Tujuan Khusus <i>Special Purpose Forest Area</i>	PSDH	: Provisi sumberdaya hutan <i>Forest resource provision</i>
KPH	: Kesatuan Pengelolaan Hutan <i>Forest Management Unit - FMU</i>	Pusdal	: Pusat Pengendalian <i>Center for Control</i>

Pusdiklat	: Pusat Pendidikan dan Pelatihan <i>Education and Training Center</i>	RPJMN	: Rencana Pembangunan Jangka Menengah Nasional <i>National Medium-Term Development Plan</i>
Puslitbang	: Pusat Penelitian dan Pengembangan <i>Research and Development Center</i>	RPJP	: Rencana Pembangunan Jangka Panjang <i>Long-Term Development Plan</i>
Renstra	: Rencana Strategis <i>Strategic Plan</i>	RTRWP	: Rencana Tata Ruang Wilayah Propinsi <i>Provincial Spatial Plan</i>
RKTN	: Rencana Kehutanan Tingkat Nasional <i>National Forestry Plan</i>	SKPD	: Satuan Kerja Perangkat Daerah <i>Local Government Work Unit</i>
RKT	: Rencana Karya Tahunan <i>Annual Work Plan</i>	SKT	: Surat Keterangan Tanah <i>Land Ownership Certificate</i>
RKU	: Rencana Kerja Usaha <i>Business Work Plan</i>	Tahura	: Taman hutan raya <i>Botanical forest park</i>
RLPS	: Rehabilitasi Lahan dan Perhutanan Sosial (Dirjen) (now : BPDAS-PS) <i>Land Rehabilitation and Social Forestry (DG)</i>	TGHK	: Tata Guna Hutan Kesepakatan <i>Forest Land Use Consensus Plan</i>
RPH	: Resort Pemangkuan Hutan <i>FMU Resort / Unit</i>	TNI	: Tentara Nasional Indonesia <i>National Army of Indonesia</i>
RPJM	: Rencana Pembangunan Jangka Menengah <i>Medium-Term Development Plan</i>	Tupoksi	: Tugas Pokok dan Fungsi <i>Main duties and functions</i>
		UPTD	: Unit Pelaksana Teknis Daerah <i>Technical Implementing Unit (of Dinas)</i>



CHAPTER 1

INTRODUCTION

- Background
 - Challenges in FMU Development
 - Objectives and Benefits of this Book
- Methodology for the Preparation of this Book
 - Contents of this Book

1.1 Background

The importance of ensuring safe and conflict-free forest areas has been the dream of all foresters and the forestry sector since the issuance of the Basic Forestry Law (Law No. 5/1967). Area security and stability is believed to be an absolute prerequisite for sustainable forest management. Following the enactment of this basic forestry regulation, the need to provide boundaries for forest areas to be preserved as permanent forest was recognised by both the public and the laws and regulations, and this was regulated through the confirmation of forest areas. The policy for designating forest areas began with the Forest Use Consensus Plan (TGHK) in the 1980's, which was used as the basis for granting forest concession permits. Forestry development initiatives oriented toward forest area consolidation to support forestry business certainty emerged in 1991 with the issuance of Minister of Forestry Decree No. 200/Kpts./1991 regulating the establishment of Production Forest Concession Units that also function as production forest concession planning units. In 1997, a Manual on the Establishment, Planning and Management of Production Forest Concession Units was issued.

The replacement of the Basic Forestry Law (Law No. 5/1967) with the Forestry Law (Law No. 41/1999) changed the legal basis for the establishment of these Production Forest Concession Units so that they became Forest Management Units (FMUs), which covered not only the establishment of FMUs in production forest areas, but also all forest areas and functions. In addition, the issuance of the Spatial Planning Law (Law No. 24/1992) drove the process of harmonising forest areas designated under the TGHK with the Provincial Spatial Plan (RTRWP), eventually resulting in the designation of new forest areas by the Minister of Forestry. Up until 2007, the mandate to establish FMUs was neglected in practice, drowning in the dynamics of land politics and the political economy of forestry, which had both directly and indirectly shifted the priority from forest area stability as a condition enabling forestry development to become oriented toward forest utilisation through concessions that divided up the entire production forest area. Comparable to “making the boat while sailing”, forestry policy lost control when the government as the “captain” became inattentive and was dragged

by a current that steered the “boat” away from its original heading, as it was later realised.

The consequences began being detected when people were surprised by the extraordinary deforestation figures for the 1997-1998 period, reaching over 3 million hectares per year, accompanied by illegal occupations and activities within forest areas that did not yet have a strong legal basis or recognition. The poor implementation of forest area confirmation – at less than 12 percent, covering an area of 14,238,516 hectares, up to 2007 – shows heavy distortion in providing preconditions for sustainable forest management. The dream of forest areas being preserved as permanent forests has not yet been realised, even though the mandate to confirm forest areas and establish forest management areas at the provincial level, regency level and management unit (FMU) level is expressly stated in several articles of the Forestry Law (Law No. 41/1999).

After forty years of forest management – particularly outside the island of Java – that has been intensive and notable for the exploitation by forestry development actors, the urgency of the establishment of forest management areas at the management unit level on site – commonly referred to as FMUs – has gained such a momentum that it can no longer be delayed. The determination for FMU development is also driven by decision-makers that see the real urgency for their development, having observed the weak state of forest area management in the field (*de facto* open access) which is attributable to various weaknesses and failures in the implementation of forestry development programme. The issuance of Government Regulation (GR) No. 6/2007 in conjunction with GR No. 3/2008 and their derivative regulations, implementation of which is guided by the stipulation of forestry development priorities that place FMU development foremost, has shown a new orientation towards forestry development that safeguards the public function of forests and realises the dream of forest areas being preserved as permanent forests, as the basis for sustainable forest management.

Despite this momentum arising, the implementation of FMU development still faces a number of obstacles, most notably a shortage of resources to realise FMU development, along

with various doubts among forestry development actors about supporting FMU development as a result of lack of information about FMU itself. This book has been written to fill that information gap, and can be used as a reference for forestry development actors to understand and support FMU development. It is also hoped that this book will become an up-to-date source of information on the status of FMU development that can be read by various circles, especially forestry development observers.

1.2 Challenges in FMU Development

FMU development rolls on, and is receiving increasing support from various parties. Overall, FMU development has shown quite satisfying progress. As of December 2010, FMU development achievements could be illustrated by the issuance of the following Minister of Forestry Decrees:

1. A Minister of Forestry Decree regarding the Establishment of Provincial FMU Areas in 22 (twenty-two) provinces with a total area of 56,091,892 hectares, consisting of 249 Production Forest Management Units (KPHPs) covering an area of 37,230,479 hectares and 155 Protection Forest Management Units (KPHLs) covering an area of 18,860,040 hectares.
2. A Minister of Forestry Decree regarding the Establishment of Conservation FMU Areas covering an area of 2,073,272.89 hectares in 20 (twenty) National Parks.
3. A Minister of Forestry Decree regarding the Establishment of 28 (twenty-eight) Model FMUs covering an area of 3,672,762 hectares in 23 (twenty-three) provinces.

Up until December 2010, the progress in FMU development could also be seen in the establishment of management organisations in 12 (twelve) Model FMUs and 3 (three) FMU/KPHL units, all of which were Technical Implementing Units (UPTDs), both at the regency and provincial levels. In tandem with such progress, it is also fully appreciated that FMU development still faces various problems, especially arising from the limited central/local government resources and quite weak support from various parties due to their limited knowledge and understanding of FMU. The FMU development

challenges that are discussed in this book include, among others:

1. How to manage conflict with communities in and around forests so that area stability can be achieved in FMU areas by accommodating community rights and access to forest resources.
2. How to create a management organisation for all FMUs in a situation where central/local government resources are limited.
3. How to create harmonious working relations between the FMU and the District Forest Service, the Province and the Ministry of Forestry in order to accelerate achievement of FMU development.
4. How to realise sustainable forest management at the FMU level through synergy among forest management actors in the FMU area – whether existing holders of forest utilisation permits and forest area use permits or new actors being brought in as working partners.
5. How to effectively evaluate performance of sustainable forest management at the FMU level.

1.3 Objectives and Benefits of this Book

As explained above, this book presents information on the concept and definition of FMU, FMU development policy and background, stages reached and problems faced in FMU development, as well as measures that should be taken in realising FMU development objectives. The presentation of this information aims to document the FMU development process to date, and to fill the many gaps in understanding about FMU that are found in various circles, especially among those directly involved in FMU development.

It is hoped that writing this book will give impetus to the FMU development process, which has become a priority national development policy in the forestry sector. The specific benefits of this book include, among other things:

1. For direct actors in FMU development in the environs of central and local government, this book is expected to be beneficial for unifying perceptions and understanding about FMU,

so that accurate and precise stipulation of policies, strategies and programmes can be directly synergised with FMU development achievements to date.

2. For the private sector, this book is expected to provide understanding about the future direction of forestry development policies, so that FMU organisations existing in the field will be welcomed as partners capable of enhancing business certainty and opportunities to achieve the objectives of sustainable forest management. In addition, understanding on FMU development can give the business sector an overview about developing investments in the forestry sector.
3. For communities within and around forests, and for NGOs, this book is expected to provide an understanding about FMU, so as to clarify the communities' bargaining position in resolving issues of rights and access to forest resources through various negotiations with parties authorised to make decisions in the field and/or to use government representation in the field to negotiate communities' aspirations at a higher level of authority.
4. For other forest-related communities, including universities, this book is expected to increase understanding on the FMU concept and state of development to date, as well as the issues that still require support from various parties, whether in the form of research and study findings or the expansion of the forestry development information network.

1.4 Methodology for the Preparation of this Book

This book has been prepared based on knowledge about FMU as contained in various laws and regulations, publications, seminar results, public consultation materials, and reports on implementation of FMU development, including Model FMUs. This book is a compilation of various pieces of knowledge spread among various documents, with the hope of presenting comprehensive information on current developments in FMUs.

1.5 Contents of this Book

This book consists of 8 chapters that systematically endeavour to elaborate on aspects related to the definition and scope of FMU, as presented in Chapter 2. Chapter 3 presents an in-depth study on the rationale for FMU development that focuses on an overview of the state of forestry in Indonesia and its issues, in order to answer the question of why FMU development is important. Chapter 4 presents a review of the conceptual basis for FMU development policy and various regulations on FMU development, as well as detailed elaboration on the proper role of FMU in governance. Chapter 5 and Chapter 6 present expectations towards forest planning, forest management, and evaluation of forest management performance in the framework of FMU. For the final part of this book, social and governance aspects, and national resources for FMU development are presented in Chapter 7 and Chapter 8.



CHAPTER 2

FMU DEFINITION AND SCOPE

- Definitions
 - FMU and Range of Forest Functions
 - FMU and Community Access
 - FMU and Forestry Business
 - FMU and Local Organisations
- FMU and Expansion of [administrative] Regions
 - FMU and Forest Sustainability

In a discussion on tree planting in the context of forest rehabilitation, it has been said that the most important thing in implementing forest rehabilitation is seed procurement. Seeds of sufficient quantity and quality being available in a timely manner for the planting season become a decisive factor. This view is supported by the fact that when quality seeds are planted they will “automatically” grow into trees. Fact of this can be easily found if the seeds are planted in the yard around a house. This perspective has become the basis for stipulating national policy. For instance, in undertaking forest and land rehabilitation, the greatest attention and budget are allocated to seedbed development and seed procurement.

Does anything strike one as odd about this view? Maybe not, maybe yes. There is nothing odd if quality seeds are planted on land where it is clear who holds authority, over the land, and where it is also clear who maintains and protects the land. But if that is not the case, then this view becomes odd. In cases where it is unclear who owns the location where the seeds are grown, or it is unclear who will maintain and protect them, there is a strong probability that the seeds will never grow into trees.

Many things, for example in tree growth, animal population growth, ecosystem changes, and changes in community life, are perceived as being able to proceed “automatically.” Since they are considered able to proceed automatically, it is not necessary to find out what or who decides these things, and therefore no effort is made to expend costs or make sacrifices or to pay any attention whatsoever to what or who decides these things. People forget that seeds grow into trees in yards because there is a house along with occupants. The function played by the house and its occupants is suddenly ignored. In this matter, a house and its occupants constitute the institution that determines who can enter the yard when and for what purpose. A house and its occupants are not something that “automatically” exists. They must be made available, and there is a strong likelihood that the cost and effort of making them available will be far more expensive than the price of the seeds planted in the yard.

Failure of forest management in Indonesia generally results from the absence or weakness of the “house and its occupants,” namely the on-site forest manager. The absence or weakness of

“who” from time to time knows about and pays attention to forest resources growing in the field, maintains and protects plant yields in critical lands, knows about changes in area boundaries, knows which community group is most connected to and in need of the forest resource benefits, and so on. The absence of an on-site forest manager is thus the main cause of failure to undertake forest management and an information disconnection between what actually happens in the field and the decisions made at the regency/municipal government, provincial government or central government level.

To provide an understanding of FMU, definitions and relationships between the FMU and the forest function, community access, forestry business, local organisations, area development, and forest sustainability are elaborated below.

2.1 Definitions

Article 12 of the Forestry Law mentions that forestry planning includes: forest inventorying, forest area confirmation, forest area stewardship, establishment of forest management areas, and forestry plan preparation. Forest management area shall be established at the provincial, regency/municipal and management unit level. Management unit refers to the smallest forest management unit in line with its main function and use that can be managed efficiently and sustainably, subsequently referred to as FMU. An FMU may take the form of a protection forest management unit (KPHL), a production forest management unit (KPHP), or a conservation forest management unit (KPHK), among other things. All forest area in Indonesia is divided up into FMU areas. One FMU area may consist of more than one primary forest function, and it shall be named in line with the dominant forest function in terms of area. FMUs shall be managed by a government organisation that undertakes the forest management function.

An FMU plays the role of forest management organiser in the field or on site, and must ensure that forest management is undertaken sustainably in line with the forest’s function.

Central Government and Local Government need FMUs to be the “owners” of forest resources pursuant to the mandate under the Law, whereby forest is controlled by the state and must be managed sustainably. In practice, the FMU’s on-site administration of forest management does not grant a forest utilisation permit. Rather, the FMU undertakes day-to-day forest management, including supervising the permit holder’s performance in forest management. In this way, the FMU becomes an information centre on the wealth of forest resources and arranges the forest area into segments that can be utilised under various permits and/or whose utilisation it manages through activities that it plans and carries out itself. If the FMU performs its role properly, it becomes the front line in achieving harmonisation of forest utilisation by various parties in the context of sustainable forest management.

In accordance with Article 9 of GR No. 6/2007 in conjunction with GR No. 3/2008, as elaborated in Ministry of Forestry Regulation No. P.6/Menhut-II/2010 Regarding Norms, Standards, Procedures and Criteria for Forest Management in KPHLs and KPHPs, the FMU’s explicit work function in on-site administration of forest management is elaborated operationally as follows:

1. Undertaking forest use planning and boundary demarcation within the FMU areas
2. Preparing the forest management plan at the FMU area level, including the FMU organisation development plan
3. Undertaking guidance, monitoring and evaluation on performance in forest management by holders of forest utilisation permits and forest area use permits, including in the fields of forest rehabilitation and reclamation, forest protection, and nature conservation
4. Undertaking forest rehabilitation and reclamation
5. Undertaking forest protection and nature conservation
6. Undertaking forest management in certain areas, for FMUs that are already implementing the financial management system of a Public Service Agency (BLU) or Regional Public Service Agency (BLUD)

7. Turning forestry policy into forest management innovations and operations
8. Upholding the forest laws, including protecting and securing the area
9. Developing investment to support the achievement of sustainable forest management objectives.

Based on the work functions above, FMU policies have led to various interpretations in the context of forestry regulation and the distribution of governance between the central and local governments. It is hoped that the various significant issues presented in the following section can clarify these diverse interpretations of FMU while illustrating the scope of FMU.

2.2 FMU and Range of Forest Functions

As explained earlier, the presence of FMUs helps ensure that the forest’s potential, the changes that occur, and the condition of the community that depends on the benefits of forest resources, are known. In addition, it is understood that the variety of forest functions located within a natural landscape actually allows for greater management efficiency and effectiveness in sustainable forest management. In this regard, the FMU is construed as the party that collects information on forest resources in order to undertake forest management that is not currently carried out directly by the Ministry of Forestry or the [regional] Forest Service. Based on these conditions, the key issue in forest management by FMUs is the size of the area that constitutes a forest ecosystem unit in a cohesive natural landscape with a reasonable span of managerial control, without concern for the different forest functions. Accordingly, an FMU area should be established not based on an administrative region but based on an ecosystem unit.

2.3 FMU and Community Access

Community access to forest resources may come in a variety of forms and patterns according to social and cultural conditions, the history of the community’s interaction with the forest, and

the economic expectations of the local people for improving their lives. In relation to permits and the determination of forest area status, the community's access cannot be determined at the FMU level, because the authority for that lies with the Central or Local Government. The presence of an FMU allows for clearer and more accurate identification of a community's existence and its need for the benefits of forest resources, such that the processes of acknowledging rights, permits and collaboration become more feasible. Similarly, conflict resolution and conflict prevention can be better controlled. In addition, an FMU can facilitate communication with the Central and/or Local Government to manage the community's rights and access to forest resources.

2.4 FMU and Forestry Business

With the operation of an FMU organisation, more accurate information should be available on the forest resources utilised by permit holders. The characteristics and nature of forest resources can also be expected to be known, which simplifies the determination of a forest management system that suits regional conditions and can be expected to reduce the administrative activities that must be performed, although this is not necessarily useful for the forestry business. In addition, permit holders' performance in forest management can be monitored and evaluated in the field. The effectiveness of forest management activities can be increased, and this in turn is expected to improve the company's efficiency.

2.5 FMU and Local Organisations

With the various work functions mentioned above, the FMU is unique. Previously, local organisations established based on GR No. 41/2007 did not recognise the existence of an organisation like the FMU, which is territorial. Because of this unique function of the FMU organisation, the various discussions on the FMU organisation have often misinterpreted it. Therefore, it needs to be reaffirmed in this book that the FMU organisation, although operating in the forestry sector, is not the same as a forestry organisation established based on GR No. 41/2007. The FMU is a specific

organisation that did not previously exist outside Java Island. In addition, an FMU may also engage in forestry business management, for example, by utilising/collecting timber and non-timber forest products and by selling tree stands that it manages in certain regions. With the issuance of Minister of Home Affairs Regulation No. 61/2010, the KPHP and KPHL organisational forms acquired a legal basis that embraced them. Broadly speaking, KPHP and KPHL organisations are Local Government Work Units (SKPDs) established under regional regulations at the provincial or regency level, and are directly accountable to the Governor or Regent.

2.6 FMU and Expansion of [administrative] Regions

Expansion of regions can be undertaken to achieve sustainable natural resource management provided economic, social and ecological/environmental interests are all given attention. Functionally, an FMU can provide goods and services to support such area development. Consequently, the objectives of FMU expansion need to be aligned with the expansion objectives of the regency and/or province. An FMU that is located across regency/municipal boundaries can align the direction of the management of forest resources in particular, and natural resources in general, in both these administrative regions.

2.7 FMU and Forest Sustainability

A significant number of factors influence forest sustainability, even though forest sustainability is in principle determined by the forest manager's capacity. The FMU is an enabling factor in establishing a forest manager, which has never previously existed, so opening up space for forestry professionals to participate in sustainable forest management. The absence of a manager has been proven to be the cause of the failure of many programmes, for instance, undertaking critical land rehabilitation within forest areas. The existence of an on-site government organisation responsible for forest management also provides space to increase the capacity of permit holders, and gives clear direction in achieving sustainable forest management.



CHAPTER 3

RATIONALE FOR FMU DEVELOPMENT

- General Issues on Indonesian Forestry
 - FMU Development as Strategy
 - Challenges to FMU Development

3.1 General Issues on Indonesian Forestry

3.1.1 Deforestation and Degradation¹

Deforestation in Indonesia generally occurs due to forest conversion for various uses, whether planned or unplanned. Meanwhile, forest degradation occurs as a consequence of forest management not being performed sustainably by Timber Forest Product Utilisation Business Permit (IUPHHK) holders in natural forest or because logging is conducted by parties that do not hold an IUPHHK. These activities damage and degrade forest stands, so reducing biomass and carbon reserves because the timber harvest rate is higher than incremental tree growth. The problem is that forest destruction and development of the land are not yet being done based on the principle of justice. For example, by the end of 2009, the forest resource permits and rights of local communities covered less than 400,000 hectares, while permits allocated to large-scale businesses reached 60 million hectares in the 1990's, and total 36 million hectares today (Ministry of Forestry, 2010).

3.1.1.1 Deforestation (Planned and Unplanned)

Planned deforestation is conversion taking place in a convertible production forest area (HPK) that is relinquished to become a non-forestry farming area (KBNK or APL). Planned conversion may also take place in a production forest area for open mining. Meanwhile, unplanned deforestation occurs as a result of forest conversion taking place in all forest areas due to various unplanned activities, particularly illegal activities.

Based on satellite data analysis, during the period 2000-2005, planned and unplanned forest conversion reached 1,089,560 hectares per year (Ministry of Forestry, Directorate General of Forestry Planning, 2008; **Table 1**). By the year 2007, the total area of planned deforestation had reached 4,609,551 hectares. This planned deforestation became commonplace after 1990, with the average planned deforestation rate reached 230,447 hectares per year (21% of total deforestation). Meanwhile, the unplanned deforestation rate was approximately 859,083 hectares per year.

¹ Unless stated otherwise, this part is extracted from the Ministry of Forestry Policy Working Group Report (2010).

Table 1. Deforestation Rate by Island in Indonesia (2000-2005)

No.	Year	Deforestation (Ha/Year)							
		Sumatera	Kalimantan	Sulawesi	Maluku	Papua	Jawa	Bali & Nusa Tenggara	Indonesia
1	2000-2001	259.500	212.000	154.000	20.000	147.200	118.300	107.200	1.018.200
2	2001-2002	202.600	129.700	150.400	41.400	160.500	142.100	99.600	926.300
3	2002-2003	339.000	480.400	385.800	132.400	140.800	343.400	84.300	1.906.100
4	2003-2004	208.700	173.300	41.500	10.600	100.800	71.700	28.100	634.700
5	2004-2005	335.700	234.700	134.600	10.500	169.100	37.300	40.600	962.500
Total		1.345.500	1.230.100	866.300	214.900	718.400	712.800	359.800	5.447.800
Average		269.100	246.020	173.260	42.980	143.680	142.560	71.960	1.089.560

Source: Ministry of Forestry, Directorate General of Forestry Planning (2008)

Based on the number of applications filed with the Ministry of Forestry, the planned deforestation rate is forecast to increase in the future. By the end of 2010, approximately 520 applications had been filed with the Ministry of Forestry for area relinquishment. The size of forest area for which relinquishment was being sought averaged 200,000 hectares per application. In the absence of any new policy to limit area expansion and limit space

utilisation, it is forecast that all HPK, covering an area of approximately 22.7 million hectares will be used up within the next 10 years. According to calculations for 18 provinces in Indonesia, the applications for forest area relinquishment based on draft provincial spatial plans (RTRWP) total an area of 15.7 million hectares (**Table 2**).

Table 2. Proposed Changes in Forest Area Use in 27 Provinces

No.	Provinsi	Luas Kawasan Hutan (Ha)	Usulan Perubahan Luas Kawasan Hutan menjadi APL	Persentase Usulan perubahan
1	Riau Islands	829.994,00	-697.652,00	-84,06
2	Riau	7.236.354,57	-3.528.039,44	-48,75
3	Central Kalimantan	14.073.744,00	-5.591.241,00	-39,73
4	Bangka Belitung Islands	657.510,00	-157.973,83	-24,03
5	Bengkulu	1.020.964,00	-199.969,00	-19,59
6	Central Sulawesi	4.369.081,00	-807.453,00	-18,48
7	West Kalimantan	9.125.486,00	-1.962.614,00	-21,51
8	North Sumatra	3.742.120,00	-610.959,26	-16,33
9	East Kalimantan	14.378.204,00	-2.063.053,00	-14,35
10	South Kalimantan	1.767.911,00	-222.442,00	-12,58
11	West Sumatra	2.464.094,00	-199.689,00	-8,10
12	North Sulawesi	788.692,00	-28.984,00	-3,67
13	Gorontalo	840.718,00	-29.888,00	-3,56
14	West Sulawesi	1.168.425,00	-20.375,00	-1,74
15	Papua	31.405.139,00	-401.975,00	-1,28
16	Lampung	1.004.735,00	0	0
17	Banten	201.787,00	0	0
18	West Java	816.602,70	0	0
19	Central Java	647.133,00	0	0
20	Yogyakarta Special Region	16.819,52	0	0
21	East Java	1.357.206,30	0	0
22	Bali	127.271,01	0	0
23	West Nusa Tenggara	1.010.012,00	0	0
24	South Sulawesi	2.502.129,00	0	0
25	Jambi	2.179.440,00	18.174,00	0,83
26	Southeast Sulawesi	2.492.455,00	310.165,00	12,44
27	Aceh	3.335.713,00	526.536,25	15,78
Total		109.559.740,10	-15.667.432,28	

Source: Ministry of Forestry, Directorate General of Forestry Planning (2010)

Based on the findings of the Indonesia Forest and Climate Alliance (IFCA) study (Ministry of Forestry, 2008), most unplanned deforestation occurs in production forest areas, followed by conservation forest areas and protection forest areas (**Figure 1**). This unplanned deforestation rate is expected to increase in the future, particularly in forest areas with more open access, in production forest without any management permit holders, and in protection forests. In some conservation forests, it is hoped that the existence of a National Park Agency can minimise this unplanned deforestation. By the end of 2009, almost half of the forest areas in Indonesia (46.5%, or 55.93 million hectares) were not being managed intensively (DKN, 2009);

3.1.1.2 Forest Degradation

Based on current industrial capacity, demand for timber from natural forests is expected to be greater than the sustainable supply. It is predicted that increased timber supply from illegal logging will equal the timber supply from legal logging. The greatest amount of illegal logging occurs in production forest areas (60%), followed by protection forests (30%) and conservation forests (10%). The rate of illegal logging is expected to be extremely high in production forest areas without a management permit holder.

There are currently 324 units of natural forest IUPHHK that are still active, covering an area

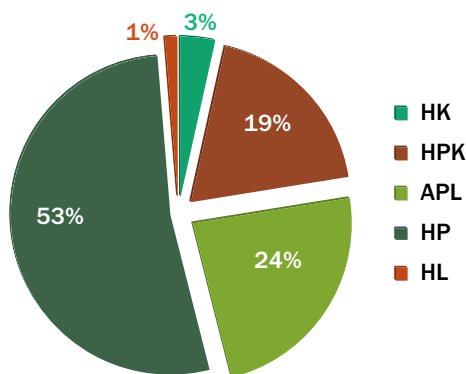


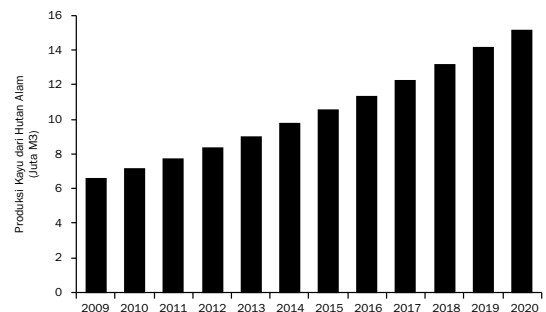
Figure 1. Deforestation locations in terms of forest area and non-forest area functions. Calculated based on data from IFCA study (Ministry of Forestry, 2008)

of 28,271,043 hectares (Directorate General of Forestry Production Development, 2010). It is estimated that approximately 15 million hectares apply a sustainable forest management system while the remaining 13 million hectares do not. Meanwhile, the area of production forest without any permit is 20 million hectares, of which approximately 13 million hectares of forest are still in good condition while the remaining 7 million hectares have suffered serious degradation (Directorate General of Forestry Planning, 2010).

According to the Strategic Plan of the Association of Indonesian Forest Concessionaires (APHI), dependency on natural forests for timber supply is expected to continue to increase in the future. In 2009, timber raw materials from natural forests totalled 6.68 million cubic metres, and by 2020 this figure is expected to increase to 15.23 million cubic metres (**Figure 2**). If this increased supply of timber from natural forests in the future is not accompanied by a sustainable forest management system, then the rate of natural forest degradation in Indonesia will also increase in the future.

3.1.2 Performance (Gap)

In the current state of forestry policy, governance and institutions, all convertible production forest (HPK) that is still forested covering an area of 22.7 million hectares, will continue being converted within the next 15 years.



Note: Projection for 2016-2020 assumes that 2009-2015 production growth continues

Figure 2. Projection of Timber Supply from Natural Forests (APHI, 2009)

This is in line with proposals from 15 provinces to convert forest areas covering 15.6 million hectares (see **Table 2**). Meanwhile, natural forest logging potential and production continue to fall. Based on experience to date, the average planting capacity in developing industrial plantations (HTI) is 150,000 hectares per year. The planting rates for Community Forests (HKm) and Village Forests are around 5,000 hectares per year. Under the GERHAN programme, the average planting rate achieved was almost 300,000 hectares per year. So the average total planting capacity under the various schemes is 455,000 hectares per year.

This level of performance is still far from fulfilling the role of the forestry sector in supplying industrial raw materials, ensuring fairness in forest benefit allocations for communities, and controlling climate change. In particular, the target area needed to reduce climate change under various schemes between 1.6 million hectares and 2.2 million hectares per year, consisting of 500,000 hectares of Community Forests and Village Forests per year, forest and land rehabilitation to improve the quality of 300,000-350,000 hectares of watershed per year, 450,000-600,000 hectares of industrial plantations (HTI) and Community Forest per year, and restoration of 300,000-700,000 hectares of HPH and 50,000 hectares of community partnership forest per year (Ministry of Forestry, 2009).

3.1.3 Roots of the Problem

This section describes and identifies the roots of forestry development problems that have led to the poor performance mentioned above. The roots of the problem identified here are summarised from the results of public consultations on the draft National Forestry Plan (RKTN), discussions with the FOrE TIKA², and various discussions held by the National Forestry Council (DKN). This identification of the roots of the problem focuses on the certainty over rights to forest areas, forestry development institutions, and the contents of laws

and regulations as well as determination of the added value of the forestry sector.

3.1.3.1 Forest Rights and Degradation

Out of 120.3 million hectares of state forest³, almost half (46.5% or 55.93 million hectares) is not managed intensively. Thirty million hectares of this forest area is under the authority of Local Governments. Only 64.37 million hectares (53.5%) of forest are managed quite intensively. Most of the forest area being managed under a Timber Forest Product Utilisation Business Permit (IUPHHK), covering an area of 36.17 million hectares, of which 26.2 million hectares are being managed by 324 business units based on a natural forest system and 9.97 million hectares are managed by 229 business units using a plantation forest system. And groups of conservation forest cover 28.2 million hectares in 534 locations.

However, there are conflicts or potential conflicts related to forest utilisation in both managed and unmanaged areas. It is estimated that there are conflicts in 17.6-24.4 million hectares of forest, taking the form of overlapping claims between state forest claims and claims from customary communities (*adat*), other local communities, village/hamlet developments, and the presence of other sectoral permits that are actually located in forest areas.

The absence of forest management, and conflicts or potential conflicts have resulted in the loss of a number of incentives for the preservation of existing natural forests, and become a disincentive for the preservation of the results of forest and land rehabilitation. This has occurred among other things due to a lack of business certainty and the high investment risks. In conservation areas, fund and resource allocations have focussed on managing conflicts and illegal logging, and on general forest protection activities, while the effort to obtain information on natural wealth has been defeated.

² These discussions on the RKTN were held on February 24, 2009 in Jogjakarta, on March 3, 2009 in Batam, on March 11, 2009 in Jakarta, on March 24, 2009 in Balikpapan, on April 15, 2009 in Makassar, and on August 20, 2010 in Jakarta. FOrE TIKA was convened separately, on February 19-20, 2009 in Jogjakarta.

³ The size of forest areas, if it were to include water conservation area, would become 136.8 million hectares (Draft RKTN, 2010)

Even in protection forest management, almost all resources are being used for forest protection, while forest management in general has been neither stipulated nor implemented.

Fairness in forest resource utilisation also remains a challenge, even though realising fair forest utilisation allocation is a basic requirement. The state of about 25 million poor people in Indonesia today depends greatly on forest benefits. Yet the government has not been able to develop certainty as to rights and access for customary communities and local communities with respect to forest resources, despite customary forests being recognised through Regional Regulations and permits for Community Forests (HKM), Community Plantations (HTR) and Village Forests (HD).

3.1.3.2 Forest Development Institutions

In addition to conflicts over forest area rights, forestry problems have become increasingly complex with the presence of institutional problems, including poor central-local government relations. Many forestry problems cannot be resolved swiftly because the existing institutions fail to prioritise efforts to resolve the root causes. The government's intensity of efforts and capacity to manage conservation and protection forest areas are still relatively low when compared to the extent of the problems faced. Counter-productivity often arises due to institutions being unable to provide solutions, investment opportunities or development of added value, and often causing high transaction costs. In addition, policy and regulatory products are often not in line with circumstances in the field.

By way of illustration, budget allocations for the 2005-2009 period at the Ministry of Forestry were as follows:

1. Secretariat General = 11.78% 1,791 people
2. Inspectorate General = 0.72% 195 people
3. Directorate General of = 5.99% 962 people
BPK
4. Directorate General of = 16.60% 2,840 people
RLPS
5. Directorate General of = 46.98% 8,210 people
PHKA
6. Directorate General of = 6.07% 1,248 people
Planning

7. Research and Development Agency = 4.49% 1,744 people

Average annual Non-Tax State Revenues (PNBP) from forestry during this period were Rp. 2,914 billion. The largest source of PNBP was the Reforestation Fund (DR), averaging 72.2%, followed by the forest resource provision (PSDH) in the amount of 23.8%. Meanwhile, average state budget realisation (including from the DR) per year (2004-2008) at the Ministry of Forestry was Rp. 3,303 billion. So based solely on budget allocations, the programmes and activities of the Ministry of Forestry during this period (2004-2008) prioritised forest protection and rehabilitation issues, so tended to be tactical and short-term rather than strategic and long-term. Resolution of issues of forest area claims and overlaps was not prioritised.

This weakness of forestry institutions also weakens the government's system for protecting forest resource assets. The Central Government (and Local Governments) tend to handle the administration of forest utilisation permits. In contrast, while mandated by Law No. 41/1999, as yet there has been no strong and directed policy to establish a government organisation that functions to manage forests in the field. As a consequence, there is insufficient information on undertaking forest utilisation, meaning that forests are *de facto* controlled by permit holders. When permits expire or are inactive, the relevant forests become open access, enabling anyone to utilise them without control, resulting in large-scale destruction.

On a national scale, the extent of forest area which is unmanaged has made the government weak in carrying out its obligation to protect natural forest assets and the results of rehabilitation. The same situation applies to right or permit holders. Government policies in this regard tend to control the quantity of forest product production, while the stock of natural forest is not the primary focus. No attention is being given to protecting and maintaining natural forests as stock in the form of young stands, stands that are ready or awaiting to be felled, since they do not fall within the criteria for evaluating permit holders' performance. On the one hand, such conditions make a company reluctant to protect natural forests in the area being managed, while on the other hand, controlling production quantity through multiple regulations leads to a high-cost economy.

3.1.3.3 Measuring Added Value

Forestry issues are also affected by confusion in calculating added value. The importance of a sector is measured from the added value in terms of development performance. This measurement is used in calculating Gross Domestic Revenues, which are limited by the value of goods and services in market prices. This measurement does not benefit forest management. There is a huge loss because the flow of forest benefits in the form of environmental services has never been considered a development benefit.

A second loss is the lowering of the work performance of the institutions managing forests. The added value of forest product processing is included as an added value of the related industry. For products in the form of agricultural commodities, for example, from agro-forestry, their added value is calculated for the agriculture sector instead of the forestry sector. Most benefits from non-timber forest products and the double impacts of forest concessions are also not fully inventoried, and are not calculated.

This bias in measuring development performance results in a lack of intensive forest management, because it is considered a cost centre, and forests can be easily converted to other uses because they are not considered to offer many benefits. In

practice, this results in a low state budget allocation for the forestry sector.

3.1.4 Root Causes of Problems and Development Policies

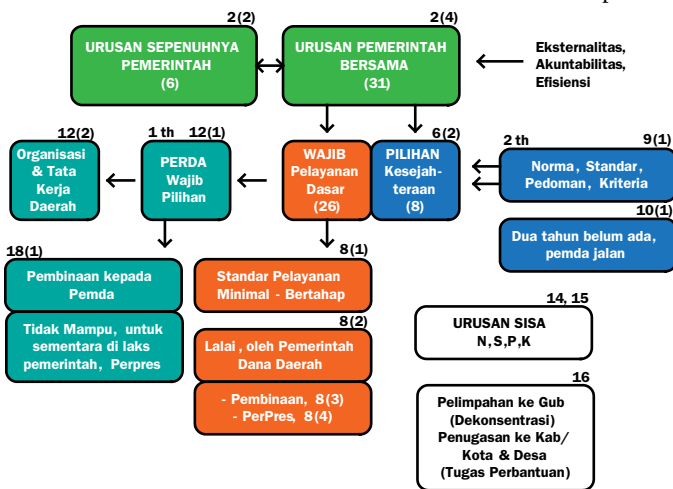
These matters are the root causes of the problems and need to be resolved immediately, because the results can solve other forestry problems. The actual response of the government and parties related to forestry development and climate change, for example, will depend on resolving these root causes of the problems. This can be seen in **Table 3**.

3.1.5 Regulation of Authorities

Authorities in the forestry sector are regulated in Government Regulation (GR) No. 38/2007 regarding the Distribution of Governance Affairs among the Central Government, Provincial Governments and Regency/Municipal Governments. In this GR, some Local Governments may decide whether or not to include forestry as an administrative option (**Figure 3**). This regulation divides the forestry sector into 59 sub-sectors.

The Government directly carries out forest management activities that are related to forest areas (forest area designation, boundary demarcation, forest area determination); ratification of plans (KPHP/KPHL/KPHK, production forest

and protection forest concessions, forest area periphery demarcation, establishment of concession areas in protection forest, conservation area and botanical forest park management); forest product administration; national critical land determination; forest rehabilitation on a national scale; land and mangroves and also areas of national natural disaster; stipulation of genetic resources, export licenses, quarantine and certification; nature tourism business permits; nature reserve management; preservation and licensing of protected plants and wild animals; permits for forest conservation and protection institutions. The Government has prepared norms, standards, procedures, and criteria (NSPK) for other activities.



Note: The numbers "2(4)" indicate the relevant article and sub-clause of GR No. 38/2007

Figure 3. Diagram on Implementation of GR No. 38/2007

Table 3. Relationship between Root Causes of Problems, Forestry Problems as a Whole, and National Development Policies

Root Causes of Problems and their Conditions	Relationship to Forestry problems as a Whole	Relationship to national development policy
<p>1. Forest area</p> <ul style="list-style-type: none"> a. Conflicts and potential conflicts with other sectors on spatial use in forest areas of 24.4 million hectares b. Excessive size of forest area being used by plantations and mines, without any solution being found c. Still small size of confirmed forest areas d. Weak legal legitimization for state forest area claims e. Absence of legal certainty on land tenure rights f. Forests and forest areas being under-valued 	<ul style="list-style-type: none"> 1.1. Problem of certainty over rights and access for customary communities and other local communities 1.2. Problems with conservation forest and protection forest management 1.3. Problem of certainty for commercial enterprises in natural forests, plantation forests, community forests, and community plantations 1.4. Easy to convert forest areas into non-forest areas 	<p>Policies and implementation for agrarian renewal and natural resource management, spatial planning, natural resource management and utilisation (mining, agriculture, plantations, transmigration, etc.), and increase in the number of regions (by division)</p>
<p>2. Forestry development institutionalisation</p> <ul style="list-style-type: none"> a. 17,620 civil servants in the Ministry of Forestry, 3,438 of which are central government employees b. Slow public services, particularly in licensing process, and high-cost economy c. Slow development of forest management organisation in the field (FMU) 	<ul style="list-style-type: none"> 2.1. Duties and functions of institutions/work units and work relations among institutions/work units relating to priority issues being handled, and distribution of authority 2.2. Organisational structure and decision-making mechanism in relation to the efficiency and effectiveness of decision making and public services 2.3. HR development and HR allocation for national forest management, particularly on-site 2.4. Scope and content of laws and regulations that determine corridors for all forestry development actors 	<p>Forestry policy and laws and regulations, determination of central-local government authority, determination of local organisations, employment, and bureaucratic reform</p>
<p>3. Determination of added value in forestry sector</p> <ul style="list-style-type: none"> a. Role of the forestry sector in GDP (2004-2008; in constant prices for 2000) Rp. 16,848 billion (0.99%). Growth during the same period fell by an average of 0.91% per year b. Added value from the forestry sector is included in other sectors, and added value calculations contain errors. 	<ul style="list-style-type: none"> 3.1. Under-valued measurement of the added value of the forestry sector, resulting in biased assessment of forest benefits for economic development 3.2. Bias when considering whether to convert a forest for use in another sector 	<p>Policies on information collection and use, added value determination, and forestry business accounting</p>

Source: DKN (2009), modified

In relation to activities directly utilising or rehabilitating forests, Provincial and Regency/Municipal Governments have the following authorities:

1. Provincial Government: botanical forest management, granting provincial-scale timber forest product collection permits, permits for utilisation of forest area and environmental services as well as timber industry with a production capacity of less than 6,000 m³/year and undertaking provincial-scale forest and land rehabilitation (in production forests and protection forests that are not under a permit, other than forest and reclamation areas in disaster areas).
2. Regency/Municipal Government: granting business permits for the utilisation of forest areas and environmental services in production forests, granting permits for the utilisation of forest areas, collection of unprotected non-timber forest products, and utilisation of environmental services in protected forests, granting utilisation permits for unprotected plants and wild animals, granting research permits in production forests and protected forests that are not stipulated as forest areas with specific purposes, and rehabilitating forests and preserving rehabilitated forest products in botanical forest parks, production forests, protection forests that are not under forest utilisation/management permits, and land outside forest areas.

Both Provincial and Regency/Municipal Governments have the authority to give technical considerations on planning and licensing under the Government's authority. Complete descriptions of Provincial and Regency/Municipal Government authorities are presented in **Annex 1** and **Annex 2**. These distributions of authorities basically constitute a "structure" determining the distribution and use of economic, political and administrative resources that make up forestry governance. A structural form such as this is very inefficient and results in high-cost economy, short-term orientation and conflicts. The governance output described above has resulted in forest degradation and overlaps in forest benefit allocations.

3.1.6 Area Licensing and Use

Outside Java Island in general, forestry has been blanketed by natural forest utilisation producing windfall profits. Although this occurred during the period from the 1970's to the early 1990's, the "*a la HPH*" pattern of thinking, inefficient service system and exploitative natural resource utilisation pattern continue today (DKN, 2008). These conditions have both structurally and psychologically weakened policy implementation and forest management performance in the field.

On the other hand, the form of forest management that was developed focused on forest management by permit holders, so the Central Government and Local Governments did not have sufficient information, control mechanisms or a basis for determining forest utilisation allocations. Prospective permit holders had to obtain their own information on the area and its potential, and endeavour to obtain a permit recommendation from the Local Government. The Central and Local Governments had no clear basis for determining which permits should be placed and to whom they should be granted, so the licensing mechanism is controlled by powerful investors – i.e., those that can pay high transaction costs – and parties within the web of power⁴.

When this policy implementation situation is applied to the community, for example, to potential holders of Community Plantation Forest (HTR) permits, it has proven to be a problem⁵ that leads to slow development of HTRs. The HTR development target through 2016 is 5.4 million hectares, or about 600,000 hectares per year. However, this policy, which was introduced in 2007, has not achieved the target. A report from the Directorate for Plantation Forest Development (2009) stated

⁴ Power is translated into different form of mechanisms, processes, and social relations, creating bundles and webs of power that enable an individual or institution/company to influence implementation of policies in the field (Ribot dan Peluso, 2003).

⁵ Discussions with 16 BP2HPs in Indonesia on 20 May 2010 indicated that some proposed locations and permits for HTR required extra expenses that should be borne by the prospective permit holder, ranging from Rp 6 million for individuals to Rp. 600 million for corporations. This expense covers developing maps, and meetings with local officials along with their honoraria.

that by December 2009, applications from 112 Regencies had been processed, and Minister of Forestry Decrees had been issued for 63 Regencies, covering an area of 383,403 hectares. Meanwhile nine HTR permits had been issued by Regents, with four units to individuals in Sarolangun Regency, Jambi and five units to cooperatives in Mandailing Natal Regency, North Sumatra; West Kotawaringin Regency, Central Kalimantan; South Konawe Regency, Southeast Sulawesi; and Gudung Kidul Regency and South Halmahera Regency in North Maluku. These only covered a total area of 21,157 hectares.

Such a licensing policy has resulted in not only unfair performance in forest resource utilisation, but also violations of the licensing procedures and errors in permit location placement or spatial plan violations. For example, in Central Kalimantan (conditions per December 1999), plantation permit location violations covered an area of 3.1 million hectares, being located within a natural forest management permit holder area of 560,990 hectares, and within a non-IUPHHK HA forest area covering 2,606,456 hectares. Of the permits where operations had commenced, an area of 1,004,668 hectares had been planted. As yet, no solution has been arrived at for these spatial plan violations.

Besides licensing issues, the results of BPS evaluations (2007, 2009) have also indicated the existence of 19,420 villages within forest areas in 32 provinces. Of those villages, 6,243 were indicated as being within Protected Forest, 2,270 villages were within Conservation Forests, 7,467 villages were within Production Forests, and 4,744 villages were within Limited Production Forests. In addition, 3,848 villages were located within Conversion Production Forest. While the presence of these villages would be deemed a legal violation based on “positive law,” no action has actually been taken from a social-political perspective, and therefore they continue to develop over time.

3.2 FMU Development as Strategy

The reality described above shows that in order to achieve forest management objectives – both maintaining the remaining natural forests and developing new plantation forests that are

expected to succeed – technical activities need to be prioritised, including at least the following:

1. Resolving forest area problems that have arisen, preventing new problems arising in the future, and increasing capacity for conservation forest and protection forest management.
2. Facilitating access for beneficiaries, alleviating the high-cost economy, and establishing a solid basis for the fair allocation of forest benefits.
3. Providing the social and economic infrastructure needed to strengthen local institutions, especially those with access to forest resource utilisation, to increase economic efficiency, and to develop added value for forest products.

These three technical activities must be undertaken and oriented toward spatial planning with due observance of local socio-economic conditions, and should unify the direction of activities by the Central Government, Provincial Governments and Regency/Municipal Governments. For this purpose, FMU development is a strategic solution that is unavoidable.

It is hoped that the existence of FMU can be synergised with a number of existing instruments and resources – although integration will be needed – in order to achieve transformation and decentralisation in forest management governance and institutions, as follows:

1. Inventorying forest resources and undertaking forest use planning in the context of regulating forest resource utilisation and controlling environmental carrying capacity;
2. Efforts to transform the order of control over forest areas and forest and land functions at the operational level, in order to achieve a more equitable and sustainable economic order in forestry;
3. Developing an economic and social infrastructure for regional development and main commodities in line with the characteristics of the resources in the FMU area and community needs;
4. Improved efficiency of services to permit holders through accurate information in the field and performance-based control and evaluation;

5. Efforts to reduce greenhouse gas emissions and natural disasters that require operational certainty over the status and function of forest and land resources in order to prevent deforestation and forest degradation.

3.3 Challenges to FMU Development

Undertaking FMU management can be considered as improving the forest management institution, which is deemed to have been neglected to date. In these improvement efforts, the matters that need to be fixed (problems) must be identified first, before solutions can be applied through a series of programmes and priority activities. Therefore, problem identification⁶ plays an important role in the preparation of FMU programmes and priority activities.

In relation to problem identification, many discussions have been held at socialisation forums, workshops, work meetings, and so on. Many lessons have been learned from these discussions, especially from the process of developing the FMU model. Such lessons have enhanced the knowledge⁷ of individuals and institutions, which can be accumulated as materials for making and taking better quality decisions and actions.

At Learning Workshop on FMU Development by UPTD-FMUs on May 31-June 1, 2010 the experiences of two Provincial UPTDs were presented (West Bali FMU and DIY FMU) along with the experiences of four Regency/Municipal UPTDs (Banjar KPHP, Kota Tarakan KPHL, Dampelas Tinombo KPHP Model Unit V in Central Sulawesi, and Way Terusan KPHP Register 47 in Central Lampung). Also presented were the results of an FMU study tour to Germany, study findings on an FMU evaluation instrument in line with P.6/Menhut-II/2009 regarding Establishment of FMU Areas, along with a number of land tenure aspects relating to FMU development. Based on the presentations and discussions among

participants at this workshop, it was determined that the main problems and challenges faced in FMU development were as follows:

1. Not all Local Governments support FMU development, particularly the establishment of FMU organisation. The main reason is the need for a budget to set up the FMU organisation;
2. Still limited understanding and comprehension about the FMU's function and its benefits in terms of forestry development. This is supported by the fact that the stipulation of governance authorities and the establishment of local organisations fail to consider the importance of area management and territory-based organisations. The governance framework is based only on utilising the commodities from natural resources;
3. Limited human resources that understand and have the capability to run the FMU organisation.

Significant issues that are more general in the FMU development process have also been identified, as follows:

1. ***In relation to the principle.*** The concept of FMU development and establishment, and the adaptation of national/sub-national specifications, are not yet fully understood by the regions. Therefore, there is a strong need to study the concept in accordance with developments in the context of history and the adaptation of national/sub-national specifications.
2. ***In relation to stakeholders.*** Provincial governments are very willing to accommodate FMU development, and some provinces can even see the importance of FMU as part of regional development. However, regency governments still feel that they have limited capacity to prepare for FMU establishment. In addition, some provinces feel that they have not been fully involved in the FMU development process. Stakeholder analysis appears necessary in order to examine the authorities, responsibilities, benefits, and roles played by the Central Government, Provincial Governments, Regency/Municipal Governments, Business Sector, Communities, NGOs, Academics, and other sectors.

⁶ Problems are requirements, values or opportunities that are unrealised, but that can be achieved (solved) through actions (Dunn, 2000).

⁷ Knowledge is a configuration and series of structured information for the purpose of a specific analysis, which may be in the form of predictions, causal relations, process flows, matching, and comparisons.

3. ***In relation to inharmonious relations.*** Problems that are still experienced generally relate to the clarity and assertiveness of authorities, main duties and functions, working relations, coordination, synchronisation, networking to share lessons learned, the FMU's relationship with the local Forestry Service and the FMU's relationship with IUPHHK holders. The implication is that there continues to be high reliance on the central government's directives for FMU development. Regional initiatives and innovations still need to be increased.
4. ***In relation to information/data.*** In Regional Development Area I, matters involving inventorying, forest use planning, mapping, sufficiency, completeness, accuracy, and dissemination are adequate at the provincial level. While in Regional Development Area II, these issues still present many obstacles due to limited knowledge, directives/guidelines, and funding. Likewise, many obstacles are still faced at the regency level in general due to such limited knowledge, directives/guidelines, and funding. However, some regencies (for example, Lampung Tengah, Tanggamus) have been able to take initiatives. It is hoped that boundary demarcation in the confirmation process can be resolved promptly.
5. ***In relation to laws and regulations.*** In general, regions are still confused about how to treat existing laws and regulations such as Government Regulation (GR) 06/2007 in conjunction with GR 03/2008, GR 38/2008 and GR 41/2008. It appears that consistent directives from the government are still needed. The issuance of Ministry of Forestry Regulation P.06/2010 regarding NSPK for forest management in KPHP and KPHL is expected to remove this confusion.
6. ***In relation to institutions/organisations/human resources.*** The Technical Implementing Unit (UPTD) institutional form has become a general trend developed by regions. But there are also other institutional opportunities that can be developed, such as the *nagari* (customary) institution in West Sumatra. Administrative and competency requirements in HR development are still seen as too burdensome. Procurement of staff, provision of technical education, and suitability of professional competency are still problems.
7. ***In relation to conflict with economic interest.*** The FMU has an essential role as a driver of the regional economy. However, it seems that this "economic interest" gets different responses from the various regions. For example, DIY and Bali do not position FMUs in relation to direct economic benefits (timber, plantations, mines, non-timber, and so on), rather, FMU is oriented more as a support for economic growth in other sectors (tourism, small-scale industry, and benefits for the community). Meanwhile, Banjar assigns it economic interest and includes it in the company category. Central Lampung and Tanggamus look at the potential local economic interest. South Sumatra and Jambi consider plantation forests as a commercial economic interest.
8. ***In relation to conflict with ecological interest.*** Environmental service benefits are not always marketable. West Sumatra depends on ecological interest, such as protection of water systems, followed by non-timber forest product economic opportunities. Meanwhile, South Sumatra and Aceh point to the potential of REDD+ and carbon trading incentives.
9. ***In relation to social conflict.*** In general, the areas allocated for FMU development have a high level of conflict over the land. However, it is now appreciated that the longer these issues are left unresolved, the more difficult it becomes to resolve them.
10. ***In relation to field operations (actions).*** Provincial governments are quite ready for acceleration, except for a few provinces that are still waiting for clarity on land classifications (RTRWP). The FMU model may be accepted and initiated by a province and regency/municipality, but funding is still a problem, and development of the infrastructure and supporting facilities to implement the FMU model cannot go ahead. The company class and business management offer great potential, but they are not yet designed and managed professionally, resulting in a situation where the cost of financing is greater than the revenues.

In line with the problems mentioned above, it seems we need to identify another problem (strategic issue) for each FMU or potential FMU, noting that each FMU has specific physical, biological, social, economic and cultural characteristics. Once the problem has been identified, specific FMU development strategies may then be determined.

Based on knowledge of the general problems identified above, the following transitional strategies or remedial steps are required for FMU development:

1. Forest use plan transition, which includes use planning, area confirmation, working area organisation, and forest class register.
2. Preservation scheme transition.
3. Funding and financing transition, location and generation of financing scheme.
4. Institutional and organisational transition.
5. HR management transition in order to satisfy standard HR needs and competencies.
6. Planning transition.
7. Transition in business management to secure corridor for operations that are financially viable in the short term in the context of FMU management independence.
8. Transition in social management that includes collaboration management, contract management, agro-forestry – depending on the local context.
9. Strengthening network with government channels: Ministry of Home Affairs, Local Government Association.



CHAPTER 4

FMU DEVELOPMENT POLICIES

- Conceptual Basis for Forest Management
 - Basis for FMU Establishment
 - Main Duties and Functions of FMU
- FMU Development in Provincial Regions
 - FMU Organisation Establishment
 - Human Resources

4.1 Conceptual Basis for Forest Management

4.1.1 Characteristics of Forest Resources

As determined in Law No. 41/1999 regarding Forestry, a forest is stated as an ecosystem unit in the form of an overlay containing biological natural resources dominated by trees in their natural environment, being inseparable from one another. Whereas forest products are defined as biological and non-biological objects and their derivatives, as well as services originating from a forest.

Both these definitions relate to the biophysical forest, with more emphasis on production of economic activity and on ecosystem management.

Forest resources, therefore, become economic assets and life carrying capacity, so that forest resources can be classified into:

1. Natural landscape in the form of stock⁸ or natural capital whose existence is not restricted by administrative region, and
2. Goods/commodities and services such as timber, rattan, water, and various forms of environmental services.

Such economic assets and life carrying capacity occur in various forms of ecosystem. Consequently, the ecosystem provides products such as food and water as well as services such as the regulation and control of floods, drought, and disease; supporting services such as soil and nutrient cycle formation; cultural services such as recreational, spiritual, religious and other non-material benefits (Bappenas, 1993). In practice, a single ecosystem is made up of several administrative regions, regions of ethnic groups or social institutions and local cultures, or based on certain political interests. An ecosystem is also divided into regions of exploitation under concessions held by private companies (Kartodihardjo, 2000).

Forest resources in the form of stock generate intangible functions. These functions include

storing water and preventing floods in the rainy season, and controlling drought in the dry season, absorbing CO₂ from the air, maintaining soil fertility, breaking down various toxic substances, and becoming a source of community knowledge and social and cultural relations. Natural resources function in the form of stock that is useful to the public, and cannot be distributed among or owned by individuals, even though everyone needs it. Both forms of forest resources are closely interrelated. Efforts to preserve forest are determined by the nature of forest resources as stock with limited carrying capacity to produce goods/commodities, services and public functions continuously (Bappenas, 1993).

Each type of commodity taken from forest resources in the form of stock influences the productivity of other types of commodity and the functions of forest resources as a whole. These various influences occur in certain landscapes, for instance, in a watershed (DAS) region if related to water, or in an eco-region if related to inter-ecosystem relations, for example land and sea ecosystems. Consequently, the management of forest as a natural landscape cannot be restricted by administrative regions, since the forest is a region where the relations between goods and services derived from forest resources are very closely connected.

Traditionally⁹, forest resources were only treated as goods and services that could be utilised directly. Developments in human knowledge and civilisation have enriched this view of resources to include other benefits in addition to direct benefits (**Table 4**).

Based on these views about forest resources, the traditional view limits what is defined as resources to those controlled by a certain community group (common pool goods), namely, resources controlled and managed based on the rules of a particular community group. The access of each individual member of the group to these jointly controlled resources produces significant additional revenues, and these additional benefits are often not profitable if they must be provided by individuals acting alone.

⁸ The term stock actually does not explain the real meaning. Physical resources can be regarded as natural landscape, not only stock – with a meaning closer to economic capital reserve – because natural landscapes also include processes that naturally realise the function of controlling damage and pollution as well as producing energy (such as geothermal energy, wind energy, etc.).

⁹ In this book, the term “traditional” relates not to customary or local communities, but to conservative views about natural resources, i.e., limited to direct utilisation only.

Forest resources –under both the traditional and current definitions – have now become extremely precious, and their functions need to be protected. Compared to the traditional system for the control of and right to use natural resources, the complexities are now greater, especially when one also considers the additional functions of forest resources that also need to be taken into account. Simply put, the common solution to this complexity is for the government to directly determine resource management. At first glance, this problem can be solved, at least partially. However, failure to consider interaction and interdependency among the individuals within a community group, and among community groups having an interest in the forest resource benefits, results in recurring conflicts over the control and use of forest resource benefits.

The types of forest resources described above can be further classified based on the motivations of those that manage them, and on the degree of need for human activities to generate or preserve these forest resource functions (**Table 5**).

From **Table 5** it is apparent that using the traditional definition, almost all types of forest resources are categorised as production for trade/export that require human activity in order to be produced. The characteristics of forest resources that can be traded/exported are as follows (Berge, 2004):

1. In general, this type of resource is produced from *subtractable* forest resources, i.e., if utilised by one party, other parties do not obtain it (*private* or *common pool goods*) – as elaborated in the next chapter;

2. In certain community environments, rights to utilise types of resources as traditionally defined are independent from one another. This does not prevent a group as a whole from jointly controlling these resources. In the same way, the right to use ecosystem services is also independent from a group’s right to control such ecosystem services;
3. Issues concerning the equitable utilisation of forest resources and preserving their functions become issues in the management of these forest resources.

The characteristics of forest resources that cannot be traded/exported, taking the form of recreational services and protected area Type II services, are as follows (Berge, 2004):

1. In general, this type of forest resource is produced from *non-subtractable* resources, i.e., if utilised by one party, other parties can still obtain it (*public* or *club goods*);
2. Rights to utilise this type of forest resource are independent from each other. However, the government may control the management of these forest resources by issuing policies. Where there is an individual/private party controlling these forest resources, the forest resource management policy that is applied needs to consider the interests of other parties;
3. The forest resource management issue is how public policy can still be applied when an individual has control over the forest resources.

For all types of forest benefits, their existence and preservation greatly depend on forest stands or stock, namely resources or plants producing all types of benefits produced.

Table 4. Traditional and Current Views on Forest Resources

Resources (traditional view)	Resources (Current view)
<ul style="list-style-type: none"> ▪ Timber, rattan, herding areas ▪ Medicinal plants, resin ▪ Fish, birds, mammals ▪ Mushrooms, honey, insects ▪ Water 	<ul style="list-style-type: none"> ▪ Carbon absorption and storage (carbon sink) ▪ Recreational Place ▪ Area protected for knowledge and history ▪ Area protected for pride of local community and nation ▪ Biological diversity (ecosystem, species, genes) ▪ Watershed protection ▪ Protection against natural disasters occurring ▪ Protection of soil and micro climate

This stock constitutes wealth that needs to be protected by its owner. In this context, the main problem currently being faced is that the stock of state forest is not yet fully controlled and protected. The protection of forests – particularly production forests – is assigned to permit holders in practice. In such circumstances, FMU development is the solution.

On the other hand, it is also known that the benefits of forest resources, especially environmental services, can be utilised by parties other than forest owners or managers, for example, services to control erosion, floods, airborne carbon absorption, micro-climate controllers, and the resulting beautiful vistas. In this way, forest resource characteristics naturally create interdependence between two community groups, namely the forest manager or owner, and the utiliser of the environmental services of the forest. This feature means that forest management can no longer be conducted in a simple manner, considering both its importance to many parties and the need to realise equitable distribution for those making expenditures and those utilising the results. It requires development and innovation in various forms of transaction, now known as payment for environmental service initiatives, carbon trading, and so on.

The importance of forest stock has also attracted the attention of accountants. Considering profit and loss in undertaking forest management seems odd if the forest stock is not treated as an asset in the balance sheet of a business, because if it were, the damage to the forest stock – which is the *notabene* factory of the business – would not

determine its profit and loss. The implications of applying a balance sheet that fails to treat the forest as an asset can be misleading, because a business whose financial performance has been declared sound can unexpectedly become bankrupt (IAL, 2010).

4.1.2 Forest Management Planning

In general, the objective of preserving the production of forest products is realised through forest management activities. This objective is achieved through a range of activities including forest inventorying, arranging forests by establishing blocks and plots, and through silvicultural activities – such as seedbed preparation, planting, thinning, and cutting – in order to obtain the desired forest stands and products. The scope of such forest resource management is limited to management by a single business unit or company class. In the management of an FMU, management of forest resources is not limited to these activities, because within the FMU an independent company or community group may be managing forest.

Forest resource management in the context of FMU begins with the stipulation of the FMU’s long-term plan. The objectives under this long-term plan will be harmonised with the Central Government, Provincial Government and Regency/Municipal Government’s objectives in line with the particular FMU’s location or region. This long-term plan will confirm the long-term direction of permit holder, the management of other forests within the FMU, and the policies and strategies for handling the problems faced in realising this long-term plan.

Table 5. Types of Forest Goods and Services based on Purpose and Degree of Human Activity to Provide or Preserve Natural Resource Functions

	Natural resources requiring human activity	Natural resources requiring almost no human activity
Production for trade/export ¹⁰	Various forms of extractive activity	Protected area Type I: Environmental services
Production for consumption/not exportable	Recreation area	Protected area type II: Biological diversity, knowledge, cultural wealth

¹⁰⁾ Goods and services are of a type that can be traded/exported if by their their nature they can be stored and moved. Goods and services are of a type that cannot be traded/exported if by their nature they can only be consumed where the goods and services are produced. Therefore, the definition of traded/exported does not always mean the activity of trading and export occurs Rather, it means changing the location where the goods and services are utilised from their place of production.

The plan will also determine the direction of FMU responsibilities, including a change in the FMU organisation to become a BLU, should this step be considered necessary to achieve the specified long-term objectives.

Unlike forestry plans in general, this plan also specifies the location and timing for implementing each activity. Therefore, prior to formulating the long-term plan, inventorying is conducted in relation to forest resources and the socio-economic condition of the communities within and around the forest, as well as potential problems that are likely to occur.

The long-term FMU plan will then be elaborated in an annual work plan. This annual work plan will have been adjusted to fit the FMU's organisational capacity and will include priority activities that are expected to significantly determine FMU performance achievement. Various related government agencies, permit holders (if any), communities within and around the forest, non-government organisations and academics should all be involved in the preparation of the long-term and annual work plans. Their participation is expected to increase the likelihood of there being synergies among the activities of all parties in the particular FMU, including appropriate programmes and activities of the various agencies, NGOs and research institutions insofar as their activities are connected to the FMU location.

4.1.3 Managing Forests and Forest Products

Forest and forest product management activities in an FMU may involve a combination of permit holders and the FMU managers. Therefore, besides engaging in conventional forest and forest product management activities such as forest use planning, utilisation, rehabilitation, protection and conservation, as well as supervision, these activities also need to consider the common needs of all parties within the FMU, such as accessibility and infrastructure, labour, information, conflict settlement, assistance, and so on, in line with the local characteristics of the particular FMU.

The management of forests and forest products, should therefore focus not only on physical forest stands and forest products, but also on the need for activities that resolve various issues that have

arisen or are expected to arise. In this regard, FMU managers need to focus on efforts to organise and allocate resources in a way that resolves the issues faced. In order to realise such efforts, it is necessary to convene routine meetings among the parties, especially parties directly undertaking activities within the FMU area. This has consequences for the working procedures of the FMU organisation. The FMU organisation should not have a rigid structure, duties and functions. Instead, it needs to be flexible to be able to interact with many parties, receive information, and adjust ongoing and future activities.

4.1.4 Forest Management Socio-politics

Confirming what has been explained above regarding the scope of forest management activities, FMU management actually involves the allocation and reallocation of resources, which benefits or harms certain parties. This cannot be avoided in practice, being a part of development reality.

In undertaking forestry development, the FMU manager is the party that knows the most about forestry conditions on site. Consequently, while the licensing administration process is in the hands of the Central Government or Local Government in line with their respective authorities, the FMU manager plays a significant role in determining how communities can be ready to accept and implement the permits or how concessionaires can safely operate their businesses after receiving the permit. And, in a broader context, the FMU manager will determine how forest resource allocation can be conducted with a high chance of success and minimal conflict arising.

In this context, the FMU manager may be considered as an institution that obtains social and political legitimacy from the community, with the technical and functional authority to perform forest management on site, yet holding a strategic position in realising forest management equitably and safely.

4.2 Basis for FMU Establishment

The basis for FMU establishment is based principally on the following laws and regulations:

1. Law No. 41/1999 regarding Forestry.
2. GR No. 44/2004 regarding Forest Planning
3. GR No. 6/2007 in conjunction with GR 3/2008 regarding Forest Governance, Preparation of Forest Management Plans, and Forest Utilisation.
4. GR No. 38/2007 regarding Distribution of Affairs among the Central Government, Provincial Governments and Regency/ Municipal Governments.
5. GR No. 41/2007 regarding Regional Apparatus Organisations.
6. Minister of Forestry Regulation No. P. 6/ Menhut-II/2009 regarding Establishment of FMU Areas.
7. Minister of Forestry Regulation No. P. 6/ Menhut-II/2010 regarding Norms, Standards, Procedures and Criteria (NSPK) for Forests Management in Protection FMUs (KPHL) and Production FMUs (KPHP).
8. Minister of Home Affairs Regulation No. 61/2010 regarding Guidelines for the Organisation and Working Procedures of Protection Forest Management Units and Production Forest Management Units in the Regions.

These laws and regulations explain the principal contents that become the policy pillars for establishing FMUs.

All forests in the territory of the Republic of Indonesia, including the natural riches contained therein, shall be controlled by the state for the greatest prosperity of the people. In the context of such control, the state shall authorise the Government to regulate and manage all things related to forests. Forest management is intended to achieve optimal, multi-purpose and sustainable benefits for the people's prosperity, and consists of:

1. Forestry planning,
2. Forest management,
3. Forestry research and development, education and training, and guidance, and
4. Supervision.

In the context of performing forest management, forest management areas need to be established and implemented at the Provincial, Regency/ Municipal, and management unit level. These forest management activities shall include:

1. Forest use planning (*tata butan*) and preparation of forest management plans,
2. Forest utilisation and forest area use,
3. Forest rehabilitation and reclamation, and
4. Forest protection and nature conservation.

It is explained that forest management should be conducted based on noble values for the greatest prosperity of the people. In this way, the implementation of each component of forest management must consider the community's cultural values, aspirations and perceptions, as well as pay attention to the people's rights, and must therefore involve the local communities.

Forest management is basically the authority of the central and or local government. Considering various local characteristics as well as social and environmental conditions that are closely related to forest conservation and the interests of the public in general, requiring specific management capabilities, the performance of forest management in certain regions may be assigned to a State-owned Enterprise (SOE) engaging in the forestry sector, whether in the form of a public enterprise (*Perum*), government agency company (*Perjan*), or public company (*Persero*), whose development is under the supervision of the Minister. In the context of regulation and management, all forest utilisation shall be undertaken through licensing.

Meanwhile, Forest Management Units shall consist of Conservation Forest Management Units (KPHK), Protection Forest Management Units (KPHL), and Production Forest Management Units (KPHP). A management institution shall be established in each Forest Management Unit. The Management Institution shall be responsible for undertaking forest management, which includes: management planning, organisation, operational management, control and supervision.

The Minister shall stipulate the organisation of KPHK, while KPHP and KPHL shall be stipulated based on Minister of Home Affairs Regulation No. 61 of 2010 regarding Guidelines on KPHP and KPHL Organisation and Working Procedures.

KPHP and KPHL stipulated in regions that straddle Regencies shall be stipulated in a Provincial Regulation and shall be responsible to the Governor, while KPHP and KPHL located within a Regency shall be stipulated in a Regency Regulation and shall be responsible to the Regent.

The FMU organisation to be stipulated shall have the following form:

1. A forest management organisation that:
 - a. Is able to perform management that can produce economic value from forest utilisation that is balanced with the conservation, protection, and social functions of the forest;
 - b. Is able to develop investments and provide work opportunities;
 - c. Has the competency to prepare spatial-based planning and monitoring/evaluation;
 - d. Has the competency to protect forest interests (including the public interest in the forest);
 - e. Is able to respond to the range of local, national and global forest management impacts (for example: the forest's role in mitigating global climate change); and
 - f. Is based on forestry professionalism.
2. An organisation reflecting integration (collaboration/synergy) between the Central, Provincial and Regency/Municipal Governments.
3. The establishment of the FMU organisation shall consistently respect the presence of already existing forest utilisation units (permits).
4. The organisation's structure and specific duties and functions guarantee that it can facilitate the performance of sustainable forest management.
5. An organisation that is flexible to adjust to local conditions/typology as well as strategic environmental changes affecting forest management.

Under Government Regulation No. 38 of 2007 regarding the Distribution of Governance Affairs in relation to FMU, Sector AA on the Forestry Sector, Sub-Sector 8 on the Establishment of Forest Management Regions states as follows:

1. Regency/Municipal Government gives consideration to the preparation of the design and proposal for the establishment of protection and production forest management

areas and the forest management area institution.

2. Provincial Government undertakes preparation of the design, establishment and proposal for the stipulation of protected and production forest management areas and provides technical considerations on the forest management area institution.
3. The Central Government stipulates the Norms, Standards, Procedures and Criteria, and stipulates the establishment of the forest management area, stipulates the management area and the area management institution, and reserve directives.

The foundation for the establishment of KPHL and KPHP organisations is Article 45 of GR 41/2007 regarding Regional Apparatus Organisations, which states that in the context of performing duties and functions to implement laws and regulations, and other general governance duties, the local government may establish other institutions as part of the regional apparatus. The organisation and working procedures along with the administrative level of this institution shall be stipulated by the Minister of Home Affairs after hearing the considerations of the minister handling governance affairs in the field of state administrative reform.

FMU development and funding shall be performed by the Central Government, Provincial Governments and Regency/Municipal Governments in line with their respective authorities. FMU development funds are derived from the State Revenues and Expenditures Budget (APBN), the Regional Revenues and Expenditures Budget (APBD) and/or other non-binding funds according to the laws and regulations.

4.3 Main Duties and Functions of FMU

The FMU organisation has the following duties and functions:

Performing forest management, including:

- a. Forest use planning and preparation of forest management plan.

- b. Forest utilisation in terms of permit holder monitoring and control.
 - c. Forest area use in terms of permit holder monitoring and control.
 - d. Forest utilisation in certain areas.
 - e. Forest rehabilitation and reclamation.
 - f. Forest protection and nature conservation.
1. Elaborating National, Provincial, Regency/Municipal forestry policy for implementation.
 2. Performing forest management activities in its area, ranging from planning, organisation, implementation and supervision to control.
 3. Conducting monitoring and evaluation on the performance of forest management activities in its region.

Under Government Regulation No. 6/2007 in conjunction with Government Regulation No. 3/2008 regarding Forest Use Planning, Forest

Management Plan Preparation, and Forest Utilisation, the main duties and functions of FMUs are stipulated. These main duties and functions of FMUs – particularly for KPHP and KPHL – are performed partly by the Provincial and Regency/Municipal Forestry Services and partly by permit holders, before the FMU comes into being. So, all main duties and functions of FMUs are performed by the Provincial and Regency/Municipal Forestry Service Offices before the FMU comes into being.

Performance of the FMU’s main duties and functions consists of the performance of forest management on site/in the field, while the main duties and functions of the Forestry Services consist of the performance of forest administration. The differences in these two types of main duties and functions are presented in **Table 6**.

Table 6. Forest Administration and Management

ADMINISTRATION (Performed by the Ministry, Provincial Forest Service, Regency/ Municipal Forest Service)	ON SITE MANAGEMENT (Performed by FMU)
Planning <ul style="list-style-type: none"> • National, Provincial, Regency/Municipal inventorying • Forest confirmation (designation, boundary demarcation, mapping, forest area stipulation) • FMU area establishment • Forestry Plan preparation 	Planning in FMU area <ul style="list-style-type: none"> • Inventorying in FMU area
Management <ul style="list-style-type: none"> • Forest use planning and preparation of forest management plan (preparation of NSPK and ratification of management plan) • Forest area utilisation and use (granting of permits) • Rehabilitation and reclamation, including community empowerment, seedbeds (if there is an FMU, this is performed by the FMU) • Nature protection and conservation (if there if an FMU, this is performed by the FMU) 	Implementation of management in FMU area <ul style="list-style-type: none"> • Performance*) of forest use planning and preparation of forest management plan • Performance*) of forest utilisation and forest area use • Performance*) of rehabilitation and reclamation. • Performance*) of nature protection and conservation.
Research and Development, Education and Training, and Consultation	Location of research, education and training, and consultation
Supervision	Undertaking supervision in the scope of the FMU region

*) Performance includes developing activities, controlling activities and conducting activities. Example: If there is a utilisation permit in an FMU management region, the performance function shall consist of development and control (in the context of monitoring activities). However, if no permit yet exists for the region being managed, then the FMU must conduct these activities.

***) Forest utilisation includes: area utilisation, environmental services utilisation, timber forest product utilisation, non-timber forest product utilisation, forest product collection. Meanwhile, forest area use concerns use for non-forestry interests (for example, mining, irrigation channels, etc.).

In this way, the presence of the FMU can support Regency activities in the FMU area in at least the following matters:

1. Preparing permit locations
2. Preparing forest and land rehabilitation locations and preserving forest and land rehabilitation results
3. Undertaking forest protection in the working area
4. Strengthening community institutions and counselling institutions
5. Monitoring, evaluation and supervision in the working area
6. Preparing proposals for the designation of production, protection and conservation forest areas, forests with specific purposes, change of forest status and functions, and forest area swapping

7. Preparing materials for consideration in the ratification of watershed management and forest and land rehabilitation plans
8. Preparing materials for technical considerations in licensing that falls under the authority of the Central or Provincial government
9. Managing certain FMU areas as determined by the Minister, following the application of a Public Service Agency (BLU) management system.

Meanwhile, the differences in terms of government administration and development administration are presented in **Table 7**. An illustration of the different management functions and administration functions can be found in **Figure 4**. The different authorities for handling the performance of forestry administration and the performance of forest management on site/in the field are presented in **Attachment 1**.

Table 7. Govern Administration and Development Administration

No	Hierarchy	Govern Administration	Development Administration
1	Province (Infrastructure) Forestry and Plantation Service Office (HP) BPKK (HL, HK)	Services in these processes: <ul style="list-style-type: none"> • Utilisation licensing • Forest product distribution • Area use • Change of area status 	Forest administration: <ul style="list-style-type: none"> • Forestry planning • Forest management administration • Research and development, education and training, and guidance • Supervision
2	Regency/municipality (Infrastructure) Regency/Municipal Service Office	Services in the processes of: <ul style="list-style-type: none"> • Utilisation licensing • Forest product distribution 	Forest administration: <ul style="list-style-type: none"> • Forestry planning • Forest management administration • Guidance and assistance • Supervision
3	Management Unit (structure) FMU	Business preconditions: <ul style="list-style-type: none"> • Forest use planning Utilisation • Rehabilitation • Protection • Conservation 	Forest management: <ul style="list-style-type: none"> • Management planning • Organisation • Management implementation • Control and supervision • In undertaking forest management: <ul style="list-style-type: none"> • Production activities (seeding, planting, cutting, selling) • Supporting activities (HR management, finance, procurement)

4.3.1 FMU and Permit Holders

FMU as an instrument for establishing an area is part of forest planning activities. FMU as a forest management area in line with its main functions and purposes shall be managed efficiently and sustainably. Therefore, FMU development becomes part of public interest provision in forestry administration. For certain regions, the Minister may assign the head of FMU to perform forest utilisation, including to sell stands. Meanwhile, the permit holder is a certain party conducting activities that utilise the forest area, utilise environmental services, utilise timber and non-timber forest products, and collect timber and non-timber forest products for commercial or non-commercial interests while maintaining sustainability. In general, a permit holder may be in the form of a cooperative, private entity or State-owned/Region-owned Business Enterprise (BUMN/D).

The FMU is permanent in nature and serves as forest manager on site – performing certain authorities of the Central, Provincial and Regency/Municipal Governments – for the permit holder organisation. The FMU management long-term plan, which is ratified by the Minister, and the short-term plan

prepared by the Head of FMU determine the scope and direction of the permit holder organisation. The permit holder prepares a long-term business work plan for the entire area with due observance of (*based on*) the FMU long-term plan, and prepares an annual work plan (RKT) to be ratified by the Head of FMU or an official appointed by the Minister.

The principle materials in the FMU long-term plan include: the objectives to be achieved by the FMU, the conditions faced, forest management development strategies and feasibilities, which include: forest use planning, forest utilisation, forest area use, forest rehabilitation and reclamation, and forest protection and nature conservation. With the existence of this long-term plan, there will be clarification on:

1. Forest resource potential and conditions, FMU location in watershed, socio-economic conditions, and regional development as the basic information for determining the FMU's long-term objectives;
2. Forest function to be realised (conservation, protection, production) and target actors as permit holders to realise efficient and equitable forest utilisation.

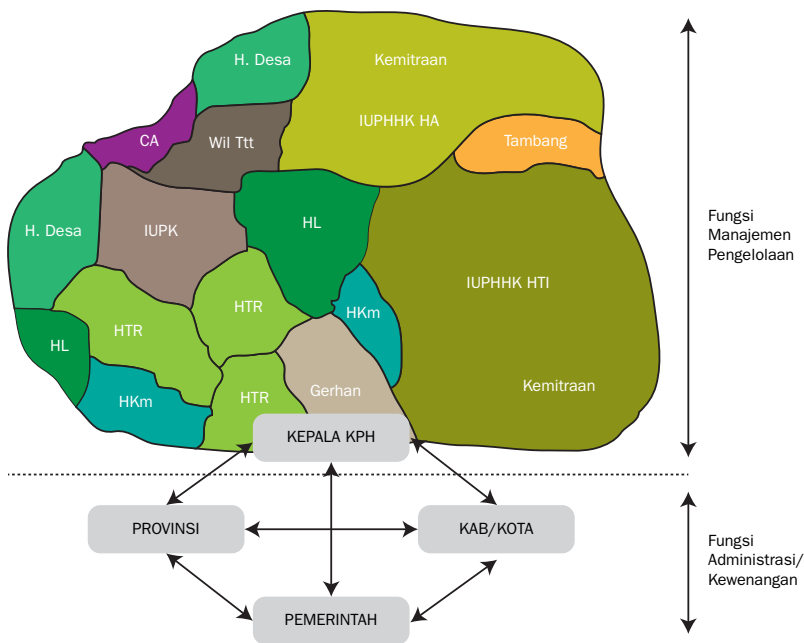


Figure 4. FMU Management Functions and Central Government/Local Government Administration/Authority

3. The availability of preconditions and potential obstacles to achieve the abovementioned objectives analysed in this long-term plan. These potential obstacles can be analysed from the perspectives of regional certainty, forest product demand, investments and funding sources, human resources, and state revenues. The potential obstacles determine the strategies and feasibilities in implementation;
4. Development feasibilities analysed not only from the perspective of benefits and costs, but also in terms of the availability of preconditions, and the weakness of institutions and organisations that will still be faced in the early stages of FMU development. This feasibility portrait determines the strategy. The type of strategy stipulated determines how this FMU will be operated, which then determines the organisation functions that need to exist and the human resource qualifications required.

The FMU long-term plan above will then be broken down into a short-term FMU plan. The short-term plan FMU contains sustainable forest management objectives at the scale of the FMU concerned, evaluation on the results of the previous short-term plan, the targets to be achieved, data and information bases, activities to be conducted, status of forest resource balance, evaluation monitoring, activity control, and participation by the parties. This short-term plan basically serves as a more detailed planning reference and as a tool for evaluating interim targets towards the long-term targets.

The permit holder's position is as part of business unit whose function – together with other business units – is to realise FMU objectives in the short term and long term, based on the general nature of private/commercial motivations. The scope of the planning by the permit holder shall include the following principal materials: boundary demarcation for work area, silviculture system implementation, use of forest product utilisation equipment, forest product administration, forest product measuring and testing, along with forest protection, use of professional labour, cooperation with local community cooperatives, financial conditions including retributions and funds, timber raw material supply to primary forest

product industry. These planning materials are also used for long-term planning (RKU) and short-term planning (RKT).

4.3.2 Permit Holder, FMU and Forestry Service

The different types of planning for Permit Holders and FMUs mentioned above show how the commercial function of a permit holder with a specific mission (private/commercial), on the one hand, can develop more efficiently, and on the other hand, can be controlled by the FMU with a broader mission as the forest manager. These efficiencies are, among other things, caused by a reduction in direct interference by the Central/Local Government – which focuses more on performing governance administration. This governance administration function will become better if information and control on forest management in the region is determined based on long-term and short-term planning prepared by the Head of FMU. For example, the Central/Local Government can obtain more accurate information on the extent and/or amount of forest area utilisation/use, which serves as the basis for tax and other revenues.

The Central/Local Government's focus on the sphere of governance administration with the FMU acting as on-site area manager allow for greater intensity of forest management as a whole. Besides controlling permits, problems related to uncertainty over an area's status (conflict), a change in area function, and the use of the forest area will be handled better through the existence of the FMU. A general illustration of the roles of the Ministry of Forestry, Provincial Forest Service, Regency/Municipal Forest Service, FMU and permit holders in each forest management activity is presented in **Attachment 2**.

4.3.3 Prior to and Following the Arrival of the FMU and Inter-Institutional Relations

4.3.3.1 Forest Planning and Forest Use Planning

In accordance with Law No. 41/1999, forest planning in this regard relates to forest area inventorying and confirmation activities, whereas forest use

planning is the determination of the blocks and plots where the permit holder may conduct its activities. Up to now, forest area inventorying and confirmation have faced obstacles, particularly the weak integration between spatial plans and forest area determination. Meanwhile, forest use planning has not been performed by the government, but by the permit holder.

Before FMUs:

1. Forest area confirmation procedures faced the challenge of weak legitimation from other parties, such that overlaps, conflicts and disputes over area use could not be avoided.
2. Before the FMU, particularly in production forests and most protection forests, permit holders, particularly IUPHHK holders, which are generally large-scale, were required to handle forest use planning, inventorying of forest potential, forest protection, and so on, as appropriate for forest managers. In this way, permit holders performed FMU functions. Problems arose particularly from poor control of the undertaking of this forest planning and forest use planning, resulting in poor stipulation of annual production, which should have been in line with the state of the forest (natural forest);

With FMUs:

1. FMU long-term and short-term planning becomes the basis for forest allocation for licensing and instruments of control for forest use planning performed by permit holders;
2. Increased capacity to undertake forest area confirmation together with other institutions so authorised.

Inter-Institutional Relations:

1. Based on the current laws and regulations and in circumstances before FMU have been established, efforts to improve the quality of forest planning and application can only be conducted based on administrative considerations (document evaluation). Similarly, policy on the determination of indicative maps for various forms of administrative licensing (evaluation of maps) is also weak because of the large gap between the forest area drawn on the map and the reality on its use in the field. Technical

considerations from the Governor/Regent, and the roles of UPT and Pusdal need to be evaluated to overcome this weakness;

2. Both before and since FMUs arrived, the undertaking of area confirmation and forest use planning needs to be supported by information on forest area use potential and conditions. BPKH's role is critical in this regard.

4.3.3.2 Forest Management Plans

Work plans at the permit holder level must be in line with the FMU management plan (if an FMU already exists) as well as the Regency/Municipal, Provincial and National management plans. Forest management not only covers production aspects, it also includes forest and land rehabilitation, conservation and protection, forest area use, and community empowerment programmes.

Before FMUs:

1. Even though forest management plans have existed at various levels of governance (Central, Provincial, Regency/Municipal), spatial plans as a whole have not yet been integrated into areas. This state of affairs often triggers conflicts over locations and/or difficulties in obtaining locations for licensing or for performing forest and land rehabilitation.
2. The evaluation and assessment of RKU and RKT that have been prepared by forestry business permit (IUPHHK) holders cannot be done optimally because it is not based on accurate information on conditions in the field.

With FMUs:

1. FMUs can perform the function of integrating the various forest management activities and become an information centre for evaluations and assessments of the planned activities of permit holders in the region.
2. FMU long-term planning ratified by the Minister of Forestry and receiving a recommendation from the Governor/Regent/Mayor becomes the basis for relating the forest management to be conducted at the FMU level to the forest management plans at the Regency/Municipal, Provincial, and National levels.

Inter-Institutional Relations:

1. Before FMUs came into being, forest management plans on site/in the field were very difficult to realise. Nevertheless, the Provincial Government, Regency/Municipal Government, BP2HP and BPKH need to be directed on how to prepare management plans on site/in the field. In line with the laws and regulations, the Minister may appoint an Official to perform FMU functions in coordination with these three institutions.
2. This forest management planning that has been prepared jointly will become the basis for undertaking forest management activities at the province or regency level, in line with their respective authorities.

4.3.3.3 Utilisation

Under the Forestry Law, forest and forest product utilisation are realised in a permit. The Minister of Forestry is authorised to grant 12 types of permit, the Governor can grant 8 types of permit, and the Regent can grant 6 types of permit. The FMU has a significant role in being economically capable of realising uninterrupted performance of this licensing by consistently taking into account social and environmental interests.

Before FMUs:

1. The weakness of the forest planning, forest use planning and forest management planning conducted to date can be seen from the low capacity to conduct all these activities, which are the government's responsibility. This is because the Central Government and Local Governments have been oriented toward forest product commodity licensing and administration rather than forest region/area management. Therefore, since forest utilisation activity – occurring under a number of licenses – is only an implementation aspect of the various plans above, when planning is weak, control of forest and forest product utilisation is also weak.
2. In the case of this licensing, procedures for obtaining forest areas that are free from conflict are also imposed on permit applicants. Consequently, the precondition that the forest area is free from conflict is a matter for the

government, the cost of which will be charged to the permit applicant. This also applies to business permits for local communities, such as Community Plantation Forests (HTR). As a consequence, the government's programme to increase investments in the forestry business sector faced obstacles.

3. Currently, the evaluation of the performance of forest and forest product utilisation licensing is not efficient enough, due to the large number of regulations and institutions conducting separate evaluations of permit holder performance. High transaction costs in performing this evaluation are unavoidable.

With FMUs:

1. The orientation of forest management work in FMU regions is to prepare preconditions for various permits and other forest management activities. In the present circumstances, the preparation of forest areas that can obtain legitimacy from various parties for a clear determination, and increasing the capacity of local communities, have become the main priorities before the permit comes into effect. This government duty should be performed before the licensing administration process. The FMU is expected to perform this duty.
2. The existence of FMU does not guarantee efficiency in licensing evaluations and assessments where the Central, Provincial and Regency/Municipal Governments still exert direct control over permit holders.

Inter-Institutional Relations:

1. Determination of certainty of a forest area that has obtained legitimacy from various parties, and increasing the capacity of the local community to utilise the licensing opportunity need to be carried out under a separate programme. In this regard, coordination is needed between the Forestry Planning Agency, the Directorate General of Forestry Production Development, the Directorate General of Forest and Land Rehabilitation, BP2HP, BPKH and BPDAS in order to prepare such a programme. This programme can prioritise FMU Model regions, while also serving as an incentive for this FMU model initiative through investment facilities, development and continuity in the region where the FMU is located.

2. In the development of licensing for large-scale businesses and HTR, BP2HP can become the coordinator of this programme. For Community Forest and Village Forest development, BPDAS may become the coordinator, with BPHK playing a supporting role to both.

4.3.3.4 Utilisation – The Case of Community Plantation Forests

Currently, until the FMU functions as expected, the licensing challenge generally lies in determining locations. Where the licensing is intended for a community living within and around a forest, there is also a challenge in increasing community capacity. HTR licensing must comply with Minister of Forestry Regulation No. 23/Kpts-II/2007 in conjunction with No. 5/Kpts-II/2008 regarding Application Procedures for Timber Forest Product Utilisation Business Permits for HTR in Plantation Forest. This policy contains principles for HTR management – we look only at those appropriate to this discussion, as follows:

LOCATION. Area reservation shall be conducted with the following method:

1. The Head of the Directorate General on Forestry Planning shall submit an HTR location guidance map to the Regent, copied to the Directorate General for Forestry Production Development /BPK, Secretary General of the Ministry of Forestry, Governor, Head of Provincial/Regency/Municipal Forestry Service Office and Head of the Forest Area Consolidation Centre/BPKH;
2. The Directorate General of BPK will then socialise the HTR development and said indicative map to the Governor and Regent/Mayor. BPKH will provide technical assistance to the Head of Provincial/Regency/Municipal Forestry Service Office;
3. The Head of Regency/Municipal Forestry Service Office shall submit technical considerations on licensing overlap areas, reforestation and rehabilitation plants, and the regency/municipal forestry programme to the Regent/Mayor with a map scale of 1:50,000.
4. Based on these technical considerations, the Regent/Mayor will submit the HTR development plan to the Minister of Forestry;
5. The Head of Forestry Planning will conduct verification on the location and the Directorate General of BPK will conduct verification on the technical and administrative aspects;
6. The Minister of Forestry will determine the HTR area reservation and submit the same to the Regent/Mayor, copied to the Governor;
7. The Regent/Mayor will conduct socialisation to villages and may be assisted by Non-Government Organisations.

PROCEDURES. Application Requirements and Procedures, sketch or area being applied for with an area exceeding 15 hectares on a scale of 1:5,000 or 1:10,000, with procedures as follows:

1. For individual or group applicants, applications shall be submitted to the Village Head and the Village Head will conduct verification for forwarding to the Regent/Mayor, copied to the Subdistrict Head (*Camat*) and the Production Forest Utilisation Monitoring Centre/BP2HP. The BP2HP shall convey its technical considerations after conducting an administrative verification and verifying the location map application sketch in coordination with the Forest Area Consolidation Centre. If everything is in order, the Regent/Mayor will issue the IUPHHK-HTR – for a term of 60 years that may be extended once for 35 years, copied to the Minister of Forestry, Director General of BPK, Head of Forestry Planning and the Governor.
2. A cooperative applicant may directly submit its application to the Regent/Mayor for the stipulated area. The duties of the Village Head and BP2HP are the same as those of an individual or group applicant above.
3. If the area being applied for has not already been stipulated, the Regent/Mayor will submit an HTR location proposal to the Minister of Forestry.

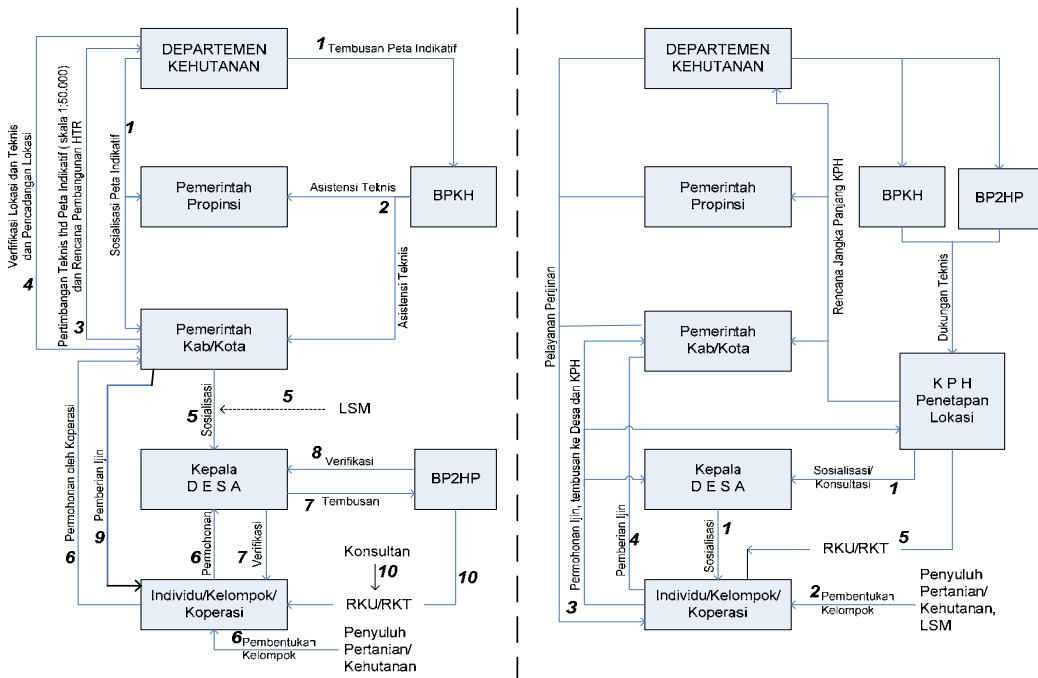
GROUP INSTITUTION AND FINANCING. Group establishment is facilitated by a forestry consultant or agriculture consultant. Funds can be obtained based on the Financial Management Pattern of the Forest Development Financing Public Service Agency.

RIGHTS AND OBLIGATIONS. Permit holders shall be entitled to conduct activities in line with the permit, receive facilities for obtaining funds for financing HTR development, technical guidance and consultation, and the opportunity to sell forest products. Permit holders are obliged to prepare RKU and RKT for IUPHHK-HTR. These shall be prepared by UPT or by consultants engaging in the forestry sector or by non-government organisations engaging in the forestry sector, with funding from the Government.

Forestry development issues, particularly related to increasing the community's access to forest resource benefits – as elaborated above –include both certainty of rights and the high transaction costs for arranging licensing. The HTR policies set out in the two Ministerial Regulations above are not yet able to resolve these two principal problems. A discussion follows:

LOCATION. The form of licensing services becomes a significant part of the absence or presence of FMU (Figure 5). Prior to the existence of FMU, almost all inter-institutional transactions related to licensing

were absorbed in determining the permit location. From the first indicative map distributed by the General Directorate of Forestry Planning up to the determination of the permit, verification was conducted by the Regent, BPKH, and Village Head (Figure 1A). Location with a map scale of 1:250,000 to 1:100,000 becomes 1:10,000 to 1:5,000. This change in map scale not only raises a need for the technology and working method to produce the map required, but also relates to a legalistic claim becoming a legitimate claim. Article 1A and article 2 of Ministerial Regulation No. 5/Kpts-II/2008 stipulate the procedure for determining a location. In this regard, the transaction costs for location stipulation are internalised under the HTR licensing process. This becomes clearer when the Village Head and BPKH need to verify the HTR location proposal map or sketch. These conditions are expected to become the main problem in HTR development. Stipulating the HTR location is best done under a separate programme, in order to simplify HTR licensing;



Gambar 5 A. Sumber: Permen No 23/Kpts/IV/2007 jo. No. 5/Kpts/IV/2008

Gambar 5 B. Sumber: PP No. 6/2007 jo PP No. 3/2008

Figure 5. Comparison between Licensing Procedures Before and After the Introduction of FMUs

TRANSACTION MEDIATION. Significant financing is needed to carry out the HTR permit application procedures involving individuals, groups, cooperatives, Village Heads, Regents/Mayors, and UPT. The funds available for preparation of IUPHHK-HTR RKU and RKT and the funds for HTR development itself may not be a sufficient incentive when the preparedness and performance of relations between these parties are not facilitated. In that regard, BP2HP needs to have a programme to coordinate work with these parties.

When an FMU already exists, the FMU's role can be directed to resolve licensing location-related problems, in terms of both forest area status and locations of plots/blocks within the FMU area. So the presence of the FMU is very important for reducing the length of the current licensing procedures, especially in relation to stipulation of the location.

4.3.3.5 Forest and Land Rehabilitation

FOREST AND LAND REHABILITATION. Except in a permit holder or concession area, Presidential Regulation No. 89/2007 regarding National Movement for Forest and Land Rehabilitation, forest and land rehabilitation shall be performed within forest areas by TNI service operations and outside forest areas by farmers' groups.

Prior to FMUs:

1. So far, the problem in undertaking forest and land rehabilitation has been the absence of a manager once plants are more than three years old. In addition, certain conditions raise problems in determining the location because there are other legal and non-legal rights in the area.
2. So far, there has not been any coordination in determining forest and land rehabilitation, especially among the Central, Provincial and Regency/Municipal Governments, each of which does these activities.

With FMUs:

1. Similar to forest and forest product utilisation activities, the performance of forest and land rehabilitation activities requires a forest managers' "forum." These forest managers designate both the location

and the conservation and utilisation of the rehabilitation results.

2. The existence of FMU has not yet dealt with undertaking forest and land rehabilitation outside forest areas.

Inter-Institutional Relations:

Outside a forest area allocated for licensing, BPDAS may coordinate with the Provincial and Regency/Municipal Governments. Stipulation of a location in a forest area needs to be integrated with FMU development plans, both previous and now being implemented.

4.3.3.6 Forest Protection

So far, forest protection activities have focused on controlling forest fires and illegal logging. Problems with these activities relate to weak forest management on site/in the field. Having an FMU is very important for controlling forest fires and illegal logging.

Before FMUs:

Coordination to carry out forest protection activities has been done through, among other things, Presidential Instruction No. 4/2005 regarding Eradication of Illegal Logging in Forest Areas and Distribution throughout the Territory of the Republic of Indonesia. These activities focused on resolving legal aspects and do not extend to preventative issues for forest protection.

With FMU:

Similar to other forest management activities, undertaking forest protection activities requires a forest manager/FMU forum. In addition to determining the root causes of forest protection issues, the FMU also relates this to the work programme of the particular FMU area.

Inter-Institutional Relations:

Forest protection issues that are currently being resolved are more a consequence of poor forest management activities on site/in the field. If the FMU is considered as one way to deal with forest protection issues, then inter-institutional relations needs to be directed to supporting the integration of various activities performed by the Central, Provincial, and Regency/Municipal Governments in an FMU region.

4.3.3.7 Conservation

Conservation aspects of forest management have been handled separately – by Local Governments for protected forest areas, and by BKSDA and the Head of National Park for conservation forests. The issues in protection and conservation activities are mainly a consequence of these weak managing institutions.

Prior to FMU:

Up to now, protection and conservation activities have been specific, and there have not been any significant developments in utilisation. This is, among other things, because of a lack of any connection between production forests and these two types of areas being managed for protection and conservation purposes.

With FMU:

If the UPT, which has been managing protected and conservation forests up to now, becomes an FMU, and integration of production forest is

accommodated within the area, then the FMU as the forest managers' forum has a greater role to play. So far, the impression has been that conservation area management is only done by the Government at a minimal level.

Inter-Institutional Relations:

In this regard, inter-institutional relations need to be undertaken in order to relate economic, social and environmental needs in protected forest and conservation forest management for the interests of the Central, Provincial, and Regency/Municipal Governments in FMU regions.

Sustainable forest management is an objective that everyone wants to achieve in managing their natural resources, because forest resources are renewable natural resources. Several hypothetical analyses on the FMU's role are presented in **Table 8**.

Table 8. FMU's Role in Sustainable Forest Management

	Tidak ada KPH	With an FMU
Forest Planning and Forest Use Planning	<ul style="list-style-type: none"> Weak acknowledgement from other parties, resulting in conflicts Weak control because permit holders act as managers 	<ul style="list-style-type: none"> Increased capacity to assure area certainty Capacity to control implementation can be increased
Forest Management Planning	<ul style="list-style-type: none"> Central – Provincial – Regency/Municipal Government Plans are not consolidated on site Evaluation of permit holder's RKU and RKT is difficult to do 	<ul style="list-style-type: none"> Forestry plans and investments can be integrated on site Accuracy of information on forest resources can be increased
Utilisation	<ul style="list-style-type: none"> Weak control of forest and forest product utilisation Investments requiring area certainty (conflict-free) are borne by permit applicants Evaluation of IUPHHK implementation is partially conducted; high transaction costs 	<ul style="list-style-type: none"> Permit preparation preconditions can be handled by FMU If FMU is strengthened with the authority to evaluate IUPHHK performance, then the FMU can integrate its evaluations of various activities Transaction costs can be minimised
Forest and Land Rehabilitation	<ul style="list-style-type: none"> RHL results are not managed once they are 3 years old Lack of coordination in stipulation of location 	<ul style="list-style-type: none"> Clarity in the management of the results of RHL and other forestry investments Increased capacity in coordinating stipulation of location
Forest Protection	<ul style="list-style-type: none"> Illegal activities and forest resource disturbances (for example, fire, pests, etc.) are not immediately detected 	<ul style="list-style-type: none"> Early detection, and prevention/eradication efforts can be intensified

4.4 FMU Development in Provincial Regions

The Government, in this case the Ministry of Forestry, has implemented the FMU development programme nationally so that it can be utilised by provincial and regency/municipal governments to accelerate FMU development in their respective regions. The logical framework for FMU regional development design in provincial regions is set forth in **Figure 6**.

The establishment of FMU design at the provincial level is conducted based on the establishment of an FMU area, by considering: land characteristics, forest type, watershed condition, community's social, cultural and economic conditions, local community institutions including any customary law community, governance administrative boundaries, overlay that geographically constitutes a unity, permanent natural or man-made boundaries, and land control.

All these factors used as a basis for considerations basically determine the criteria for establishing FMU areas in provincial regions, so as to provide certainty on the management area, ecological feasibility, feasibility of forest management

institution development, and feasibility of forest utilisation development. Establishment of the FMU area is done in stages: FMU design/blue-print, directives for reserving the FMU, proposal for FMU establishment, and FMU area establishment.

Delineation of FMU area takes the form of a map that gives the FMU area outer boundaries and names the FMU in line with the forest's main function dominating the area. The FMU region delineation map and book containing the FMU description constitute the FMU design document. In case conservation forest is to be included in a KPHP area or KPHL area, technical considerations are required from the Directorate General of Forest Protection and Nature Conservation. Similarly, when production forest and protected forest are to be included in the KPHK region, a Governor's recommendation is required.

For KPHK, the FMU design is prepared by the Head of the Technical Implementing Unit for Natural Resource Conservation with supporting data and information from the Forest Area Consolidation Centre and stakeholders, and is submitted to the Director General for Forest Protection and Nature Conservation.

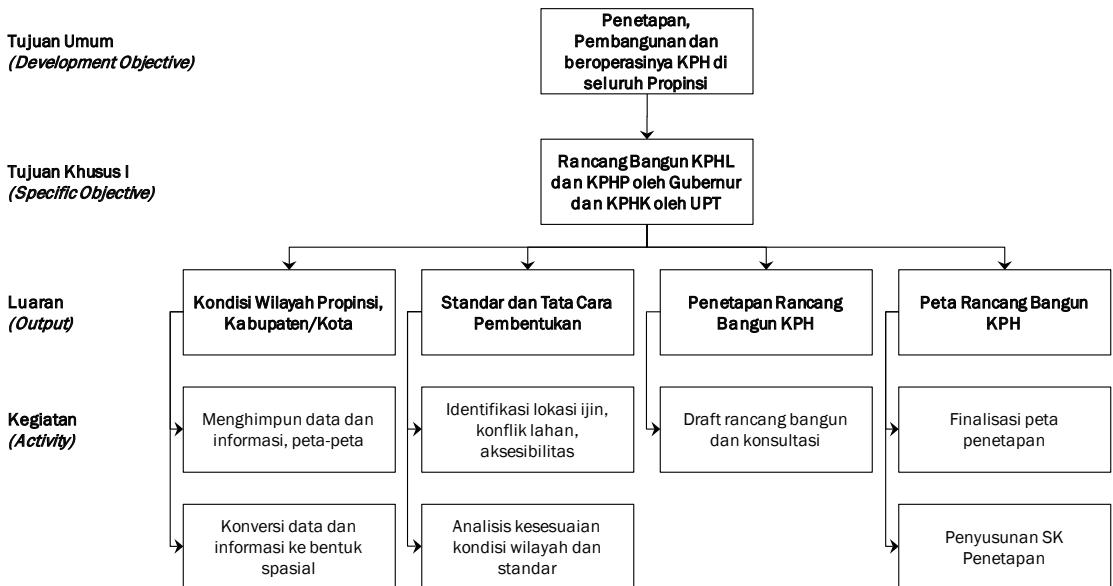


Figure 6. Logical Framework for National FMU Development

The Director General for Forest Protection and Nature Conservation will study and then submit the KPHK design to the Minister to obtain a directive to reserve the area. As for KPHL and KPHP designs, these are prepared by the Head of the Service Office for forestry affairs in the province, taking into account considerations of the Regent/Mayor, supporting data and information from the Forest Area Stabilisation Centre and stakeholders, and are submitted to the Governor for approval. The Governor will then deliver the KPHL and KPHP designs to the Minister to obtain a directive to reserve the area.

The directive to reserve the area from the Minister is studied by the Governor while the KPHL and KPHP designs are revised through discussions with the competent agencies in the Region, with supporting data and information from the Forest Area Stabilisation Centre. Based on the results of the revision, the Governor will convey a proposal for stipulation of the KPHL and KPHP regions to the Minister. For this purpose, the Minister will assign the Director General of Forestry Planning to draft a Ministerial Decree concept and map stipulating the FMU region through discussion with the related Echelon I officials.

4.5 FMU Organisation Establishment

In the interest of ensuring that economic, environmental and social functions are sustainably realised in forest management, all forest areas will be divided into regional units of a management scale in the form of FMUs (Article 17 of Law No. 41/1999) with a management organisation that:

1. Integrates Central, provincial and regency/municipal governments, among other things as reflected in the procedures for establishing the FMU organisation, the human resources (HR) of the FMU organisation, and the financing of the FMU organisation.
2. Has the competency to serve various forest management activities in line with the typology of the local region.
3. Has a flexible (elastic) organisational structure capable of accommodating various regional typologies so as to provide room for professional efforts to explore regional potential in order to increase competitiveness and achieve greater comparative advantage for the region.
4. Has a control mechanism so that the specific differences in the direction/objectives of each region due to typological diversity stay within the framework of national forestry development strategy.
5. Is able to accommodate implementation of the roles of Central, provincial and regency/municipal governments in line with the stipulated forestry development strategy for realising efficient and sustainable forest management.
6. Has a hierarchy that enables control to be applied to synchronise forest management on site by the respective FMUs which jointly (in the aggregate) achieve the forestry development targets at the regency/municipal, provincial and national levels and meet the demands of the global role.
7. Due to the specific nature of the forest management activities that must be conducted on site, the FMU organisation structure is required to be able to provide services in line with the localised type of management and servicing activities (division of region into service sub-units).
8. Has performing forest management on site as its main duty and function, which constitutes implementation of the national and provincial forestry development strategy while at the same time accommodating the need for local development.
9. Has organisational HR originating from Central Government civil servants and Local Government (provincial and regency/municipal) civil servants.
10. Has a personnel development mechanism to increase and maintain competencies, career patterns (among other things, systems for assigning duties and assigning positions) on a national scale.
11. Has internal and external working procedures such that the performance of the FMU organisation's main duties and functions can be effective, and that minimise potential overlap with other organisations' main duties and functions.
12. Has fund sources that may be derived from the State Revenues and Expenditures Budget (APBN); Regional Revenues and Expenditures

Budget (APBD); and or other non-binding funds in line with the provisions of laws and regulations.

13. Is allowed to directly utilise part of the PNBP obtained for forest management activities in its work region.

As the performer of forest management activities, the FMU organisation is expected to be capable of achieving efficient and sustainable forest management. Some of the keys to the success of the FMU that must be prepared are:

1. Presence of forestry personnel near the forest and the community;
2. An FMU size/area in line with the capacity of the management organisation;
3. Continuous education and training towards professionalism;
4. Internal and external communication and cooperation, coordination, liaison, and supervision;

5. Clear responsibilities and assignment of authority;
6. Service-oriented;
7. Separation between administration/authority and management;
8. Long-term planning prepared based on assessment/inventorying results and prepared on a spatial basis;
9. Continuous environmental education for the community.

The logical framework for FMU organisation establishment is simplified in the diagram in **Figure 7**.

The issuance of Minister of Home Affairs Regulation No. 61/2010 regarding Organisational Guidelines and Organisational Working Procedures for KPHL and KPHP in Regions provided a legal framework for the establishment of KPHP and KPHL organisations.

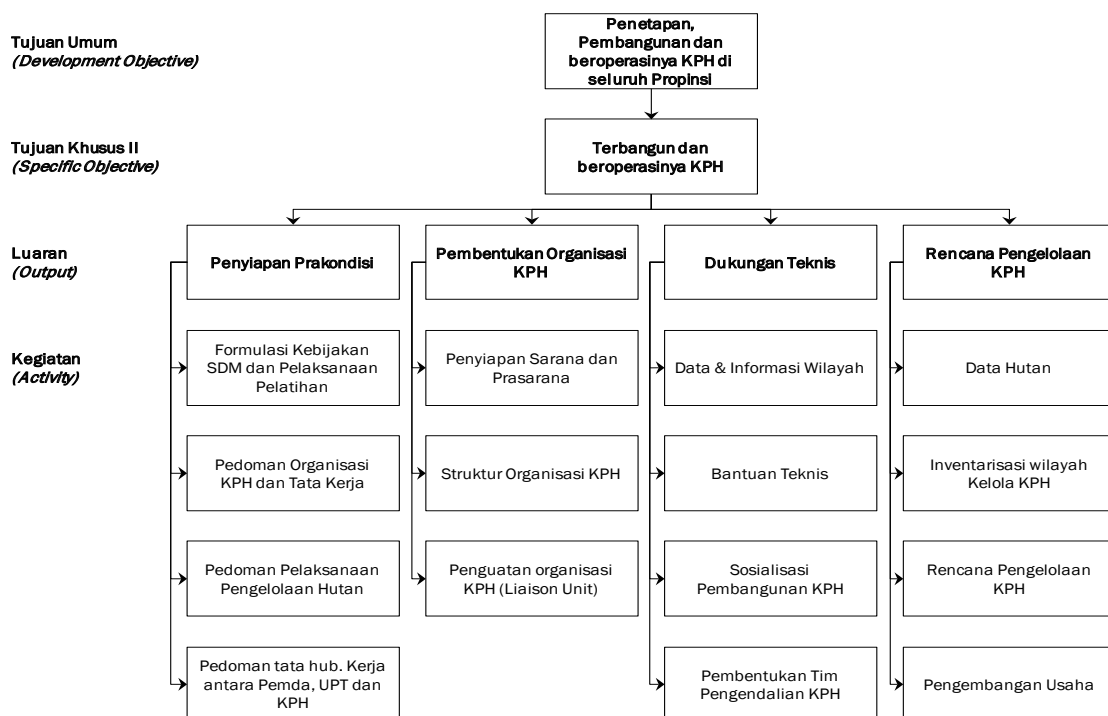


Figure 7. Logical Framework for FMU Organisation Establishment



All existing KPHP/KPHL organisations are required to be revised to comply with this Minister of Home Affairs Regulation. Based on this regulation, there are two KPHP/KPHL organisational structures, namely: Type A with KKP (echelon IIIa) and Type B (echelon IVa), as shown in **Figure 8** and **Figure 9**.

4.6 Human Resources

KPHP and KPHL organisations should be managed by human resources (HR) that are capable of performing efficient and sustainable forest management, both structural position

and functional position groups. FMU HR must fulfill the administrative and position competency requirements in line with the FMU HR NSPK. Administrative requirements include rank and class, performance evaluation results and level of formal education. In addition, FMU HR must fulfill the competency requirements substantiated with a certificate of competency issued by the Profession Certification Institution in the forestry sector or other certificates acknowledged by the Minister of Forestry. There are already competency standards for KPHK managerial positions, while competency standards for KPHP/KPHL managers are currently being developed.

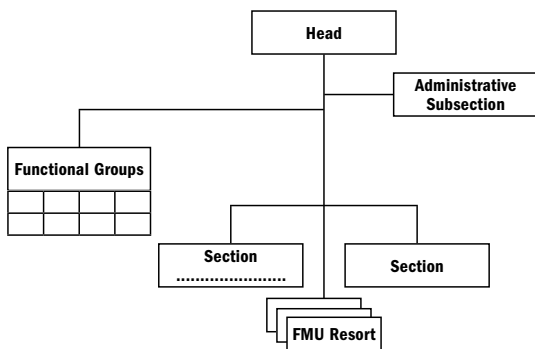


Figure 8. KPHP/KPHL Organisational Structure Type A

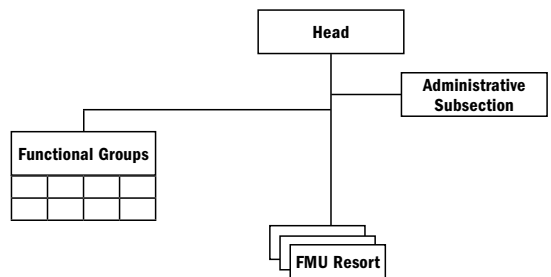


Figure 9. KPHP/KPHL Organisational Structure Type B



CHAPTER 5

FOREST PLANNING AND MANAGEMENT UNDER THE FMU FRAMEWORK

- Forest Planning System
- Forest Use Planning (Tata Hutan)
 - Forest Utilisation
- Forest Rehabilitation and Reclamation
 - Forest Protection
- Community Empowerment
 - FMU Long-term Plan

5.1 Forest Planning System

As explained in GR No. 44/2004, the planning system regulates matters concerning the mechanism, substance and process of preparing forestry plans. The forestry plan consists of national level, provincial level, and regency level forestry plans, depending on its geographical scale. Specifically for forest management, a forest management plan is needed that consists of a Forest Management Unit Plan for the Conservation Forest Management Unit (KPHK), Protection Forest Management Unit (KPHL), and Production Forest Management Unit (KPHP).

The forest management plan includes short-term (1 year) and long-term (10 years) management plans (Minister of Forestry Regulation No. P.06/2010). The FMU short-term forest management plan is developed by an official appointed by the FMU Head and ratified by the FMU Head. Meanwhile, the long-term forest management plan, which is developed by the FMU head, will be assessed by the Governor and ratified by the Minister or an appointed official.

The long-term FMU forest management plan then becomes the guideline and reference for all long-term forest management activities within the related FMU region, while the short-term FMU forest management plan becomes the guideline and reference for all short-term forest management activities within the relevant FMU region.

The FMU head develops the forest management plan based on the results of forest use planning, by referring to the national, provincial or regency/municipal forestry plans and paying attention to the aspirations and cultural values of the local people, and environmental conditions. So the forest management plan is basically a plan that is based on the results of multi-level and inter-connected inventoring. The forest management plan material consists of:

1. forest management directives for the FMU area; and
2. FMU development plan, containing an organisational plan that includes HR development, the provision of facilities and infrastructure, the financing of activities, and other activities.

The multi-level and inter-connected planning characteristics in the development of the

management plan are also indicated by the roles of various governmental levels. The role of government (the Ministry of Forestry) is to prepare the criteria, ratification, and monitoring and evaluation, in line with its authority. While the authorities of the province and regency/municipality in the development of the management plan consist of ratification of the long-term management plan, and monitoring and evaluation of the long-term and short-term forest management plans in line with their respective authorities. The Forest Region Stabilisation Agency (BPKH) has the duty to provide assistance in the process of developing the plan.

Guidance and technical instructions are also needed for the development of the management plan. Guidance on the development and ratification procedures for a forest management plan at the FMU level will be stipulated by the Directorate General of Forestry Planning (GR No. 6/2007 Article 15 subsection 4). Technical instructions on the development of forest management plans for KPHP are developed by the Directorate General of Forestry Production Development. Technical instructions on the development of forest management plans for KPHK and KPHL are developed by Directorate General PHKA. And the Directorate General RLPS provides support in terms of technical information on the forest rehabilitation activities that must be performed by the FMU. The Forestry Research and Development Division provides supporting data and information on research results, and the Centre for Forestry Education and Training provides support in the empowerment of technical planning personnel.

5.1.1 Planning Principles

Planning is an active process that requires serious thought as to what can or should be available and occur in the future. Forest planning involves the coordination of all elements existing in both FMU internal management and its inter-relations with the external situation in the context of achieving forest management objectives. The forest planning process must be designed and implemented to ensure a balance between realities in the field and management capacity, between economic, ecological, and social priorities, and between regional and national forestry development priorities.

The available information must be utilised (1) as the basis for various analyses that are required, (2) to explain the potential gains and losses that will be experienced by the parties, becoming a rational basis for balancing the negotiation of the parties' various interests, and the benchmark for various monitoring and evaluation activities. Therefore, the completeness, accuracy, reliability and recency of the information determine the forest management planning process and results. Moreover, in implementing REDD+ programmes, which are very likely to be implemented in the FMU, where measurable, reportable and verifiable (MRV) conditions are required, the completeness, accuracy, reliability and recency of the information become critical.

There are certain principles that need to be followed in the development of a management plan. Those principles include:

1. The principle of multi-purpose sustainability.
The forest management plan that is developed must consider balance in achieving economic, ecological, and social objectives at the site, provincial, regency/municipality and national levels.
2. Principle of integration and synergy. The forest management plan that is developed should be able to integrate and synergise the principles of watershed (DAS) management as well as sustainable development at the national, provincial and regency/municipality levels.
3. Consultative principle. To enhance the validity of the results, the process of developing the forest management plan should maximise consultations with relevant parties.
4. Autonomy principle. The FMU should develop and ratify the forest management plan and be fully responsible for any consequences arising from such planning.
5. Information objectivity principle. Each phase and component of the planning should be based on information obtained and processed in the most objective manner.
6. Implementability principle. Only implementable plan options should be contained in a forest management plan.

7. Precautionary (awareness and risk prevention) principle. Should avoid including or adding a protection and conservation plan for treatment of management that is deemed to have high risks in terms of social and environmental aspects.
8. Learning and control principles. Information management should continue to accompany the management implementation process as material for upgrading learning that is used to improve management quality and fix/correct management plans.

5.1.2 Planning Working Unit

The FMU management is required to have a working unit that constitutes a planning Department, Division Bureau or Section, in line with the development of the organisation. This working unit should be directly responsible to the head of FMU. The duties of this working unit are:

In terms of technical planning:

1. Initiating the planning process, which covers developing the schedule for planning activities and formulating the initial framework of the forest management plan.
2. Collecting information, covering planning, determination of methods, implementation, validation of accuracy and precision of data/information, and presentation of information as the basic material for the development of the forest management plan.

In terms of public networking:

1. Identifying the main parties, i.e., government, provincial government, regency/municipal government, business partners, and the public.
2. Identifying the supporting parties, including experts, NGOs, academics and so on.
3. Performing stakeholder mapping, i.e., mapping interests, conflicts that arise, aspirations that develop, and ideas for settlement of conflicts from the parties concerned. This also includes identifying the power to influence of each stakeholder.
4. Facilitating the parties in the consultation process during development of the forest management plan.

In terms of monitoring and evaluation:

1. Managing data and information, which covers data/information compilation, analysis, storage, retrieval and service use.
2. Preparing the register (formatted records) for implementation of the plan.
3. Determining the threshold for any deviations in implementation of the plan.
4. Updating the data and information.
5. Issuing reminders when the threshold for deviations has been exceeded.
6. Evaluating the plan in its totality and conveying reports on urgent corrections needed to the forest management plan.

To guarantee the fulfilment of forest management planning principles, the following planning procedures can serve as a reference:

1. Consultations must be held with the parties at least during the initial phase and the delivery phase for the provisional draft of the Forest Management Plan. The draft shall consider any national regulations in the forestry sector as well as national, provincial, and regency/municipal forestry plans.
2. Significant information sources should be summarised. Only information directly connected with implementation of management objectives should be included. Where it is known that the available sources and information are incomplete or of uncertain quality, a conservative position should be taken. In practice, statements from conservative sources tend to be closer to future reality than optimistic forecasts.
3. The priorities discussed should not be limited in number. One approach may be chosen for each activity planned.
4. The planning document should include the information sheet on implementation that can be used in monitoring and evaluation.
5. The Forest Management Plan document should be developed in a format that is easy for anyone to read.

Supporting facilities and infrastructure are needed to ensure the smooth implementation of planning activities. Depending on how far the FMU organisation has advanced, the facilities and

infrastructure that need to be provided may include, among others: (1) forest mapping tools; (2) forest resource inventorying tools; (3) data processing equipment; (4) information technology equipment; and (5) sufficient operating space.

By having a management plan developed by the FMU management that is close to the planned forest resources on-site, several benefits can be obtained, among others:

1. Forest planning can be developed in more detail and be based on the actual field conditions/situation in terms of production, forest and land rehabilitation, conservation and protection, use of forest area, and community empowerment programmes. With more complete and accurate data and information, the work plans of license holders whose areas are located within an FMU can be monitored and evaluated better. In addition, these license holders' plans can be integrated into the FMU forest management plan.
2. While forest management plans are now already available at various levels of government (central, provincial, regency/municipal), an overall spatial plan is not yet integrated for the territory as a whole. This state of affairs frequently causes conflict to occur in a location and/or makes it difficult to find a location for the licensing or implementation of forest and land rehabilitation.
3. The evaluation and assessment of RKT and RKT that have already been developed by forestry business license (IUPHHK) holders can be implemented more optimally since it is based on accurate information on conditions in the field.
4. The FMU can implement the integration functions of various forest management activities and become an information centre for the evaluation and assessment of any planning activities conducted by license holders within its territory.
5. FMU long-term planning that has been ratified by the Minister of forestry and has obtained a recommendation from the governor/regent/mayor becomes the basis for linking the forest management to be conducted at the FMU level with the forest management plans at regency/municipal, provincial and national levels.

6. Jointly developed forest management planning becomes the basis for conducting forest management activities with a provincial or regency scope, in line with their respective authorities.

5.2 Forest Use Planning (Tata Hutan)

Forest use planning activities are principally undertaken to ensure that the utilisation and use of forest resources is conducted in an organised manner based on accurate information on the forest resources, economy, society, culture and environment while paying attention to government, provincial, and regency/municipal policies, including integration with spatial planning. Forest use planning activities in an FMU consist of boundary demarcation¹¹, forest inventorying, division into blocks or zones, division into plots and sub-plots, and mapping. The results of forest use planning activities constitute forest use planning set out in FMU planning book and maps.

Forest use planning is a key feature of forest management. For this activity, it is necessary to determine a relatively permanent forest area that cannot easily be altered during the forest management term. Therefore, state forest areas that have been determined as FMU areas must be defined in, for example, the spatial plan. Nevertheless, it would be pointless if an FMU area already defined in the spatial plan were not consistently complied with and could easily be altered if another sector needed it (Warsito, 2010)¹².

In determining the forest area, it is necessary to take into account the condition of the landscape, considering that:

1. The key function of the forest is as one component of the ecosystem (buffer system) where, if this function is damaged, it will have implications for the other functions (economic/production and social/cultural). The function of forest in the economy is not merely to produce a flow of goods and services that are marketable in the financial markets, but also to provide services that are beneficial to people, even if they are not or not yet marketable.
2. The shape of the landscape is not easily altered. Furthermore, by overlaying organisational maps of government territory, it becomes clear where permanent forest areas are located in each unit of government territory. This allows the external boundaries of a permanent forest in a particular regency on an island to be linked to the external boundaries of a forest area unit in the government territory of neighbouring regencies. When this occurs, the FMU area does not need to be split up based on government administrative regions. For example, Cepu FMU is located in Blora and Bojonegoro regencies, while Ngawi FMU is located in Sragen and Ngawi regencies. Both these FMUs are FMU units covering forest areas across two regencies, and even across two provinces (Central Java and East Java).
3. With a relatively permanent forest area (FMU) that is limited by the condition of the landscape, if the region is split up (for instance, a regency) no changes are needed to the permanent forest area. Splitting up a defined FMU would interfere with the regulation of forest sustainability.

Forest use planning begins with forest inventorying. Based on the results of this forest inventorying, the FMU managers will develop a design for dividing it into blocks and plots, followed by boundary demarcation for these blocks and plots. These boundaries of the FMU management territory, and the results of the boundary demarcation, will be contained in a forest use planning map.

5.2.1 Forest Inventorying

Forest inventorying is a series of data collection activities to comprehensively determine the condition and potential of the forest resources and

¹¹ Minister of Forestry Regulation No. P.06/2010 states that boundary demarcation shall be done after division of blocks and plots to ensure that blocks and plots are established.

¹² Warsito, S. 2010. Educational forest science and Indonesian forester activities. A response to the public servant's completion paper by Prof. Dr. Ir. H. Hasanu Simon. Paper was presented at a Seminar for the farewell of public servant's completion, Prof Dr.Ir.H.Hasanu Simon, Faculty of Forestry at UGM, 27 September 2010

environment. Forest inventorying is intended to obtain information on the potential, landscape characteristics, socio-economic conditions, and other information about the FMU management territory.

These forest inventorying activities are intended to obtain data and information relating to: (1) land status, use and cover; (2) type of soil, field declivity/topography; (3) climate; (4) hydrology (water system), landscape and natural phenomena; (5) condition of human resources and demography; (6) type, potential and distribution of flora; (7) type, population and habitat of fauna; and (8) social, economic, and cultural conditions of the community. The data and information derived from forest inventorying is presented in descriptive form, numerical form, maps and suchlike, covering:

1. Basic data in the form of potential timber stands; potential of non-timber plant resources, including species/sub-species, distribution, population and status; diversity of tree species, status of stands for permanent plots where repeated measurements have been made; potential of tourism objects and environmental services; grouping of fauna that are protected by Government Regulation, whether central or regional; types and forms of forest management; map of activity findings with a minimum scale of 1:50,000; and
2. Supporting data consisting of infrastructure that supports forest management; the social, economic and cultural condition of the community; information on the state of watershed and sub-watershed areas.

Forest inventorying is not an activity done once and lasting forever, rather, it is an activity that needs to be repeated after a certain period. Ideally, inventorying should be done at least once every five years, through either a remote sensing survey or a terrestrial survey. In Java Island, Perum Perhutani does this at least once every 10 years, likewise the current regulations of the Ministry of Forestry require a periodic comprehensive forest inventorying (IHMB) to be done outside Java Island. This periodic inventorying is necessary to accommodate the dynamics that occur on the ground relating to the potential, social conditions, and the economy. Specifically for changes in potential, periodic inventorying allows for changes

in the annual production allocation (AAC). In addition, it can be used as an early monitoring instrument for forest management performance, especially if the FMU concerned is to become a site for REDD+ implementation, where periodic monitoring of the carbon stock is required.

5.2.2 Division into Blocks and Plots

The results of this forest inventorying will then serve as the basis for dividing it into blocks. A block is a part of the FMU area that is made relatively permanent in order to improve management effectiveness and efficiency.

This meaning is close to that of the term *Bos Afdeling*, when the Dutch conducted forest use planning on Java Island after stipulating permanent forest, in an effort to organise the forest territory (Warsito, 2010).¹³ *Bos Afdeling* (BA) is a unity of forest sustainability with certain characteristics. In a production forest, for example, one BA will have a separate forest cycle or class that may be different from other BAs.

Therefore, a block division can be construed as an activity of dividing (sorting) an FMU area into relatively permanent sections to improve management effectiveness and efficiency. Blocks or sections of an FMU area can serve as the basis for organising sustainability units, meaning that one sustainability unit will exist in one block/section of forest. Therefore, one FMU unit may consist of one or more sustainability units in line with their bio-physical characteristics, site accessibility, direction of transport of products/commodities, and the class of company being developed.

In a block division, the following should be taken into account: (1) bio-physical characteristics on the ground; (2) socio-economic conditions of the local people; (3) potential of the natural resources; and (4) presence of titles or business licences for forest utilisation and use of the forest area.

¹³ Warsito, S. 2010. the educational forest science and Indonesian foresters activities. A response to the public servant's completion paper by Prof. Dr.Ir.H. Hasanu Simon. Paper was presented in a Seminar in the farewell of public servant's completion, Prof Dr.Ir.H.Hasanu Simon, Faculty of forestry a UGM, 27 September 2010

For this purpose, a summary is needed of the bio-physical characteristics on the ground, the socio-economic condition of the local people, the potential of the natural resources, and the presence of any licences in the FMU region concerned.

The summary of bio-physical characteristics on the ground includes, among other things:

1. Assessment of forest land, including the land system, inventory of topography and physiography, and hydrography.
2. Inventory of significant biological aspects other than the forest products and environmental services produced.
3. Inventory of protected areas, high conservation value forest (HCVF) and potential bio-physical environmental impacts.
4. Map of forest land system, topography, hydrography, biology, protected areas, and potential environmental impacts.

The summary of the socio-economic condition of the local people includes, among other things:

1. Inventorying the location of settlements, hamlets and villages in and around the FMU area
2. Demographic summary
3. Summary of diversity of local culture in relation to the dynamics, changes and development in customary laws
4. Summary of local political economy: local leaders, traders and bosses, potential intervention by external leaders (those coming from outside the hamlets/villages), potential for conflict of interest, and potential for tenurial conflict
5. Summary of local economic life: productive business system, local market performance, local statistics on the prices of basic necessities
6. Spatial maps of settlements, hamlets, villages, demographic map, map of class of customary law development, map of local political levels and potential for conflict, and map of tenurial conflict.

The summary of natural/forest resource potential includes, among other things:

1. Summary of forest resources at the smallest area unit (block or plot)

2. List of forest classes and classes of flora and fauna diversity within a forest unit or zone, as basic data on the forest resources balance
3. Basic map, working area map, and map of forest classes.

The summary on the presence of licenses includes, among other things:

1. Summary of the validity of the license holder's legal status, company name, type of license, extent and location of the working area, and its accessibility.
2. Annual production allocation in line with the IUPHHK decision, license holder's work plans, types of commodities to be produced, partnerships that have been established, and the marketing plan for the production proceeds.
3. Efforts (planned and realised) toward sustainable forest resource utilisation/use, and certification obtained for sustainable forest management.

Based on the division of blocks mentioned above, the plots are then distributed in each pre-determined block. A plot is construed as part of a block with a certain area that becomes the smallest utilisation business unit receiving a particular management or silviculture treatment.

In distributing the plots, it is necessary to take into account: (1) the productivity and potential of the area/land; (2) the existence of protected areas, including peat areas, water catchment areas, coastal demarcation, river demarcation, areas around lakes/reservoirs, areas around springs, cultural conservation areas, areas prone to natural disasters, germplasm protected areas, wildlife refuges, and mangrove forest coastal areas, and (3) plans being designed for the area, covering among other things forest utilisation, forest area use, forest rehabilitation and reclamation, and community empowerment. In the event the area concerned already has a permit or title, then the distribution of plots should be adjusted for the plots already made by the permit or title holder. In addition, the distribution of plots should aim to match the allocation based on site identification and the potential of certain territory, such as territory to be subject to a permit, and territory for community empowerment.

5.2.3 Boundary Demarcation in the FMU Area and Mapping

To obtain certainty on the borders of blocks and plots, it is necessary to demarcate the boundaries in the FMU area. The boundary demarcation activity stages include:

1. Preparation of boundary demarcation map based on the completed results of dividing up the blocks and plots;
2. Preparation of border trajectories;
3. Implementation of border demarcation based on border trajectories; and
4. Presentation of map showing demarcation of boundaries in FMU based on results of boundary demarcation based on border trajectories.

Based on the boundary demarcation, inventorying, block distribution and plot distribution activities, the FMU mapping is conducted. FMU mapping must contain the following elements, among others: (1) KPHL and KPHP territorial boundaries stipulated by the Minister; (2) distribution of block boundaries; and (3) distribution of plot boundaries. Boundary demarcation must involve the community. The results of this mapping shall be contained in a map with a minimum scale of 1:50,000.

5.2.4 Urgency

As explained above, forest use planning activities are intended to ensure that forest resource utilisation and use is conducted in a planned way based on data and information that are relevant, accurate and objective, and is integrated with the government, provincial, regency/municipal spatial plan and policies. Forest inventorying as an important component of forest use planning bears meaning in terms of the generation of information. In partnering with a private party (permit holder), possession of accurate information by the resource holder (the government) becomes a pre-requisite (necessary condition) for the enforcement of government rights and as the basis for evaluating the partner's performance in achieving sustainable forest management.

If these activities are conducted by the license holder, this will pose a risk of deviations that are detrimental to the government and forest

sustainability. If the FMU¹⁴ engages in forest use planning as the representative of the government in forest management at the site level, then emergence of such risks can be minimised. There are also other benefits, such as:

1. The accuracy of data and information can be enhanced, considering that the FMU is located close to the forest site that it manages.
2. Strong ownership of information by the government might improve the government's capability in nurturing, monitoring and controlling the implementation of the license by the license holder, including the determination of an annual production allowance that should match the condition of the forest.
3. The availability of accurate data and information on forest resources, supplemented by a performance monitoring and evaluation system for all existing businesses, will facilitate the application of measureable, reportable, verifiable (MRV) criteria in REDD+ Implementation.
4. The issue of a wide disparity between the forest area drawn on the map and the reality of its use on the ground can be overcome in determining the indicative map for various forms of licensing.

5.3 Forest Utilisation

Forest utilisation is intended to obtain the benefits of forest products and services optimally, fairly, and sustainably for the people's welfare. Forest utilisation can generally be implemented through these activities: (1) utilisation of the area, (2) utilisation of environmental services, (3) utilisation of timber and non-timber forest products, and/or (4) collection of timber and non-timber forest products. For forest utilisation in an area functioning as production forest, all such types of

¹⁴ Currently, forest use planning is not undertaken by the government but by concession holders, as stipulated in Minister of Forestry Decrees No. 20/Kpts-II/2007 and No. 12/Kpts-II/2008 concerning procedures for granting business permits for timber utilisation from natural forests within production forest, whereby the concession holder is obliged to conduct forest use planning, inventory forest potential, forest protection, etc., as is usually conducted in forest management. Therefore, in point of fact, the concession holder (particularly large-scale companies) has performed the FMU functions in the production forest.

utilisation can be performed. While in protected forest, utilisation is limited to (1) utilisation of the area, (2) utilisation of environmental services, and (3) utilisation of non-timber forest products. It is therefore necessary to ensure that these forest product utilisation activities are legally valid in terms of the forest utilisation permit.

The head of FMU's duty in the utilisation (and area use) of the forest in a forest area already under a permit is to conduct development, monitoring and evaluation of implementation of the forest utilisation permit in the FMU area. The performance of these development, monitoring and evaluation activities should be reported every three months to the Minister, copied to the governor and regent/mayor. If the license for utilisation (and area use) of forest in the FMU area is void or has expired, then the FMU head is responsible for securing and protecting the forest located in this former working area.

Forest utilisation shall be implemented based on the forest management plan developed by the FMU head. This also applies to any applications and/or extensions to licenses for the utilisation (and area use) of forest in the FMU region. Consequently, the forest management plan developed by the FMU should be considered by the office handling forestry affairs in the province or regency/municipality when issuing a recommendation.

For certain regions, the Minister may assign the FMU head to organise forest utilisation, including to sell stands. The organisation of forest utilisation, including the sale of stands in certain areas should be based on the guidance, criteria, and standards for forest utilisation in certain regions, and should apply the management system of a public service agency (BLU).

In addition, the Minister will allocate and stipulate certain areas for developing Community Plantation Forests (HTR), Community Forests (HKm) and Village Forests (HD) based on a proposal from the FMU or a designated official. Based on the FMU management plan, the business of timber forest product utilisation in HTR, HKm and HD in plantation forest can be done through the sale of stands. The stand selling activities include harvesting, securing and marketing activities. The sale of stands should be conducted in one unit of

plot area proposed by the FMU head or an official designated by the Minister.

Within an FMU area that already has a long-term forest management plan, forest utilisation activity can be conducted under a forest utilisation license. Where no long-term forest management plan exists after a period of five years, forest utilisation activity can be conducted based on a nationwide forestry plan.

Under the Forestry Law, utilisation of forests and forest products is realised through a license. The Minister of Forestry has the authority to issue 12 types of license, the governor may issue eight types of license, and the regent may issue six types of license. FMU has an important role in being economically able to ensure these licensing procedures run smoothly while taking into account social and environmental interests. In a situation where there is no forest management at the site level (FMU), utilisation faces several weaknesses, among others:

1. The weaknesses in the forest planning, forest use planning and forest management planning that have occurred to date can be seen in the low capacity to carry out all these activities that are the government's responsibility. This is caused by the orientation of the central government and regional government toward the licensing and administration of forest product commodities rather than toward the management of forest territory/areas, resulting in weak control of forest utilisation activities.
2. In regard to this licensing, the procedure for obtaining a forest area free from conflict is also borne by the license applicant. Consequently, regarding the pre-condition that the forest area be free from conflict, which is a matter for the government, the costs are also borne by the license applicant. This also applies to business licenses for the local community, such as Community Plantation Forest (HTR)¹⁵. As a result, the government programme to promote investment in the forestry business sector has faced constraints.

¹⁵ Under P.No.23/Kpts-II/2001 jo P.05/Kpts-II/2008 concerning procedures for granting business permit for timber utilisation on community plantation forest within plantation forest.

3. Evaluation of implementation of forest utilisation and forest product licensing is not currently sufficiently efficient, due to the many regulations and institutions that separately assess the license holder's performance. As a consequence, high transaction costs are unavoidable when undertaking this evaluation.

With the establishment of the FMU, it is expected that the process of forest utilisation and rehabilitation can be made efficient because:

1. The working orientation of forest management within an FMU region is to prepare pre-conditions for various licenses and other forest management activities. Under present conditions, preparing a forest area that obtains legitimacy on the certainty of its stipulations from various parties, and enhancing the local community's capacity, become the main priorities before a license becomes effective. These tasks of the government should be accomplished before the licensing administrative process commences. The FMU is expected to perform this task.
2. The existence of the FMU does not guarantee efficient evaluation and assessment of licensing while direct control of the license holders remains in the hands of the central government, provincial government and regency/municipal government.

Therefore, inter-institutional relations in forest utilisation need to be established. Stipulation on the certainty of a forest area that acquires legitimacy from various parties and enhancement of local community capacity to utilise licensing opportunities need to be carried out under a separate programme. In this respect, coordination is needed between the Directorate General of Forestry Planning, the Directorate General of Forestry Production Development, the Directorate General of Forest and Land Rehabilitation, BP2HP, BPKH and BPDAS to develop this programme. This programme can be prioritised in Model FMU areas, and also serve as an incentive for model FMU initiatives in the form of investment facilities, development and continuity in the region where the FMU is located. In the development of licensing for big business and Community Plantation Forests, BP2HP can serve as the coordinator of this programme. For programmes to develop

Community Forests and Village Forests, BPDAS may serve as the coordinator, while BPKH can play a supporting role to both.

5.4 Forest Rehabilitation and Reclamation

Forest rehabilitation is an effort to restore, maintain and upgrade a forest's functions so that it can retain its carrying capacity, productivity and role in supporting the ecosystem. The activities involved in forest rehabilitation include reforestation; plant cultivation; plant enrichment; and the application of land conservation techniques.

The implementation of these activities falls under the FMU's responsibility, especially within the area of an FMU whose territory is not subject to a forest utilisation license/title to a third party. While in the territory of an FMU that is already subject to a forest utilisation license/title to a third party, the forest rehabilitation should be conducted by the relevant holder of said license/title.

Nevertheless, even though the implementation of forest rehabilitation in the territory of an FMU that is already subject to a title is the responsibility of the title holder, the FMU head assumes the obligation to engage in nurturing, monitoring and evaluating the implementation of forest rehabilitation within the FMU area. Such nurturing, monitoring and evaluation must be reported every three months to the Minister, copied to the governor and regent/mayor.

In accordance with the prevailing legislation, the rehabilitated plants in a production forest are referred to as rehabilitated plantation forest. Rehabilitated plantation forest (HTHR) is defined as plantation forest in a production forest that is developed through land and forest rehabilitation activities in a production forest area to restore, maintain and upgrade the land and forest functions in the context of maintaining its carrying capacity, productivity and role as an ecosystem. These HTHR products can be utilised by the sale of stands based on the FMU management plan. These stand selling activities include harvesting, securing and marketing activities, and should be conducted in a single plot area proposed by the head of FMU or an official designated by the Minister.

The provisions on the sale of stands can be found in GR No. 6/2007 and GR No. 3/2008.

Forest reclamation is construed as an effort to repair or restore damaged forest land and vegetation so that it can function optimally as intended. This activity is conducted on forest land and vegetation within a forest area that has undergone changes to the land surface and land cover.

Basically, forest reclamation activities fall under the responsibility of the forest area use license holder. If the forest area use license holder has performed forest reclamation, then the FMU head assumes responsibility for securing and protecting the products of the forest reclamation.

5.5 Forest Protection

In the implementation of forest management, one of the FMU organisation's duties is to arrange forest protection and nature conservation activities (GR No. 6/2007). The forest protection referred to here is defined as an effort to prevent and restrict damage to the forest, forest area and forest products that is caused by the acts of humans, livestock, fire, natural forces, pests and disease, and to retain and maintaining the rights of the state, the community and individuals to the forest, forest area, forest products, investments, and any apparatus associated with forest management (Minister of Forestry Regulation No. P.06/2010)¹⁶. Activities included in forest protection generally include (GR No. 6/2007 and GR No. 3/2008):

1. preventing any unauthorised forest harvesting;
2. preventing or extinguishing forest fires;
3. providing facilities and infrastructure to secure the forest;
4. preventing hunting of wild animals and/or protected animals;
5. preventing unlawful cultivation and/or use and/or occupancy of forest areas;
6. preventing the clearing of forest areas;
7. preventing disturbance from pests or disease; and/or
8. building a forest security unit.

Furthermore, under GR No. 38/2007, the division of governmental affairs in forest protection activity shall follow the following provisions:

1. Central government (cq. Ministry of Forestry) is responsible for:
 - a. Stipulating of norms, standards, procedures, and criteria, and implementing forest protection in state forests nationwide.
 - b. Providing facilitation, guidance and supervision in forest protection activities for forests subject to titles and customary law forests nationwide.
2. Provincial government is responsible for:
 - a. Implementation of forest protection in production forests, protection forests not subject to titles, customary law forests and botanical forest parks on a provincial level.
 - b. Providing facilitation, guidance and supervision in forest protection activities for forests subject to titles and customary law forests on a provincial level.
3. Regency/municipal government is responsible for:
 - a. Implementation of forest protection in production forests, protected forests not subject to titles, customary law forests and botanical forest parks on a regency/municipal level.
 - b. Providing facilitation, guidance and supervision in forest protection activities for forests subject to titles and customary law forests on a regency/municipal level.

In conditions where an FMU has already been established, the operationalisation of forest protection activities by the provincial and regency/municipal governments (in line with their respective authorities) shall be conducted by the FMU. In the context of managing the FMU, forest protection activities shall include:

1. Securing the working area, including the forest, forest area and forest products, including plants and animals;
2. Preventing forest damage from the acts of humans and livestock, forest fires, pests and disease, and natural forces;
3. Taking initial action required against any disturbances to forest security within the working area;

¹⁶ MoF Regulation P.06/2010 regarding Norms, Standards, Procedure and Criteria (NSPK) for forest management in a protected forest management unit (KPHL) and a production forest management unit (KPHP).

4. Reporting any incidents of legal violations within the working area to the nearest forestry authority;
5. Providing facilities and infrastructure, as well as a forest security force in line with the need.

Through these activities, forest protection implementation is basically intended to protect the forest, forest products, forest area, and environment, so that the protection function, conservation function, and production function can be achieved optimally and sustainably. To achieve these objectives, two key principles have been developed, namely:

1. Preventing and limiting damage to forest, forest areas and forest products caused by acts of humans, livestock, fire, natural forces, pests and disease; and
2. Maintaining and protecting the rights of the state, community, and individuals to the forest, forest areas, forest products, investments, and the apparatus associated with forest management.

For forest protection within the area of an FMU whose territory is already subject to a forest utilisation license/title to a third party, implementation should be done by the holder of the license/title. In case a forest utilisation license within an FMU area is void or has expired, the FMU head shall be responsible for securing and protecting the forest located in the former working area. This also applies to areas not subject to a license (forest utilisation right) to a third party.

5.6 Community Empowerment

In the frame of utilising forest resources optimally and fairly, it is necessary to empower the local community through both capacity development and by providing access to forest resource utilisation for the purpose of improving the welfare of the local community. This empowerment of the local community is an obligation of the central government, provincial government, and regency/municipal government which is the responsibility of the FMU head to implement in line with his/her authority. The local community empowerment programme may utilise village forest (HD), community forest (HKm) and partnership schemes.

Village forest is state forest not subject to any licenses/titles, which is managed by the village and utilised for the village's welfare. Whereas community forest is state forest whose main purpose is to be utilised to empower the community. The Minister may stipulate the working area of HKm and HD following a recommendation from the regent/mayor and community according to the criteria defined in the management plan developed by the FMU head or a designated official. The institutions handling HKm and HD will develop their forest management plans together with the FMU head or a designated official as part of the forest management plan.

A village forest can be provided in a protected forest or production forest by granting management rights to the village institution. This village forest management right covers area use planning, area management plan development, forest utilisation, and forest rehabilitation and protection activities. In a protected forest, village forest utilisation includes utilisation of the area, environmental service utilisation, and the collection of non-timber forest products. While in a production forest, it includes area utilisation, environmental service utilisation, utilisation of timber and non-timber forest products, and collection of timber and non-timber forest products. For such purposes, the central government, provincial government and regency/municipal government will provide facilitation covering institutional development, business development, technological guidance, education and training, and access to the market, in line with their respective authorities. Meanwhile, the FMU head (or a designated official), together with the village institution as the village forest manager, will prepare a village forest management plan as part of its forest management plan.

Community forest can be provided for (1) conservation forest, except for nature reserves, and national park core zones; (2) protected forest; and (3) production forest. The empowerment of the local community through this community forest scheme will be done by granting a community forest utilisation business license. The business license for utilisation of community forest located in a protected forest will cover area utilisation, the environmental service utilisation, and the collection of non-timber forest products. In a production

forest, it will cover area utilisation, environmental service utilisation, utilisation of timber and non-timber forest products, and collection of timber and non-timber forest products. For such purposes, the central government, provincial government, and regency/municipal government will, in line with their respective authorities, provide facilitation covering institutional development, business development, technological guidance, education and training, access to the market, and nurturing and control.

Local community empowerment can basically also be conducted through a community plantation forest (HTR) scheme, i.e., plantation forest within a production forest that is developed by a community group to enhance the potential and quality of the production forest by applying silviculture in the framework of ensuring sustainability of forest resources. In this regard, the role of the FMU (or designated official) is to provide recommendations to the Minister on the allocation and stipulation of a specific area to be granted a community plantation forest license.

5.7 FMU Long-term Plan

In developing the FMU's long-term plan, it is necessary to stipulate the goals and objectives. The principles for developing the goals and objectives include:

1. The goals and objectives should be derived from the Vision and Mission and be formulated operationally according to the planning period.
2. The goals and objectives should aim to resolve any problems identified by the FMU's management in achieving sustainable forest management.
3. The goals and objectives should be translated into achievement targets that are specific and measurable.
4. The goals and objectives should be socialised and become a commitment of the parties involved in FMU management.

The results of a review on support for the FMU development process in Indonesia conducted by Schaefer (2008)¹⁷ recommended that several

important points be taken into consideration when preparing the long-term plan, as follows:

1. The FMU long-term plan should be more concrete than regional forest policy and should contain clear and measurable targets. This is intended as an instrument of control for achieving results. Without clear targets, it will be difficult to define who is responsible for their achievement. Nevertheless, the long-term plan document should still be general in nature.
2. A separate management plan should be prepared for each type of management (e.g., for different types of licenses, management purposes such as HTR, and area conditions).
3. The data for each area may be combined into an overall FMU plan.
4. Ten-year targets must be clearly defined for utilisation, planting, rehabilitation, reclamation, protection of forests that are not yet subject to a license, community plantation forests, community forests (HKm), REDD, and so on. These targets can then serve as the foundation for stipulating the annual plan, workload and personnel requirements.
5. The long-term plan must be followed by a clear, concrete and binding medium-term action plan. In this way, responsibility for controlling activities and performance can be clearly described.
6. A financing plan must be incorporated in the long-term plan in order to clarify funding needs from the outset, so that funds can be obtained from the government budget and other sources, and as a basis for defining the annual work plan.
7. A working group needs to be established consisting of the FMU, Forestry Office, Bappeda, and the party performing the inventorying, to prepare a plan for integrating opinions in formulating the targets.
8. Harmonisation is needed between forest use planning and spatial plan. In this regard, integrating Bappeda in the long-term planning process is essential to avoid conflict with the spatial plan.
9. Preparation and approval of the plan must be done as quickly as possible so that planning decisions are based on current data.
10. The role of forest inventorying, which becomes the core of the long-term management

¹⁷ Schaefer, Christian. 2008. *Advisory Services for the Support of the FMU Establishment Process in Indonesia*. GTZ-SMCP-Hessen Forst. Kassel. Germany.

plan, must be emphasised in the guidance. Inventorying activity will become the basis for the FMU's own activities as well as for monitoring and evaluating license holders.

The operational steps for long-term forest management planning are as follows:

1. It should be prepared by the FMU and ratified by the Minister of Forestry or a delegated official.
2. It should be prepared and ratified by the Minister within two years at the latest as of the FMU organisation being established.
3. It should be prepared based on the situation mapping results.
4. It should follow the results of forest use planning (working area arrangement).
5. It should take into account the national, provincial and regency/municipal forestry plans.
6. It should contain:
 - a. Vision and mission as well as the goals and objectives of FMU management
 - b. Situation map of FMU management
 - c. Sustainable forest management development strategy, covering:
 - i. Forest arrangement into forest sections, zones, blocks, resorts, plots
 - ii. Forest area utilisation and use, and market services
 - iii. Forest rehabilitation and reclamation
 - iv. Forest protection and nature conservation.
7. It should include a guarantee on long-term sustainable forest management (for the duration of the FMU planning and/or forest class cycle), covering:
 - a. area management,
 - b. forest management,
 - c. market and consumer management,
 - d. Institutional arrangements,
 - e. Investment, financial and economic feasibility.
8. The main activities in area management, forest management and institutional arrangements should be directed toward maximise the performance of the following elements:
 - a. Utilisation, i.e., optimising the production and service functions of forest resources and the environment, including timber

production, non-timber production and environmental services

- b. Marketing and consumer services
 - c. Community empowerment, i.e., the clarity of working area and community access to the forest, cooperation mechanism, distribution of benefits and costs, and performance in local economic development
 - d. Environmental sustainability, i.e., maintenance of protected areas, minimising the impact of activities on hydro-oro-logical functions, preserving and maintaining the existence of endemic and protected flora and fauna
 - e. Investment and financial management.
9. The main activities should be described in terms of time and place for the duration of the planning period.
 10. The main activities in terms of time and place should be illustrated on a work map.
 11. There should be an information system management plan for the duration of the planning period.
 12. There should be a monitoring and evaluation plan for the duration of the planning period.

The vision and mission are a projection or picture of the expected future form of the sustainable FMU, along with the main achievements projected to be realised from this projection or picture. In determining the vision and mission, balanced sustainability (social, economic and environmental) needs to be applied in the concentration of forest resource management.

Here, FMU's visionary skills are required in making its formulation, and it should accommodate stakeholders' opinions as far as possible.

The situational analysis is construed as a systematic review and/or commentary and/or presentation of the external situation (politics, governance, market and industry, investment and financial services, the parties, and global trends in forest management) and internal situation (institution, management, forest resources, bio-physical environment, and local socio-cultural economy).

CHAPTER 6

ASSESSMENT OF FMU PERFORMANCE

- Basic Concept
- FMU Typologies
- Criteria and Indicators for FMU Performance
 - FMU Performance Assessment System



6.1 Basic Concept

Assessment of FMU performance is a sequence which cannot be separated from the FMU development process. As a development process, it clearly begins with diagnosing the problem and defining the concept for the solution needed to resolve any problems encountered. The solution conceived then needs to be formalised into a policy that forms the basis for implementing the solution that has been conceived. Without a policy set forth in various legislation and formal government plans, implementation will not have a legal framework.

Of course, the concept and policy developed have specific objectives. To ensure that those objectives lead to the achievements desired and stipulated, it is necessary to assess the performance of implementation. As a continuing process, these activities to assess FMU development performance should not be construed as activities aiming to reveal mistakes, but as an effort to find a way for the programme to be implemented effectively. Accordingly, the lessons learnt and feedback from the performance assessment process become important. Therefore, implementation of FMU development constitutes an uninterrupted cycle that runs continuously.

The performance of FMU development reflects the level of its achievements. Therefore, a performance assessment can be construed as an activity/effort to find out/measure the level of achievement of FMU development. There are two basic principles that must be met in the performance of FMU development, namely, management effectiveness

and FMU organisation efficiency. Management effectiveness is closely related to the purpose of the FMU's establishment (production, conservation, protection) and the FMU management process (forest use planning, utilisation, rehabilitation, protection, and conservation). Meanwhile, FMU organisational efficiency is closely related to the institutional models (UPT, UPTD, BLU, BLUD, etc.) developed, and the support from available resources (HR, funds, facilities and infrastructure).

6.1.1 Purpose and Objective

The purpose of the assessment of FMU development performance is to measure the level of achievement in FMU development with the purpose of defining the forms of intervention that are needed in the framework of improving FMU management at the site level based on the series of lessons learnt from the performance assessment. The assessment system is also expected to serve as an instrument that accompanies the FMU development process so that it runs in line with the objectives and within the confines of the prevailing legislation.

6.1.2 Performance Assessment Principles

Depending on the context, the principles that can be developed for the assessment of FMU development performance include accountability, transparency, effectiveness, efficiency, and simplicity/ease. An explanation of these principles is presented in **Table 9**.

Table 9. Performance Assessment Principles

Principle	Explanation
Accountability	Assessment-implementing organisation (assessor) is responsible to stakeholders, and the veracity of the results of the assessment can be accounted for.
Transparency	The assessment system, processes, data and information are accessible, understandable and monitorable by interested parties.
Effectiveness	The system developed can assess the performance of FMU development in line with the objectives of the assessment, namely, to acquire lessons and recommendations for improved forest management.
Efficiency	Use of resources (funds, HR, facilities and infrastructure) to achieve an effective assessment can be minimised without sacrificing the effectiveness of the assessment.
simplicity/ease	Obtaining an effective assessment can be achieved through a simple yet accurate procedure.

This performance assessment activity is a systematic process of collecting, analysing and interpreting information to determine the level of achievement of FMU development implementation for the purpose of making decisions on interventions to improve management. The main focus of this evaluation activity is on the results (output) and impact (outcome) components, i.e., to obtain information on how far outputs and outcomes have been achieved. It may also be possible to assess the FMU development inputs and process at the same time.

6.1.3 Assessment Model Options

In theory, there are two choices available for performance assessment models – conventional and participatory models. The differences between these two models are outlined in **Table 10**.

Selecting which of these models is the most appropriate option to choose depends primarily on the nature of the activities to be assessed. In general, for activities that have a clear time frame for completion, such as infrastructure development (roads, bridges, school buildings, hospitals, etc.),

the conventional model may be the appropriate option. But the participatory model will be better for sustainable activities.

Forest management is a chain of forest management processes – consisting of forest use planning, utilisation, rehabilitation, protection and conservation – that must be performed continuously in order to achieve the main objective. Yet implementation of each activity basically has a fixed time frame for completion. Therefore, combining the two approaches above (conventional and participatory) could be the best option. By combining the conventional and participatory models, certain benefits may be hoped for, among others:

1. Improving performance

In a participatory process there will be intensive communications making it possible to guarantee improved performance in terms of the input side (what, how many, why, when), the process (how the input is used and how the output is generated), and the output side (what, how many, why, when).

Table 10. Differences between Monitoring and Evaluation Models

Aspect	Conventional Model	Participatory Model
Actor	Assessment is conducted by a third party called various things, including “external party”; “independent party”; “outsider”; and “outsourcing.” The party being assessed is positioned as the “insider.”	Assessment involves all parties, in the form of a constructive cooperation between ‘outsider’ and ‘insider’, the institutions concerned, and the policymaker.
Procedure	The criteria and indicators are generally determined beforehand. In many cases, they are determined by the granter/owner of the funds.	Determined together, concerning: <ul style="list-style-type: none"> ▪ How progress in management implementation should be assessed (what, how, when and who). ▪ How follow-up corrective action should be determined.
Orientation	Orientation generally focuses only on efficient use of ‘inputs’; sometimes forgetting about the effectiveness of outputs and outcomes achieved.	There are 2 main principles: <ul style="list-style-type: none"> ▪ Not to look for mistakes, but to obtain information to learn lessons, and to find ways to improve management implementation. ▪ Empowerment, transparency and objectivity.
Satisfaction	Satisfaction generally resides with the ‘assessor’; disappointing ‘the assessed’	The chief hope is to satisfy all related parties.
Characteristics	Assessment frequently becomes the objective due to the funding made available	The performance assessment is not the objective, rather, it is a journey (process).

2. Improving capacity to achieve impacts

Procedures defined jointly and framed in criteria and indicators whose selection involves all parties will have consequences in that the impacts (outcomes) are defined by the parties responsible for FMU development and the subject (the community and/or its representative) in line with needs and conditions (contextual), so that control of the programme towards the objective (convergence) will be easier and more direct.

3. Improving the learning and empowerment process

The principle of collective thinking can be used as a facility for both learning activity and empowerment and strengthening the capacity of all related parties, strengthening the organisation and independent-development initiatives at the level of the main stakeholders (community).

4. Driving institutional reform towards a participatory structure

The characteristics of the participatory process will remove the hierarchical bureaucratic obstructions, improving the chances of accountability, transparency, participation and trust building among the parties arising, which will ultimately facilitate mobilisation of collective action and development of social capital.

5. Ensuring programme continuity

Intensive communication among stakeholders will build openness among all parties so that the local communities can appreciate the constraints to FMU development and the communities will be more easily persuaded to mobilise their resources to continue programmes that benefit them.

For local communities, a participatory process will increase opportunities to be actively involved in decision-making processes during each management phase, including in setting the standards, criteria and indicators for performance assessment. Active participation by the communities is essential, since the ultimate objective of FMU development is to improve the people's welfare.

The combination of conventional and participatory performance assessment models is not only extremely beneficial to the communities, it also benefits the FMU's organising personnel. The main benefit for the FMU organising personnel is the performance assessment can serve as a tool to obtain information and feedback from the programme by listening directly to the communities' opinions on the impacts of the development programme that the people themselves experience.

It is appreciated that a performance assessment process that introduces a participatory element is not a process without need for direction, since the participatory approach is not an orchestra without a conductor. Therefore, the people that should be involved in the performance assessment need to be recognised. Identification of the parties that should participate can be done using the stakeholders analysis technique.

6.2 FMU Typologies

The performance (level of achievement) of the FMU development process in each region may vary, and these variations may be due to various reasons, among others:

1. FMU development stage. Based on its stages, FMU development may be at the establishment phase (initiation, design, determination of FMU unit, through to determination of organisation establishment); the use planning phase (initial operational phase after the FMU is established); or the consolidation phase (a phase involving management capacity improvements in all aspects).
2. Main functions and purpose of FMU. Based on its main functions and purpose, the FMU can be classified into KPHK, KPHL and KPHP, each of which has a different emphasis in its main objective.
3. FMU Organisation. Considering the FMU's position as the government's representative at the site level, the variants in its organisational form remain under the control of the government, including the UPT, UPTD, BLU, BLUD, BUMN, and BUMD organisations. However, looking at the progress in development of the FMU model, it appears that the UPTD form is the most desirable

form. In the future, when the KPHL and KPHP conduct utilisation activities in certain areas, their organisational form will have to be transformed into a Public Service Agency (BLU) management system (GR No. P.06/2010, Article 18 section 3).

4. Resource potential contained. It is a fact some FMUs have a rich potential of resources while other FMUs have poor potential resources.
5. Complexity of issues. Based on the complexity of issues encountered, one variant likely to emerge is an FMU with a modest-to-high complexity of issues.

In FMU assessments, these variations must be taken into account. Therefore, the definition of typologies in an FMU performance assessment becomes essential in avoiding biases in the assessment arising from the variations present in each FMU established. Typology is very closely associated with the practices that must be performed in forest management activities (forest use planning, utilisation, rehabilitation, conservation and protection). Therefore, the typology defined should indicate the setting or condition of the object, in this case the FMU. The implication is that performance criteria and indicators are needed for FMU development along with a performance assessment system for FMU development that is based on the development process and regional typology.

In view of the above variations, various typologies can be developed. The more typologies developed, the greater the certainty that the criteria and indicators developed for each of these typologies will be contextual. However, if this is applied, it will create such complexity in the

application that the simplicity/ease principle for performance assessment cannot be fulfilled. Therefore, the typology needs to focus on the most easily recognisable factors. For instance, the recognisable influencing factor is the progress in FMU development and the potential of the forest resources belonging to that FMU. Presently, based on its progress, FMU development varies from those currently undergoing establishment to those already established, whether at the use planning phase or the consolidation phase. On the other hand, certain regions have adequate potential resources, while others do not. With these two determinants, four area typologies can be defined, as follows:

Typology 1. FMU is undergoing establishment phase, and has adequate potential resources.

Typology 2. FMU is already established, and has adequate potential resources.

Typology 3. FMU is undergoing establishment phase, but does not have adequate potential resources.

Typology 4. FMU is already established, but does not have adequate potential resources.

However, not all influencing factors can be disaggregated based on their characteristics, including the factor of the FMU's main function and purpose. Consequently, these factors become given factors, meaning that there must be different criteria and indicators for KPHK, KPHL and KPHP (**Table 11**).

Table 11. Criteria and Indicators Needed for various Typologies

	KPHK		KPHL		KPHP	
	Under formation	Already established	Under formation	Already established	Under formation	Already formed
Forest resource potential is adequate	CRITERIA & INDICATORS	CRITERIA & INDICATORS	CRITERIA & INDICATORS	CRITERIA & INDICATORS	CRITERIA & INDICATORS	CRITERIA & INDICATORS
Forest resource potential is not adequate	CRITERIA & INDICATORS	CRITERIA & INDICATORS	CRITERIA & INDICATORS	CRITERIA & INDICATORS	CRITERIA & INDICATORS	CRITERIA & INDICATORS

6.3 Criteria and Indicators for FMU Performance

The objective of stipulating the criteria and indicators for FMU development is so that forest management in the management unit can take place and be developed in line with the goals and objectives already stipulated, namely, preservation of the forest function, whether that be preservation of the production, protection or conservation function, so that the forest is managed better, more efficiently and effectively. In connection with the FMU institutional criteria for forest management units (GR No. 44/2004, Article 32), which among other things regulates the scope of responsibility for forest management organisation by the managing institution, comprising (1) management planning, (2) organising, (3) management implementation, and (4) controlling.

There are eight important criteria for assessing FMU development performance, namely: (1) area stability, (2) forest use planning, (3) management plan, (4) organisational capacity, (5) inter-strata relations within government and regulations, (6) investment mechanism, (7) availability of access and community rights, and (8) forestry dispute settlement mechanism. These eight criteria for FMU development performance can be explained as follows:

1. Area stability

Certainty that the area is stable is one of the pre-conditions for FMU management. Area stability is required, whatever the activity. Area stability in an FMU can be seen from several indicators: (1) a strong and correct legal basis for boundary demarcation and forest use planning, (2) space allocated for each utilisation (utilisation, protection, conservation and rehabilitation) (3) the area is free from forestry disputes, namely disputes over land utilisation with other government departments, (4) free from forestry land disputes with the community, and (5) an organisational structure exists that is based on control of the area.

2. Forest use planning

FMU performance is determined by the forest use planning activities being conducted. Indicators of these activities include, among others: (1) preparing the work area (inventorying, boundary demarcation and arrangements), and (2) dividing up the work area based on the conservation, protection and production functions.

3. Management plan

FMU performance can also be seen from the management plan being implemented. Indicators of this activity include, among others: (1) having short-term and long-term management plans; (2) having a forest utilisation plan in line with the designation of the plots; (3) having already prepared a work programme for forest rehabilitation, conservation and protection.

4. Organisational capacity

Organisational capacity is an important thing in determining FMU performance. The indicators of adequate organisational capacity include, among others: (1) availability of personnel with sufficient skills and expertise in all forest management activities (forest use planning, utilisation, rehabilitation, conservation and protection), and (2) already having an adequate planning and management system for all forest management activities.

5. Government and regulatory relations

Other FMU performance criteria that relate to the mechanism for government and regulatory relations in each forest management activity are: (1) good coordination undertaken in the forest area use allocation, (2) forest resource utilisation, (3) a fund allocation for rehabilitation, conservation and protection of forest areas, and (4) availability of regional regulations supporting the FMU's existence and sustainability.

6. Investment mechanism

Inevitably, FMU management requires substantial funding. An FMU that has good performance should have an investment mechanism. The indicators that a proper investment mechanism is in place include, among others: (1) the forest use planning provides space for various proper and appropriate types of investment, (2) an investment mechanism has been developed for investors to utilise resources, (3) a cost-benefit sharing system is available for forest management, (4) an investment programme for forest management is in place that guarantees the existence and sustainability of investments that are made.

7. Rights and access mechanism

In fulfilling the criteria above, FMU performance can also be seen in the availability of a rights and access mechanism for stakeholders. The performance indicators are: (1) availability of a clear space for management by the community, (2) availability of access for the community to obtain the proceeds, (3) active community involvement in forest rehabilitation and conservation activities, and (4) availability of an accountable and transparent monitoring and control system.

8. Forestry dispute settlement mechanism

Finally, forest management can never be separated from disputes over forestry interests with other parties. The performance of an FMU will be assessed based on the following indicators: (1) FMU readiness to anticipate forestry disputes and their settlement (forestry dispute resolution), and forestry dispute management, and (2) availability of human resources and apparatus to resolve forestry disputes with other parties.

Based on the scope of the assessment, criteria and indicators mentioned above, some of these can be assessed based on an administrative assessment while others must be assessed based on achievements in implementation in the field. The criteria (and indicators) numbers 1, 3, 5 and 8 can be assessed based on an administrative assessment (based on documents) while numbers 2, 4, 6 and

7 must be assessed based on implementation achievements in the field.

In the FMU establishment efforts, it is also necessary to assess performance in FMU territory development. There are three main problems in FMU development, namely:

1. Contents and completeness of legislation;
2. Resource mobilisation, especially for the integrated planning and implementation of the programmes of related parties;
3. FMU organisation, quantity and qualifications of human resources.

With the regional characteristics and FMU development issues mentioned above, the FMU development strategy can be formulated as follows:

First, at a national level it is necessary to increase capacity in national FMU development. This strategy is aimed at realising the national resource allocations for FMU development. This strategy should be applied continuously until all FMUs have been developed for the entire forest area.

Second, focus on efforts to develop FMU institutions in the field. Implementation of this strategy requires the identification of regencies/provinces that are reasonably prepared, at least in terms of political support for implementation. The success of these two programmes can be expected to become a pull factor for nationwide FMU development, especially if in the short term, FMU development actually becomes the basis for promoting regional economic activities.

Therefore, the performance of FMU regions established in provinces and regencies/municipalities can be assessed based on the following criteria and indicators:

1. Strengthening forest administration system

A strong forest administration system is one reflection of the success and capability of a region in administering its forest areas. The FMU development programme is basically a national programme for strengthening the national, provincial and regency/municipal forest administration systems.

Strengthening of the forest administration system can be seen in several indicators: (1) FMU area unit has already been established (planning phase), (2) spatial plan provides support in planning, and (3) establishment of FMU working group (*Pokja*) secretariat.

2. Regulatory support

The regulatory support required to support performance of provincial and regency/municipal FMU development can be seen from these indicators: (1) existence of support from regulations and legislation that satisfy needs for FMU establishment, (2) existence of clear re-organisation of relations among rights/permit holders, central government, provincial/regency/municipal government and FMU organisation, and (3) stipulation of standards and criteria for contractual relations (partnership) between the FMU organisation and partners and prospective partners.

3. Internalised programme for FMU development

Internalisation is aimed at mobilising the strengths of many groups, including related government institutions and other parties (non-governmental) that have competence in forestry issues. This internalisation consists of socialisation, institutionalisation and institutional strengthening. The indicators that can be developed comprise: (1) FMU development has been socialised, namely, there have been efforts to develop an understanding of the FMU programme, (2) FMU development has been institutionalised¹⁸ in all related parties, and (3) there have been efforts to strengthen FMU organisational capacity.

4. Resource mobilisation

To support acceleration of FMU establishment, resource mobilisation is required. The indicators that can be developed comprise: (1) convergence of forestry development programme into FMU area being managed, (2) clear financial and non-financial incentives, (3) mobilisation of state budget (APBN)/regional

budget (APBD)/donor funds, and potential utilisation of existing personnel.

5. Acceleration of stipulation for establishment of FMU that is ready.

This can be seen in the following indicators: (1) availability of clear funding mechanism for initiating FMU development, (2) establishment of FMU institution, (3) existence of FMU institutional structure, and (4) FMU institution consolidation and improvement.

Based on the explanation above, it appears that FMU development requires that it be institutionalised in all related parties as one institution. This requires a response in terms of strategy, policy, programme and activities that do not take a physical form on the ground, but rather consist of efforts to implement FMU institutionalisation in order to put this on the agenda of the related parties. This institutionalisation is realised through actions to resolve four main issues, namely:

1. Complexity characteristic. FMU development policy should be able to internalise FMU development activities among various parties that have different tasks, functions and authorities. Complexity in controlling the roles of the parties requires a response in a policy, such that stipulation of FMU development policy requires openness in inviting the active participation of the parties.
2. Autonomy characteristic. The philosophy, background and urgency of implementing the FMU development programme should be understood by all related parties. FMU development is highly dependent on capacity for shared learning among the related parties in order for them to have a shared understanding of everything about the FMU, so as to reduce the obstacles in terms of lack of understanding and the obstacles to the coordination that is needed.
3. Adaptability characteristic. All parties as an integrated whole should be able to adjust their programmes and activities to internal and external developments, which are always dynamic. Such adaptation to change really determines the flexibility in FMU development to always become a part of the changing conditions that are encountered.

¹⁸ Institutionalised and programme-rooted processes in FMU development towards relevant stakeholders in order to remind all stakeholders when they are preparing policies on forest areas to connect and synergise with FMU development programme.

4. Coherence characteristic. All parties connected with FMU development as an institution should be able to coherently manage the workload and prepare procedures and a schedule to achieve a single direction in FMU development.

6.4 FMU Performance Assessment System

6.4.1 Objective System for FMU Development

The objective of FMU development is basically an effective and efficient FMU organisation at managing certain areas. Achieving organisational effectiveness and efficiency is inseparable from the existence of an input, the process conducted, and the output and impact of such activity. Therefore, the objective of FMU development is an integrated objective system, as detailed in **Table 12**.

6.4.2 Assessment System for Performance of FMU Development

Generally speaking, the assessment system used to assess FMU development performance is designed in a way that makes the assessment process easy. This assessment system consists of assessment objectives, assessment uses, assessment tools

used, assessment process, assessor, and assessment impact (interventions and incentives that will be stipulated). The performance assessment system scheme for FMU development is presented in **Figure 10**.

The performance assessment begins with a document assessment (*desk assessment*) by an independent assessment team. This desk assessment aims to obtain an initial description of FMU development performance. Once the desk assessment is completed, site visits are made to the respective FMUs. The combination of the desk assessment and site visit will result in a certain FMU development achievement level and recommendations for strengthening the FMU's institutional capacity and capability. Based on this result, the competent authority can determine the types of interventions and incentives to give the FMU.

The tasks and functions of the performance assessment on FMU development are to review:

1. Review satisfaction of the requirements and process required for FMU development.
2. Review compliance with/effectiveness of the requirements and process conducted in FMU development.

Table 12. FMU Development Objective System

Objective	FMU can perform its main tasks and functions effectively and efficiently.
Outcomes	Forest management comprising forest use planning, utilisation, rehabilitation, conservation and protection activities that are conducted better in line with the FMU typology.
Output	Forest use planning is handled well, forest can be utilised better, rehabilitation activity improves, forest conservation is done better, and there are improvements in forest protection activities, a stable organisational management structure, efficiency in forest management and fund use.
Process	To improve coordination with related sectors to synchronise the spatial plan, improve quality/capability/skills in forest management planning, improve forest use planning capacity, improve the system for evaluating and assessing the success of forest management, improve the forest rehabilitation system, improve the forest utilisation system, improve the forest conservation system, improve the forest protection system, improve forest management accountability and transparency.
Input	Forest area, map, method, human resources, funds, regulations and legislation, technology

3. Review and assess (make a judgement) on how far the targets under the FMU development process plan have been met.
4. Review the existence of deviations in the requirements, targets and process of FMU development.

6.4.3 Assessor

The FMU development process assessment is made by an independent team appointed by the holder of authority for management and control, in line with their authorities. This independent team will have members consisting of individuals or institutions that are competent in the performance assessment process and forestry sector activities. In addition, the active role of the community is essential because the ultimate goal of FMU development is to improve the people's welfare. For that purpose, the community's management role in the performance assessment of FMU development needs to be stipulated.

6.4.4 Assessment Stage

The time span of the FMU development process begins when the FMU unit is stipulated by the Minister of Forestry and ends when the FMU's desired capacity and capabilities have been developed. The FMU development assessment schedule consists of:

1. FMU development initial assessment (*baseline assessment*), namely a performance assessment on FMU development during an initial period (for instance, one year) after the issuance of the Decree Stipulating the FMU.
2. A *midterm assessment*, namely a performance assessment FMU development after several years of FMU development implementation (for instance, three years). This intermediate assessment may be conducted annually (*annual assessment*).
3. A *final assessment*, namely an assessment conducted at the time the FMU's capacity and capabilities have been developed, or once the FMU has been consolidated. It is expected that this consolidated stage will be achieved in the fifth year of FMU development.

6.4.5 Achievement and Interventions

FMU development achievement or performance declares the FMU's degree of fulfilment of the stipulated development process criteria. This achievement also indicates the FMU's degree of success in performing its main tasks and functions. Meanwhile, the interventions are not sanctions (*punishment*), but resource inputs and incentives (*feedback*) to certain FMUs in order to achieve the desired condition (**Figure 11**). These achievements comprise:

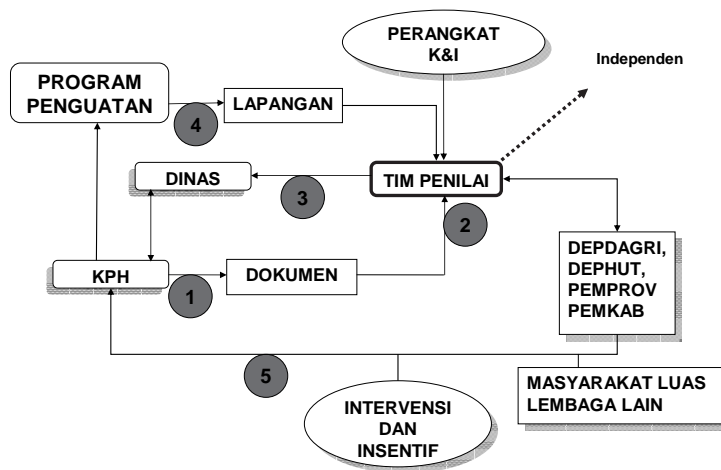


Figure 10. Assessment System Scheme for FMU Development (sequential numbers indicate Assessment Process Stages)

Achievement IV (ideal condition) is a condition where FMU has been able to conduct the development process as intended. In other words, almost all or all criteria in the FMU development process have been met (almost 100% of the criteria have been met).

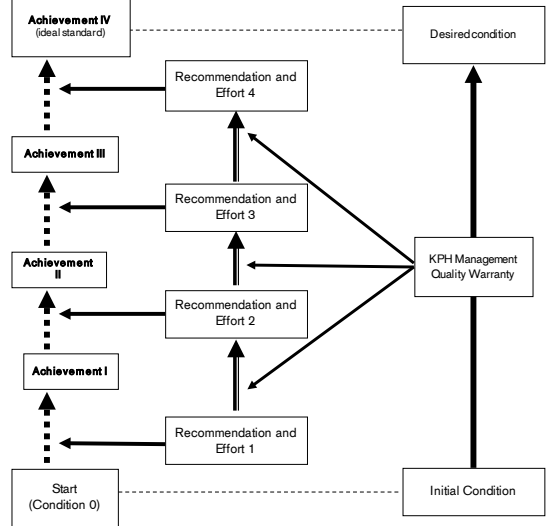
Achievement III is a condition where some criteria for the FMU development process have not yet been met. In other words, $\pm 75\%$ of the FMU development process criteria have been met.

Achievement II is a condition where the FMU has only been able to conduct part of the development process as intended. In other words, $\pm 50\%$ of the FMU development process criteria have been met.

Achievement I is a condition where the FMU has not been able to perform the development process as intended. In other words, only $\pm 25\%$ of the FMU development process criteria have been met.

With reference to the achievements explained above, it is necessary to quantify the criteria and indicators that have been developed using certain values. This quantitative approach requires conformance with quantitative analysis principles, including data and information generation, data analysis presentation and method, and the conclusions drawn. Nevertheless, it is often the case that such a quantitative analysis technique is not able to explain the phenomenon accurately. So, while the assessment is developed using the quantitative

method, qualitative explanations are still needed.



Remarks:
➔ : assessment

Figure 11. FMU development achievements and degree of intervention required



CHAPTER 7

SOCIAL AND GOVERNANCE ASPECTS

- Typology of Social Issues
- Typology of FMU Organisation and Governance

The basic issues that emerge in the forestry sector as described in the previous chapters are a result of the state handling forest management affairs, as set out in government bureaucracy, regulation and policy that directs the behaviour of forestry development actors, with the existence of various interpretations of forest management among stakeholders. The imbalance of structure and process, where power, authority, cooperation and conflict are articulated to control decision making and settle objections concerning the allocation and use of forest resources through interaction between social organisations and institutions, whether government, non-government, formal or informal, illustrates the weakness of governance in the forestry sector in Indonesia.

Good forestry governance should be characterised by the existence of forest management institutions that illustrate balanced roles and responsibilities of the government, business community and civil society, supported by accountable policies and trustworthy law enforcement institutions. Overall, good forestry governance can be assessed in the handling of forestry affairs, which ideally applies the following 14 principles (Bappenas, 2007):

1. Vision of the future
2. Openness and transparency
3. Public participation
4. Accountability
5. Supremacy of law
6. Democracy
7. Professionalism and competency
8. Responsiveness
9. Efficiency and effectiveness
10. Decentralisation
11. Partnership between the business community and the people
12. Commitment to reduce inequality
13. Commitment to environmental sustainability
14. Commitment to a fair market.

Performance in forestry management as mandated in Article 33 of the 1945 Constitution, elaborated in the Forestry Law No. 41/1999, and implemented through regional government corridors mandated by Law No. 32/2004, is the realisation of the state's provision of public services in the forestry sector. The adoption of good governance principles in forest management undertakings is a pre-requisite for public services in the forestry sector to be able to satisfy all parties with an interest in forests and

forestry. Various sources describing the forestry governance situation indicate the existence of various complex issues, as follows:

1. The root of the problems faced in achieving good forest management performance focuses on the pre-conditions, among others: conflicts in spatial planning policy, weak law enforcement, poor capacity in forest management, and the absence of a management institution for production forest and protected forest areas.
2. In terms of forest management structure and institutions, there are still several fundamental issues causing poor performance in forestry, among others: domination of decisions by the political elite and private entities; poor recognition of the sovereignty of civil society; poor working relationships in forestry affairs between the central government, provinces and regencies/municipalities; the low capacity and competence of regional forestry agencies; and weak coordination across sectors.
3. In terms of the decision-making process, forestry governance is still characterised by rejection of the supremacy of law by law enforcement institutions, forestry development actors and the community; poor transparency and participation; low responsiveness, efficiency and effectiveness of government programmes; and rejection of their social and environmental responsibilities by both the government and private entities.
4. In terms of the value system for governance affairs, forestry is still characterised by a low level of commitment towards achieving public welfare; low commitment to forest and environmental sustainability; and low commitment to the management of public goods.
5. In terms of the parties' perceptions, it is acknowledged that public services in the forestry sector do not yet comply with good governance principles, except for the principle of a vision of the future and several elements of the principle of openness and transparency.
6. All parties agree that almost all forest management elements still fail to fulfil the principles of accountability and supremacy of law.

The FMU as a legal instrument to enhance the stability of forest areas and guarantee the presence of a forest management institution on the ground, while mandated by Law No. 41/1999, is still considered to be a new thing in forestry governance. At the site level, the establishment of FMU areas has been notable for a high level of conflict with the community – whether the customary community, the local community or members of the general public having an interest in the forest area. In chapter 3 we mention that an area of between 17.6 million and 24.4 million hectares of forest has become a source of conflict in terms of conflicting claims over state forest and claims of customary communities or other local communities, the development of villages/hamlets, and the existence of permits from other sectors for areas inside forest areas. In this context, the establishment of FMUs based on the legal provisions on forest areas frequently clashes with the spatial planning process, which is closely related to the issue of forest area relinquishment.

7.1 Typology of Social Issues

The reality of forest areas being ‘open access’ in nature, combined with the poor stability of these areas due to lack of recognition by the community, has created complex social issues that are rooted in the socio-cultural conditions of customary communities, the fundamental need for a proper living and [escape from] poverty, and economic circumstances that motivate various illegal activities in forest areas. **Table 13** provides examples of several social issues being faced by FMUs, including the FMU of Perum Perhutani in East Java.

Based on the situations described in **Table 13** and other information, the typology of social issues within FMU regions can be grouped into the following:

1. **Major Tenurial Conflict:** This issue is characterised by the presence of a strong base of rights among the community, whether under customary law or positive law. In many cases, the problem is exacerbated by passivity, which may also become a cause of major tenurial problems.
2. **Minor Tenurial Conflict:** This issue is characterised by the presence of control over land founded on a weak base of rights. This issue generally arises from poverty, or an urge

to satisfy the fundamental need for a proper living, while the land is owned by people outside the forest area and cannot sustain their lives.

3. **Issues Involving Access to Forest Resources:** This issue is characterised by the presence of forest resource utilisation without any claim to control the land in the forest area. This access issue is generally based on historical evidence that is rationally accountable.
4. **Issues Involving Illegal Activities:** This issue is characterised by a land control and/or access to forest resources that lacks any strong base in rights or historical evidence that is rationally accountable.

With such diverse typologies of social problems among FMUs, there is no single generic strategy capable of resolving all of these social problems. Some strategic directives that might be adopted and adjusted depending on the typology of social problems found at the FMU include, among others:

1. localising all areas of serious tenurial conflict into areas of non-effective production as a transitional policy, and gradually building a collaboration to optimise achievement of sustainable forest management objectives.
2. developing micro spatial arrangements together with the community in order to reach mutual agreement with the community on the utilisation norms for each spatial function.
3. recommending legal settlement through the mechanism of revising the spatial arrangements in areas of serious tenurial conflict that are unlikely to be retained as forest areas .
4. accommodating community access to forest resources by re-arranging the norms for utilising such resources in accordance with sustainability principles.
5. developing a mechanism for recognising community management rights in areas of serious/minor tenurial conflict in the context of sustainable forest management. This mechanism serves as the basis for FMU managers to prepare licensing recommendations that are relevant to the community’s rights and access to forest resources – for instance, village forests, community forests (HKm), community plantations (HTR), and acknowledgement of customary forest.
6. engaging in law enforcement for all issues relating to illegal activities.

Table 13. Social problems faced by several FMUs

No.	FMU Name	General Condition of FMU	Tenurial	Socio-Economic
1.	FMU Rinjani Barat	<ul style="list-style-type: none"> ▪ Working area of KPHL Rinjani Barat based on the forest's function consists of protected forest (HL) covering an area of 28,911 hectares, limited production forest (HPT) covering an area of 6,997 hectares, and permanent production forest (HP) covering an area of 5,075 hectares. ▪ Condition of vegetation: <ul style="list-style-type: none"> ▪ Open land (15%) = ±6,147 hectares, ▪ Coarse grass & shrub land (20%) = ± 8,197 hectares ▪ Swamp forest (25%) = ± 10,246 hectares ▪ Medium-dense forest (40%) 	<ul style="list-style-type: none"> ▪ Land certification case in the forest area requires a legal process. Forest certification was conducted by BPN through the PRONA programme in 1984 in Rempek, for an area of ±82 hectares. The community was disappointed that the land certification by BPN did not accommodate their presence. 96% of the names listed in the certificate were outsiders having close ties to influential people at the time, while there were only four names from the community ▪ Much of the land has been tilled by the community for a long time 	<ul style="list-style-type: none"> ▪ 70% of the people living in the vicinity of Rinjani are classified as poor ▪ Need for fire-wood has increased for cooking and drying tobacco ▪ Illegal logging and forest clearing due to the people's increasing need for cultivation land for non-forest development, in response to an increase in the population. ▪ There are indications of illegal mining (use of forest areas for PETI activities)
2.	FMU Banjar	<ul style="list-style-type: none"> ▪ Working area of FMU Banjar based on the forest's function consists of protected forest covering an area of ± 42,090 hectares, limited production forest covering an area of ± 25,354 hectares, and permanent production forest covering an area of ± 72,513 hectares. ▪ Land cover based on the results of interpreting SPOT 5 in 2007: <ul style="list-style-type: none"> ▪ Ex-mining open land of 1,892.95 hectares (1.35%), ▪ Ex-forest timber extraction/LOA of 47,828.20 hectares (34.17%), ▪ Coarse grass mixed with shrub land of 54,732.86 hectares (39.11%), ▪ Shrubs and old shrub land of 22,545.89 hectares (16.11%), ▪ Virgin forest of 413.4 hectares (0.30%). 	<ul style="list-style-type: none"> ▪ Land ownership is based on the issuance of an SKT. ▪ Much of the land has been claimed by the community for unirrigated fields and converted into a mining area. 	<ul style="list-style-type: none"> ▪ Illegal occupancy of land ▪ Illegal mining
3.	FMU Yogyakarta	<ul style="list-style-type: none"> ▪ Working area of FMU Yogyakarta based on the forest's function consists of: <ul style="list-style-type: none"> ▪ production forest covering 13,411.70 hectares, ▪ protected forest covering 2,312.80 hectares, ▪ Tahura covering 634.10 hectares. 		<ul style="list-style-type: none"> ▪ Many people are still classified as 'pre-prosperous'

No.	FMU Name	General Condition of FMU	Tenurial	Socio-Economic
4.	Perum Perhutani Unit II East Java, FMU Madiun	<ul style="list-style-type: none"> The forest management plan for FMU Madiun, covering an area of 31,221.62 hectares, is divided into business class Teak covering 27,528.20 hectares and business class Eucalyptus covering 3,736.10 hectares. Based on its function, the forest area of FMU Madiun can be divided into three groups, namely a protected area (6,877.64 hectares/22.03%), a non-effective production area (1,055.085 hectares/3.38%), and an effective production area (23,289.948 hectares/74.59%). 		<ul style="list-style-type: none"> Conflicts over managed land Community is still quite dependent on/interacting with forest resources, as indicated by the people's need for firewood, to utilise land below stands (cultivation of greenery as livestock fodder), and land cultivation for routine plants (intercropping)
5.	FMU Model Register 47, Way Terusan, Central Lampung regency	<ul style="list-style-type: none"> With an area of 12,500 hectares, this partly comes from a replacement area for the relinquishment of 10,500 hectares of forest area allocated to PT. BS3, and the rest the forest area itself. The bio-physical condition is already seriously damaged, with permanent vegetation cover in the form of forest plants no longer being found on the site. The entire area of register 47 Way Terusan has now been cleared and tilled by the community. Generally, this area is divided into a settlement area, fields/plantations; and swamps. 	<ul style="list-style-type: none"> There are community demands to convert the replacement land from PT BS3, which was traditionally owned by customary communities in three villages. The basis for the demand is the fact that the land is no longer forest, and nor did it initially have forested status; it was merely replacement land from PT BS3. There is a land overlap, with 300 people (under the transmigrasi programme) having been placed in an area of 350 hectares to become a settlement unit (SP3), while this settlement area was later included within the land under Register 47 Way Terusan. 	

7.2 Typology of FMU Organisation and Governance

Of all the FMU areas already established, only 15 FMUs already have management institutions, all of which are in the form of technical implementing units (UPTD) of the forestry service at provincial or regency level. There are at least two FMU

organisational structure models, which are presented in **Figures 12** and **13**. It appears that these UPTD organisational structures are not yet in tune with the basic tasks and functions of the FMU as a forest management agency. The Minister of Home Affairs Regulation regarding the organisation provides a framework for establishing the FMU organisation, such that the existing organisation needs to be adjusted.

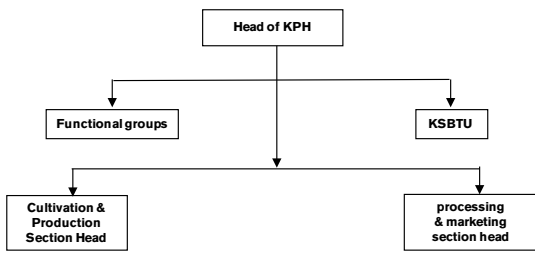


Figure 12. Organisational Structure of KPHL Rinjani Barat

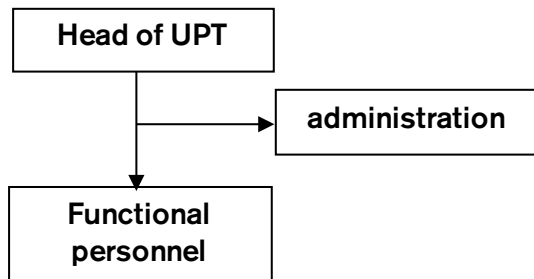


Figure 13. Organisational Structure of KPHP Banjar

With the organisational structures presented in **Figures 12** and **13**, FMUs still face various problems, as presented in **Table 14**.

There are differences when we compare these structures with the organisational structure mandated under Minister of Home Affairs Regulation No. 61/2010, namely that the management of the smallest territorial unit is handled by a resort, and the KPHP/KPHL organisation is accountable to the Governor or Regent, and not the forestry service head. Both the old and new organisational structures consider it important that functional position groups should perform the various forest management functions. The relationship between the FMU organisation and the forestry service, other regional apparatus organisations, regional forestry agencies, and license holders, is developed based on the principles of coordination, integration and synchronisation at the locus of an FMU area. Fundamental issues likely to emerge in implementing the new organisational structure are HR competency and funding problems, and the system of working relations between KPHP/KPHL and other agencies concerned with forestry.

Table 14. Organisational and governance issues faced by several FMUs

No.	Name of FMU	Funding	Forms of land utilisation and Presence of License Holders	Organisational Problems	Other Information
1.	FMU Rinjani Barat	<p>National:</p> <ul style="list-style-type: none"> Funding for joint patrols, training for KKP and technical personnel, constructing seedbeds to planting 350 hectares 2011 Forest use planning (40,983 hectares) 2011 Boundary reconstruction plan (92.21 Km) <p>Provincial:</p> <ul style="list-style-type: none"> FMU socialisation financing bamboo planting (10 hectares) 	<ul style="list-style-type: none"> Use of forest area for telecommunication tower, PDAM, PLTMH KHDTK for UNRAM forest education Proposal to reserve for HKm and HTI 	<ul style="list-style-type: none"> Limited organisational structure at site level, such as BKPH/RPH/ Foreman Tupoksi for positions in the organisation are not yet in accordance with management needs Limited facilities and infrastructure Limited technical personnel Limited working relation arrangements, restricting communications and relations among stakeholders 	<ul style="list-style-type: none"> Detailed data/map/ information on the forest area are not yet known, including the forest potential, the condition and social-economic-cultural problems of the community around the forest working area of KPHL Rinjani Barat The perimeters and functional limits of the forest area have mostly been lost or damaged, considering the timeframe for boundary demarcation is longer than 10 (ten) years, on average

No.	Name of FMU	Funding	Forms of land utilisation and Presence of License Holders	Organisational Problems	Other Information
		<ul style="list-style-type: none"> ▪ planting ketak grass (5 hectares) ▪ 2011 routine patrols ▪ Protected forest rehabilitation plan (200 hectares) ▪ Cultivation plan for eaglewood (25 hectares) <p>Other parties:</p> <ul style="list-style-type: none"> ▪ LSM Konsepsi ▪ KSM Bareng Maju/ KSU RIMBA ▪ LSM Mitrasamiya ▪ Kemitraan/Partnership 		<ul style="list-style-type: none"> ▪ Standard operating procedures for FMU activities not yet developed ▪ The parties' poor technical capacity to facilitate organisational development and lack of opportunities for study in relation to the development of the FMU organisation 	<ul style="list-style-type: none"> ▪ Forest use planning covering the arrangement of blocks and plots has not been done yet. Forest use planning activities conducted previously were limited to PHTUL programme activities funded by Ditjen BPK. The results of the block arrangements documented at KPHL Rinjani Barat only cover an area of ±977 hectares (3.4 % of the KPHL area) ▪ Most of the forest area is in a critical condition (unoccupied land, coarse sabana grass, and swampy forest) with poor potential, due to timber theft, illegal clearing, swidden cultivation, and illegal forest occupation
2.	FMU Banjar	Local budget (APBD)	<ul style="list-style-type: none"> ▪ 6 IUPHHK locations ▪ 1 KHDTK forest R&D unit (Litbanghut) ▪ 34 villages ▪ 7 transmigration sites, and ▪ 1 ex-mining site 	<ul style="list-style-type: none"> ▪ The Banjar Model KPHP institution is still in the form of a UPTD, so its tupoksi is only as technical implementer of existing sectors ▪ HR capacity is still low ▪ Limited facilities and infrastructure 	<ul style="list-style-type: none"> ▪ Inactive investment (3 HTI and 1 HPH) means there are many concessions not being managed ▪ Poor potential of forest area ▪ Outer and inner perimeters of the forest area do not yet exist
3.	FMU Yogyakarta	<ul style="list-style-type: none"> ▪ 2009 and 2010 budgets were limited to provincial budget funds. ▪ The focus of the local budget – 80% related to building a eucalyptus factory since it contributes to locally generated revenues (PAD), while the development of areas for BDH and RPH was still low ▪ MoF funds facilitated through de-concentration funds were not distributed to FMU 	<ul style="list-style-type: none"> ▪ Tahura Bunder (617 hectares). The Tahura area included various types of utilisation, such as a eucalyptus oil factory, a special purpose forest area for the MoF R&D Centre (Puslitbang), a campground, rest area, a nursery, and a seed garden ▪ Eucalyptus (4,176.2 hectares) consisting of 3,691.55 hectares in the HP area and 484.65 hectares in the HL area 	<p>Working relations procedures are not yet standardised in a regulation, there is only in a coordination forum of UPT-Dep and SKPDs for DIY province. Many operational activities are still performed by the Forest Service</p> <ul style="list-style-type: none"> ▪ The FMU does not yet have an RKU ▪ Forest management performance standards have not yet been developed ▪ Still limited facilities and infrastructure 	<p>In the territory in Gunungkidul regency there is a potential state forest area in the form of AB forest estate covering 1,773.01 hectares, but forest use planning has not been done yet, especially forest designation activity. The AB forest estate that had its borders demarcated by the provincial forestry office of D.I. Yogyakarta during the period 1990-1998, and BPKH territory XI Java-Madura in 2007-2009, totals 1,122 hectares.</p> <ul style="list-style-type: none"> ▪ Boundary demarcation is not yet completed

No.	Name of FMU	Funding	Forms of land utilisation and Presence of License Holders	Organisational Problems	Other Information
			<ul style="list-style-type: none"> ▪ Wanagama I KHDTK/ forest education and research area managed by the UGM Faculty of Forestry (599.70 hectares) ▪ Playen KHDTK/ re-research forest managed by the research and development agency of the MoF (100.6 hectares) ▪ Community forest/ HKm (1,061.55 hectares) ▪ Community Plantation/ HTR (327.73 hectares) ▪ Model development (118 hectares) ▪ SILIN (94 hectares) 	<ul style="list-style-type: none"> ▪ Tupoksi for positions in the organization are not yet in line with management needs ▪ Planning preparations for annual programmes and activities still refer to the Strategic Plan of the Forestry and Plantation Service Office (Dishutbun) ▪ Budgeting process is still with the Dishutbun, resulting in a lack of authority over forestry management and utilization, with the local budget allocation for the FMU Yogyakarta Board also being quite limited ▪ FMU institution still refers fully to GR 6/2007, which is territory-based, due to a conflict with GR 41/2007 ▪ Roles of BDH and RPH are not accommodated by local regulation (perda) 36/2008 ▪ No foremen have been established yet, while many are already retired ▪ Facilitation support from the MoF does not yet reach the FMU ▪ Implementing organisation activities at the site level appear to be ineffective due to an overlap in performing the same tasks 	<ul style="list-style-type: none"> ▪ HL area is not yet divided into protected blocks and utilization blocks ▪ Proportional division of plots by management and administrative consideration has no criteria yet
4.	Perum Perhutani Unit II East Java, FMU Madiun	Perhutani funds		<ul style="list-style-type: none"> ▪ Limited quality and quantity of HR ▪ Facilities and infrastructure are not yet adequate ▪ LHP verification on logs produced by Perum Perhutani is conducted by Perum Perhutani officers, allowing deviations to occur in PSDH payments (PSDH payments do not match actual production) 	<ul style="list-style-type: none"> ▪ Boundary marking between FMU and non-FMU territory, between blocks, and between plots has not been done properly in accordance with the applicable provisions

No.	Name of FMU	Funding	Forms of land utilisation and Presence of License Holders	Organisational Problems	Other Information
				<ul style="list-style-type: none"> ▪ There is no institution yet at the level of section head specifically to handle environmental management, making this pre-condition for obtaining PHL certification ineffective. 	<ul style="list-style-type: none"> ▪ The presence of a management region that is adjacent to community settlements increases the risk of security disturbances, especially the need for land, employment opportunities, and the sub-standard economic level of the local people ▪ During the last decade, there was a decrease in land “bonita” in several areas of stands. Efforts to enhance the fertility of the land and use environment-friendly fertilisers did not receive sufficient attention ▪ The target of obtaining FSC certification has not been achieved yet due to the high standards that must be met in implementing sustainable forest management at FMU Madiun.



CHAPTER 8

NATIONAL ACTION PLAN AND IMPLEMENTATION

- Strategy and Policy
- Programmes and Activities

FMU development should be perceived in terms of strategy, policy, programmes and activities that are not physical site activities, but efforts to implement FMU institutionalisation so that it becomes the agenda of related parties. The realisation of such institutionalisation will take the form of actions to resolve 4 (four) basic aspects, as follows:

1. *Complexity*. FMU development policy must be able to internalise FMU development activities among parties with different tasks, functions and authorities. The complexity of arranging these parties' roles should be accommodated in a policy, such that the stipulation of FMU development policy requires an openness to invite active participation by those parties.
2. *Autonomy*. The philosophy, background and urgency of implementing the FMU development programme should be understood by all related parties. Progress in FMU development is highly dependent on the *shared learning* capacity of the related parties to have a shared understanding of FMU in order to reduce obstacles arising from disagreements and constraints in respect of the necessary coordination.
3. *Adaptability*. All parties as an integrated unit should be able to adjust their programmes and activities to dynamic internal and external developments. Adaptation to such changes is a key determinant the flexibility of FMU development to always be a part of the changing conditions that are faced.
4. *Coherence*. All parties connected with the development of the FMU as an institution must be able to coherently manage the workload and develop procedures and schedules so as to realise a single direction in FMU development.

The four issues mentioned above, based on the socialisation, coordination and consultation processes that have been conducted, are still encountered. In other words, the task of FMU development still rests firmly with certain working units, namely the Directorate of Area Management and Preparation of Forest Area Utilisation.

8.1 Strategy and Policy

8.1.1 Issues

Developing an FMU is about developing an institution, in terms of both the rules of the game and the organisation. Developing an institution is about developing public goods, so the issues lie in the authority, capacity and political will of the related public institution, either alone or in terms of its capacity to organise with others.

There are 3 (three) basic issues concerning FMU development, as follows:

1. Content and completeness of the legislation;
2. Mobilisation of resources, especially to plan and carry out the programmes of related parties in an integrated manner;
3. FMU organisation, quantity and qualifications of human resources.

8.1.2 Strategy and Policy

With the regional characteristics and issues in FMU development mentioned above, the strategy for FMU development can be formulated as follows:

First, at the national level, capacity building is needed in national FMU development. This strategy is intended to realise the allocation of national resources for FMU development. This strategy is applied continuously until all of all FMUs have been developed for all forest areas. Based on the prevailing legislation, this capacity building in national FMU development should be undertaken based on the respective roles of each institution.

Second, focus on efforts towards FMU institutional development on the ground. In implementation, this strategy involves identifying regencies/provinces that are relatively prepared, at least in terms of political support to carry it out. The success of this second programme is expected to become a pull factor for FMU development nationwide, especially if FMU development can become a foundation to promote regional economic activities in the short term. Development of Model FMUs is included under this strategy.

Based on those two strategies, a number of policies can be developed (**Table 15**).

There are five basic national-level policies for FMU development, as follows:

1. Policy I. Completion of legal framework and national planning, along with their socialisation
2. Policy II. National HR Development (objectives, targets and form of HR development)
3. Policy III. National Institutional Development of FMU Development (relating to intra- and inter-institutional roles, management system)
4. Policy IV. Raising Public Interest in FMU Development (DPR, universities, donor

agencies, business associations, non-governmental institutions)

5. Policy V. Stipulation and facilitation process for FMU development on the ground.

8.1.3 Road Map

The above strategies and policies can be implemented when the driving institutions and elements capable of realising FMU development have been identified. Among central government institutions, the Ministry of Forestry is the key such driving institution, followed by the Ministry of Home Affairs, and supported by the Minister of State Apparatus Empowerment, the State Minister for State-Owned Enterprises and Bappenas.

Table 15. Strategy and Policy for National FMU Development

STRATEGY	FMU DEVELOPMENT POLICY			
	Legislation and planning	National Resources		
		Organisation and HR	Coherence of Programme	Public support
1. Enhancing the Capacity of National FMU Development	Completion of legal framework and national planning, along with their socialisation: <ol style="list-style-type: none"> 1. Law No. 41/1999 (Article 17 & Article 21) 2. Government Regulation (GR) No. 44/ 2004 (Articles 26 to 32 and Article 37 subclause (2)) 3. GR No. 6/2007 (Articles 5 to 10) 4. Regulation of the Minister of Forestry to follow up GR No. 6/2007 5. National action plan 	National development of organisation and HR (objectives, targets and form of HR development)	National institutional development of FMU development (relating to intra- and inter- institutional roles, management system)	Raising public interest in FMU development (DPR, universities, donor agencies, business associations, non-governmental institutions)
2. Development of FMU Institution on the ground	Stipulation and facilitation process for FMU development on the ground: <ol style="list-style-type: none"> 1. Appointment of FMU areas by the Minister of Forestry 2. FMU Development Team at provincial and regency level 3. Action Plans at provincial and regency levels 	Included in the provincial and regency-level action plans through general guidance (from MoF)		

These driving institutions are used to achieve a comprehensive set of legal instruments, followed by the re-allocation of resources to achieve FMU development. The roadmap is formulated based on a behavioural dimensions analysis. Behavioural dimensions can be determined once the following are known: (1) perceptions of the parties, using any information available, (2) identification of creative thoughts, (3) power and influence of policy makers, (4) communication and commitment of the parties, and (5) support from the parties.

Behavioural dimensions are principally used to determine to what extent the parties understand the importance of FMU, their primary reaction, and the forms of support that can be provided based on their respective authorities. With good results from the behavioural dimension analysis, as contained in the FMU development implementation programme, the direction or concrete measures will be obtained (who to meet, when, commitments obtained, etc.) in undertaking FMU development. With that implementation framework, it is expected that the plan can be translated into activities on the ground, as indicated by the mobilisation of development resource to realise the programmes and activities contained in this action plan.

8.1.4 Monitoring and Evaluation

Monitoring and evaluation will be conducted of activities that have already been implemented to formulate the issues encountered and the forms of intervention that are needed so that FMU development can proceed in accordance with the defined objectives. Conducting this monitoring and evaluation requires FMU development criteria and indicators as well as a monitoring and evaluation system.

8.2 Programmes and Activities

In this national-level FMU RAP, the programmes and activities are derived from the five policies above.

1. Policy I. Completion of comprehensive legal framework and national planning, as well as their socialisation:

Name of programme	: Comprehensive Legislation and FMU Development Planning
Issue	: There are constraints in terms of poor capacity and political support for FMU development
Objectives	: 1. Achieving legal certainty and certainty of direction in national FMU development 2. Achieving clarity on activities and continuity of FMU development as well as results measured by territory and over time
Activities	: 1. Stipulation of legislation derived from GR No. 6/2007 with respect to FMU development 2. Revision of legislation to accelerate FMU development 3. Stipulation of national planning apparatus for FMU development
Risks	: 1. Inadequacy of legislation already prepared 2. Other constraining factors, such as issues over rights to forest resources
Coordination	: All working units at Ministry of Forestry, Ministry of Home Affairs, Bappenas, State Minister for State-owned Enterprises, Minister of State Apparatus Empowerment, NGOs, universities
Managing risks	: 1. Taking into account the variety of conditions in policy making for FMU development 2. Preparing to engage in mediation and conflict resolution to implement FMU development
Evaluation	: Establishment of the criteria and indicators for performing evaluations on the implementation of legislation and the implementation of FMU development planning

2. Policy II. National HR Development

Name of programme : Increasing the Quantity and Capacity of HR to Operationalise FMU Functions

Issue : Limited HR in terms of both quantity and qualifications

Objective : Accelerate the function of FMUs in enhancing forest management nationwide

Activities : 1. Development of education and training modules
2. Technical training on forest management and forest planning within the scope of FMUs
3. FMU managerial training and government relations

Risks : -

Coordination : All work units at Ministry of Forestry, NGOs, universities

Managing risks : -

Evaluation : Establishment of criteria and indicators for evaluating the training results

Activities : 1. Socialisation and consultancy to harmonise the programmes of the authorities in FMU development
2. Review and socialisation of FMU in legal, social, economic and institutional review of forestry organisation
3. Evaluation and input on improving FMU development policy

Risks : Conflicts of interest may occur

Coordination : All work units at Ministry of Forestry, Ministry of Home Affairs, Bappenas, State Minister for State-owned Enterprises, Minister for State Apparatus Empowerment, NGOs, universities

Managing risks : Need for periodic informal meetings to harmonise the understanding and interests

Evaluation : Establishment of criteria and indicators for evaluating developments in national institutional capacity

3. Policy III. Development of FMU Development National Institution

Name of programme : Establishment and Capacity Building of FMU Development National Institution

Issue : Although there is legislation and clarity on the authority of each party, institutional weaknesses often prevent overall policy from being implemented

Objectives : 1. Achieve capacity and cooperation mechanism among the parties to support FMU development
2. FMU development becomes a national agenda

4. Policy IV. Raising Public Interest in FMU development

Name of programme : Developing Public Support and Mobilising FMU Development Resources

Issue : FMU development, since it pertains to governance, is closely tied to the interests of many parties. FMU development issues and image determine the relative strength of support among many parties

Objective : FMU development becomes an urgent matter for all parties, so as to facilitate mobilisation of resources for FMU development

- Activities : 1. Increased understanding and urgency of FMU development among higher education institutions on forestry
 2. Increased understanding and urgency of FMU development among the media
 3. Increased institutional capacity to support mobilisation of FMU development resources

Risks : Cases where FMU development has failed and/or there is still much forest destruction may develop into an issue stating that FMU development is not needed

Coordination : All work units at the Ministry of Forestry, Ministry of Home Affairs, Bappenas, State Minister for State-owned Enterprises, Minister of State Apparatus Empowerment, NGOs, universities, media, Parliament (DPR)

Managing risks : 1. Periodic publications are available
 2. Readiness to clarify negative reviews about FMU in the media

Evaluation : Establishment of criteria and indicators for evaluating progress in public support and the results of mobilising FMU development resources

5. Policy V. Stipulation and Facilitation Process for FMU Development on the ground

Name of programme : Development of National Capacity to Facilitate Implementation of FMU Development Process

Issue : FMU development, which involves many parties, often requires other parties to provide support and mediate relations between the parties

Objective : Acceleration in implementation of FMU development on the ground is achieved

- Activities : 1. Development of strategy and framework for FMU development support
 2. Acceleration of FMU development through support

Risks : If the support process is too strong, this might lessen sense of FMU 'ownership' among local governments and other parties

Coordination : All work units at the Ministry of Forestry, Ministry of Home Affairs, Bappenas, State Minister for State-owned Enterprises, Ministry of State Apparatus Empowerment, NGOs, universities

Managing risks : Readiness of support team to be improved with sufficient preparation

Evaluation : Establishment of criteria and indicators for evaluating developments in national institutional capacity

FMU development has now become a national priority, as expressly set out in the 2010-2014 Forestry Strategic Plan presented in **Table 16**. In addition, the Directorate General of Forestry Planning has developed benchmarks for basic activities and their relationship to the roles of BPKH and the forestry service in both provinces and regencies, as presented in **Table 17**.

Table 16. Indicators of FMU Development in 2010-2014 strategic plan (*Renstra*) of the Ministry of Forestry

INDICATOR	Cumulative				
	2010	2011	2012	2013	2014
Decree of Minister of Forestry on Stipulation of KPHL and KPHP areas throughout Indonesia	22 Prov	25 Prov	28 Prov	28 Prov	28 Prov
Decree of Minister of Forestry on Stipulation of KPHK areas throughout Indonesia	20%	40%	60%	80%	100%
Legislation on implementation of FMU - four titles	2 titles	4 titles	4 titles	4 titles	4 titles
Operation of 120 FMUs (i.e., 20% of the designated FMU areas)	2%	4%	10%	15%	20%

Table 17. Basic activities that serve as benchmarks for Directorate General of Forestry Planning and for realising FMU development

Basic activity	Activity Details	CENTRAL GOVERNMENT	BPKH	Forest Service (Dinas)
ESTABLISHMENT OF FMU TERRITORIES	Evaluation of FMU areas	V	V	
	Preparing design for FMU area			V
	Preparing directives on reserving FMU areas	V		
	Preparing proposals for FMU area designation			V
	Preparing FMU area designation	V		
PREPARATION OF POLICIES AND REGULATIONS ON FMU DEVELOPMENT	Preparing regulation/policies	V		
	Stipulating utilisation of certain territories	V		
	Assessing FMU institution	V		
	Action Plan	V		V
ORGANISATION OF EDUCATION AND TRAINING FOR FMU MANAGEMENT COMMITTEE		V		
FACILITATION ON FMU DEVELOPMENT	Support for FMU institutional preparation <ul style="list-style-type: none"> ▪ Coordination of FMU institutional preparation ▪ Support for FMU preparation 	V	V	V
	Supervision or Facilitation on implementation of forest management <ul style="list-style-type: none"> ▪ Inventorying FMU management area ▪ Forest use planning for FMU management area ▪ Preparation of forest management plan or review of forest management plan 		V	V
	Coordination and socialisation of FMU development	V	V	V

Basic activity	Activity Details	CENTRAL GOVERNMENT	BPKH	Forest Service (Dinas)
	Socialisation of FMU development through FORETIKA	V		
	Coordination meetings on national-level FMU development	V		
	Consolidation of FMU management territories		V	
MONITORING AND EVALUATION	Monitoring and evaluation of FMU development	V	V	V
	Monitoring and evaluation of organisation of forest management		V	
	FMU nurturing and control	V	V	
PREPARATION OF DATA/ INFORMATION ON FMU DEVELOPMENT		V		

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ANNEXES

Annex 1. Identification of Forest Management Activities

NO	ACTIVITY	CENTRAL	PROVINCE	REGENCY	FMU	REMARKS
1	Forest Use Planning	<ul style="list-style-type: none"> NSPK 			Forest use planning implementation	
2	Management Plan (MP)	<ul style="list-style-type: none"> NSPK Ratification of Long Term and Medium Term MP (RP-JP and RP-JM) for KPHP, KPHL and KPHK Ratification of Short Term MP for KPHK 	<ul style="list-style-type: none"> Technical considerations on RP-JP and RP-JM KPHP, KPHL, KPHK Ratification of Short-term MP for KPHP and KPHL 	<ul style="list-style-type: none"> Technical considerations on RP-JP, RP-JM, short-term MP for KPHP, KPHL, KPHK 	<ul style="list-style-type: none"> Preparation of RP of Long- and Short-Term KPHP, KPHL, KPHK Ratification of Short-term MP for FMU (Government Regulation 38/2007) 	<ul style="list-style-type: none"> GR 6/2007 does not contemplate the medium-term (5 years) In GR 6/2007 the long-term is 10 years, while in Government Regulation 38/2007 it is 20 years
3	Utilisation					
	1. Conservation	<ul style="list-style-type: none"> NSPK Granting of Permit 	Technical considerations	Technical considerations	<ul style="list-style-type: none"> Monitoring & evaluation Supervision and control 	
4	Protection					
	1. Work Plan	Ratification of Long-Term RKU and Medium-Term RKU	Technical considerations	Technical considerations	<ul style="list-style-type: none"> Monitoring & evaluation Supervision and control 	
			<ul style="list-style-type: none"> Evaluation and Ratification of Annual RKU 	Technical considerations for ratification		

NO	ACTIVITY	CENTRAL	PROVINCE	REGENCY	FMU	REMARKS
		<ul style="list-style-type: none"> • NSPK • Ratification of RKU of business unit of long-, medium- and short-term utilisation of protection forest 	Technical considerations for ratification of RKU of business unit for long-, medium- and short-term forest utilisation	Technical considerations for ratification of RKU of business unit for long-, medium- and short-term forest utilisation		
	2. Utilisation of area and environmental services	<ul style="list-style-type: none"> • NSPK • Granting of national scale permit 	Provincial scale permit granting (inter-Regency/Municipality)	Regency/ municipal scale permit granting (in regency/ municipality)	<ul style="list-style-type: none"> • Monitoring & evaluation • Supervision and control 	
	3. Collection of non-timber forest products	<ul style="list-style-type: none"> • NSPK • Granting of national scale permit 	Provincial scale permit granting (inter-Regency/Municipality)	Regency/municipal scale permit granting	<ul style="list-style-type: none"> • Monitoring & evaluation • Supervision and control 	
	4. Arrangement of work area of protected forest utilisation business unit	<ul style="list-style-type: none"> • NSPK • Ratification of outer boundary demarcation for work area of protected forest utilisation business unit 	Ratification of technical considerations to the government	Ratification of technical considerations to the province	<ul style="list-style-type: none"> • Monitoring & evaluation • Supervision and control 	
5	Production					
	1. Timber Forest Product	<ul style="list-style-type: none"> • NSPK • Granting of Permit 	Technical considerations/ permit recommendation	Technical considerations/ permit recommendation	<ul style="list-style-type: none"> • Implementation of utilisation in certain areas • Monitoring & evaluation • Supervision and control 	

NO	ACTIVITY	CENTRAL	PROVINCE	REGENCY	FMU	REMARKS
	2. Non-Timber Forest Product	NSPK	Provincial scale permit granting (Inter Regency/ Municipality)	Regency/municipal scale permit granting (in regency/municipality)	<ul style="list-style-type: none"> Monitoring & evaluation Supervision and control 	
	a. Utilisation of area and environmental services	<ul style="list-style-type: none"> NSPK Permit granting for area and environmental services utilisation 	Granting permit for provincial scale area and environment (inter regency/municipality)	Granting permit for regency/ municipal scale area and environmental services utilisation (in regency/ municipality)	<ul style="list-style-type: none"> Implementation of utilisation in certain areas Monitoring & evaluation Supervision and control 	
	b. Collection of forest and non-timber products	NSPK				
	c. Business Work Plan Preparation	<ul style="list-style-type: none"> NSPK Ratification of long-term (20 years) and medium-term (5 years) RKU 	Granting permit for provincial scale collection of timber and non-timber forest products (inter-regency/municipality) <ul style="list-style-type: none"> Technical considerations for ratification of long-term (20 years) and medium-term (5 years) RKU Evaluation and ratification of short-term (1 year) RKU 	Granting permit for regency/municipal scale collection of timber and non-timber forest products (in regency/municipality) <ul style="list-style-type: none"> Technical considerations for ratification of long-term (20 years) and medium-term (5 years) RKU Technical considerations for short-term (1 year) RKU 	<ul style="list-style-type: none"> Monitoring & evaluation Supervision and control 	Under Government Regulation 6/2007

NO	ACTIVITY	CENTRAL	PROVINCE	REGENCY	FMU	REMARKS
	d. Arrangement of work area for production forest utilisation	<ul style="list-style-type: none"> NSPK Ratification of boundary demarcations 	Technical considerations for ratification, coordination and supervision of implementation of outer boundary demarcations for provincial-scale production forest utilisation by work unit (inter regency/municipality)	Technical considerations for ratification, coordination and supervision of implementation of outer boundary demarcation of work unit area for production forest utilisation in regency	<ul style="list-style-type: none"> Monitoring & evaluation Supervision and control 	
6	Forest product administration	NSPK Implementation of arrangement of forest product administration	Supervision and control of provincial-scale forest product management	Supervision and control of regency-scale forest product management		
7	Forest area use	NSPK Granting of Permit	Technical considerations	Filing the proposal (recommendation)	<ul style="list-style-type: none"> Monitoring & evaluation Supervision and control 	Used by permit holder
8	Rehabilitation and reclamation (outside permit) 1. Forest and land rehabilitation, including mangroves	Implementation of rehabilitation and maintenance of conservation forest	<ul style="list-style-type: none"> Implementation of provincial scale rehabilitation and maintenance of Tahura Implementation of rehabilitation of HP, HL without provincial scale permit 	<ul style="list-style-type: none"> Implementation of regency-scale rehabilitation and maintenance of Tahura Implementation of rehabilitation of HP, HL without regency-scale permit 	Rehabilitation implementation	To date, the rehabilitation and protection has been conducted by Province/regency/municipality (This should be done by FMU)

NO	ACTIVITY	CENTRAL	PROVINCE	REGENCY	FMU	REMARKS
	2. Community Empowerment	NSPK	Monitoring, evaluation and facilitation	Community counselling, development of institutions and partnership	Community empowerment	Idem
	3. Reclamation in Forest Area Use area	<ul style="list-style-type: none"> • NSPK • Reclamation product evaluation 	Reclamation plan ratification	Technical consideration for reclamation plan and monitoring	<ul style="list-style-type: none"> • Monitoring & evaluation • Supervision and control 	Idem
	4. Reclamation of Forest in Natural Disaster Area	<ul style="list-style-type: none"> • NSPK • Organising of reclamation of national scale disaster area 	Plan preparation and implementation of province scale reclamation	Plan preparation and implementation of regency-scale reclamation		Idem
	5. Development of Rights Forest and Various Forestry Businesses	NSPK	Monitoring, evaluation and facilitation	Plan preparation and nurturing		Idem
	6. Germination of Forest Plants	<ul style="list-style-type: none"> • NSPK • Stipulation and development of genetic resources • Export/import permit granting • Quarantine and certification • Certification institution accreditation 	<ul style="list-style-type: none"> • Technical considerations • Certification Implementation 	Inventorizing, identification and proposing prospective area		

NO	ACTIVITY	CENTRAL	PROVINCE	REGENCY	FMU	REMARKS
9	Natural Protection and Conservation (outside permit)	<ul style="list-style-type: none"> • NSPK • Providing national scale facilitation, guidance and supervision (forest not subject to traditional right and customary forest) 	<ul style="list-style-type: none"> • Implementation of protection of HPHL not subject to the traditional right and customary forest and provincial scale Tahura • Providing provincial scale facilitation, guidance and supervision (forest not subject to traditional right and customary forest) 	<ul style="list-style-type: none"> • Implementation of protection of HPHL not subject to traditional right and forest and regency scale Tahura • Providing regency scale facilitation, guidance and supervision (forest not subject to traditional right and customary forest) 	Implementation of forest protection and nature conservation	To date, forest protection and nature conservation have been conducted by Province/Regency/municipality (Should be done by FMU)

Annex 2. Roles of Government, Provincial Government, Regency/City Government, FMU and Permit Holder under the Legislation

No	Activity	Ministry of Forestry	Provincial Forestry Service	Regency/Municipal Service	FMU	Permit Holder
1	Forest Planning and Forest Use Planning	<ul style="list-style-type: none"> • NSPK • National Forest Inventory (TGH) • Designation and stipulation of forest area • Stipulation of status and function changes • Permit for use and swapping 	<ul style="list-style-type: none"> • Technical considerations in preparation of Provincial Spatial Plan • Application and technical considerations on swapping and relocation of forest area functions 	<ul style="list-style-type: none"> • Technical considerations in preparation of regency/municipal spatial plan • Application and technical considerations on swapping and relocation of forest area functions 	<ul style="list-style-type: none"> • Inventorying: • Forest inventorying outside the permit area, comprising timber, non-timber and socio-economy. • Inventorying of target and realisation of permit holder production • Compliance of permit holder • Ecosystem type • state of titles • Conflict structure • Total households in FMU • Division of blocks/zones of public interest (utilisation, protection and conservation) • Mapping 	<ul style="list-style-type: none"> • Inventorying of forest in the permit area comprising timber, non timber and socio-economy • PAK (division of blocks/parcels/sub parcels) • Boundary demarcation of blocks/parcels/sub parcels
2	Management Plan Preparation	<ul style="list-style-type: none"> • Production and State revenues target determination • Integration with national development • Target achievement strategy • NSPK Management Plan Preparation • FMU management plan ratification 	<ul style="list-style-type: none"> • Elaboration of target and State revenues at provincial scale • Target achievement strategy • Technical considerations 	<ul style="list-style-type: none"> • Elaboration of target and State revenues at regency/municipal scale • Target achievement strategy • Technical consideration 	<ul style="list-style-type: none"> • Elaboration of target and State revenues at FMU scale • Target achievement strategy • Long-term management plan preparation • Short-term management plan preparation 	<ul style="list-style-type: none"> • Production plan • Target achievement strategy • RKT and RKT preparations by considering FMU management plan

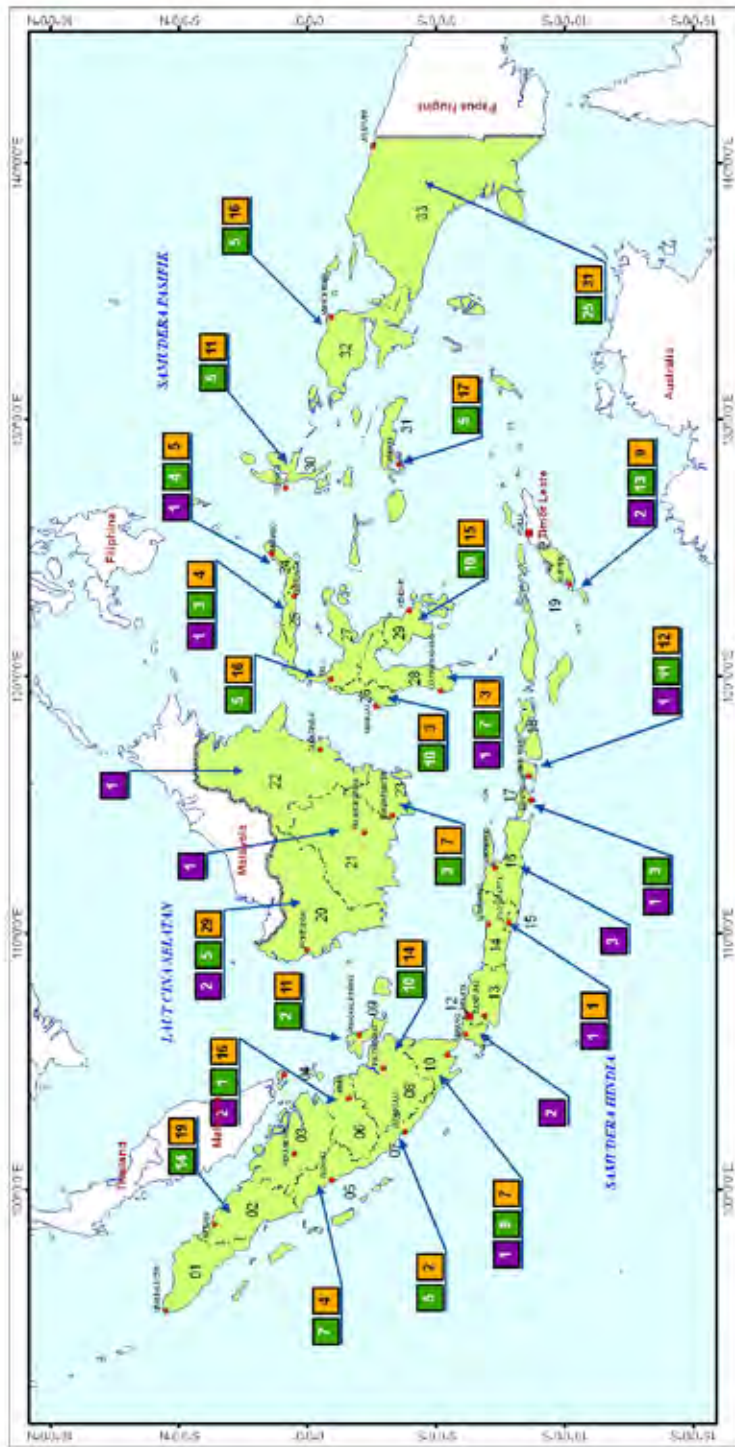
No	Activity	Ministry of Forestry	Provincial Forestry Service	Regency/Municipal Service	FMU	Permit Holder
3	Utilisation					
	1. IUPK a. Protection Forest b. Production Forest	<ul style="list-style-type: none"> • NSPK • Granting inter-province permit 	Granting inter-regency/municipal permit	Granting permit in regency/municipality territory	<ul style="list-style-type: none"> • Receiving copy of permit • Monitoring and evaluation of activity implementation 	Implementation
	2. IUPJL a. Conservation Forest b. Protected Forest c. Production Forest	<ul style="list-style-type: none"> • NSPK • Granting inter-province permit • Granting permit for IUPHHK ecosystem restoration area 	Granting inter-regency/municipal permit	Granting permit in regency/municipality territory	<ul style="list-style-type: none"> • Receiving copy of permit • Monitoring and evaluation of activity implementation 	Implementation
	3. IUPHHK a. Natural Forest	<ul style="list-style-type: none"> • Granting of Permit • RKU approval 	Recommendation	Consideration	<ul style="list-style-type: none"> • Area-related technical considerations • RKT ratification • Monitoring and evaluation of activity implementation • Receiving report on RKU 5-year evaluation 	<ul style="list-style-type: none"> • Permit application • RKU preparation • RKT preparation • Implementation
	b. Restoration	Granting of Permit	Receiving copy of permit	Receiving copy of permit	<ul style="list-style-type: none"> • Receiving copy of permit • Monitoring and evaluation of activity implementation 	<ul style="list-style-type: none"> • Permit application • RKU preparation • RKT preparation • Implementation

No	Activity	Ministry of Forestry	Provincial Forestry Service	Regency/Municipal Service	FMU	Permit Holder
	c. Plantation Forest					
	1) HTI	<ul style="list-style-type: none"> Granting of Permit RKU approval 	Recommendation	Consideration	<ul style="list-style-type: none"> Area-related technical consideration RKT ratification Monitoring and evaluation of activity implementation Receiving report on RKU 5-year evaluation 	<ul style="list-style-type: none"> Permit application RKU preparation RKT preparation Implementation
	2) HTR	Granting of Permit		Granting of IUPHHK (delegated by minister)	Monitoring and evaluation of activity implementation	Implementation
	3) HTHR	Granting of Permit	Recommendation	Consideration	Monitoring and evaluation of activity implementation	Implementation
	4. IUPHHBK	<ul style="list-style-type: none"> NSPK Granting inter-province permit 	Granting inter-regency/municipal permit	Granting inter-regency/municipal permit	<ul style="list-style-type: none"> Receiving copy of permit Monitoring and evaluation of activity implementation 	Implementation
	5. IPHHK	<ul style="list-style-type: none"> NSPK Granting inter-province permit 	Granting inter-regency/municipal permit	Granting inter-regency/municipal permit	<ul style="list-style-type: none"> copy of permit Monitoring and evaluation of activity implementation 	Implementation
	6. IPHHBK a. Protection Forest b. Production Forest	NSPK	Granting inter-regency/municipal permit	Granting inter-regency/municipal permit	<ul style="list-style-type: none"> Receiving copy of permit Monitoring and evaluation of activity implementation 	Implementation
4	Empowerment					
	1. Village Forest • Protection Forest • Production Forest	<ul style="list-style-type: none"> NSPK Area determination Facilitation Granting of IUPHHK 	<ul style="list-style-type: none"> Facilitation Management of title granting Granting of IUPHHK (delegated by Minister) 	<ul style="list-style-type: none"> Area Proposal (based on FMU management plan) Facilitation 	<ul style="list-style-type: none"> FMU management plan Receiving copy of IUPHHK Village forest management plan together with village institution Monitoring and evaluation of activity implementation 	<ul style="list-style-type: none"> Village forest management plan together with FMU Implementation: Work plan Boundary demarcation Protection HH arrangement

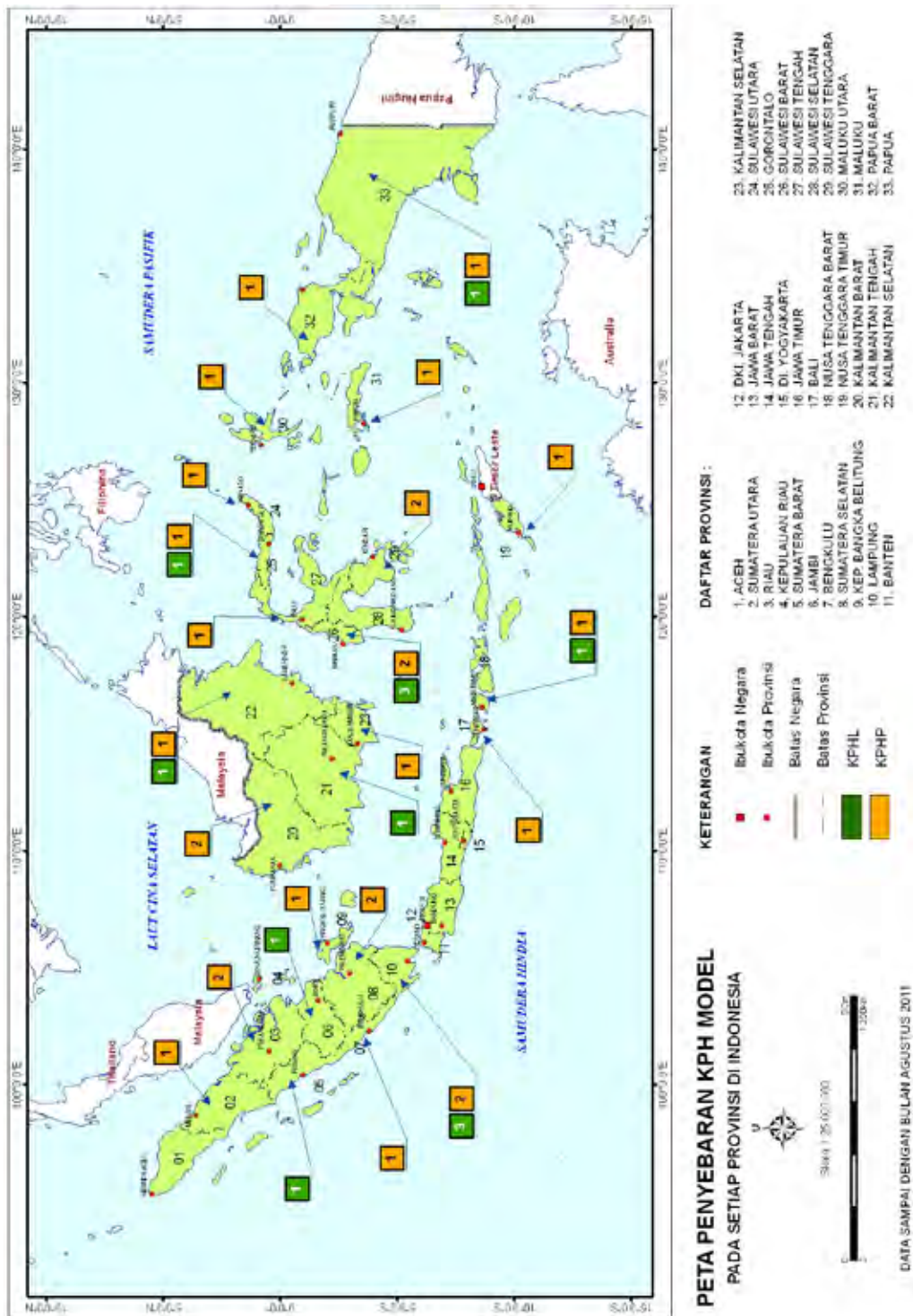
No	Activity	Ministry of Forestry	Provincial Forestry Service	Regency/Municipal Service	FMU	Permit Holder
	b. HKm	<ul style="list-style-type: none"> Area determination Facilitation Granting of IUPHHK 	<ul style="list-style-type: none"> Facilitation Granting of IUPHKm for inter-regency/municipality Granting of IUPHHK (delegated by Minister) 	<ul style="list-style-type: none"> The proposed area (based on the FMU management plan) Facilitation Granting of IUPHKm (not including timber forest products) in regency/ municipal territory 	<ul style="list-style-type: none"> Management plan Receiving copy of IUPHHK Receiving copy of IUPHKm Monitoring and evaluation of activity implementation 	<ul style="list-style-type: none"> Application (community) Implementation: <ul style="list-style-type: none"> Work plan Boundary demarcation Protection HH arrangement
	c. Partnership	Facilitation	Facilitation	Facilitation	Monitoring and evaluation of activity implementation	Implementation
5	Forest area use	Granting of lease and use permit for forest area	Recommendation	Recommendation	Monitoring and evaluation of activity implementation	Implementation
6	Rehabilitation	<ul style="list-style-type: none"> NSPK Fund Support Guidance and Control 	<ul style="list-style-type: none"> Fund Support Provincial-scale planning Guidance and Control 	<ul style="list-style-type: none"> Fund Support Regency/municipal-scale planning Guidance and Control 	<ul style="list-style-type: none"> Target at FMU level Strategy Implementation outside permit area Monitoring and evaluation of activity implementation 	<ul style="list-style-type: none"> Target, strategy and implementation in permit area Implementation
7	GERHAN	Operational Head of GERHAN Coordination Team	<ul style="list-style-type: none"> Provincial GERHAN Promotion Team Providing matching funds (minimum 10%) 	<ul style="list-style-type: none"> Regency/Municipal GERHAN Promotion Team Providing matching funds (minimum 10%) 	Delegation of GERHAN implementation	<ul style="list-style-type: none"> Within forest area through Indonesian Armed Forces Bhakti Operation Outside forest area through SPKS with community group
8	Reclamation	<ul style="list-style-type: none"> NSPK Guidance and Control 	Guidance and Control	Guidance and Control	Monitoring and evaluation of activity implementation	<ul style="list-style-type: none"> Target, strategy and implementation in the permit area Implementation

No	Activity	Ministry of Forestry	Provincial Forestry Service	Regency/Municipal Service	FMU	Permit Holder
9	Protection	<ul style="list-style-type: none"> • NSPK • Fund Support • Guidance and Control 	<ul style="list-style-type: none"> • Fund Support • Guidance and Control 	<ul style="list-style-type: none"> • Fund Support • Guidance and Control 	<ul style="list-style-type: none"> • Target at FMU level • Strategy • Implementation outside permit area • Monitoring and evaluation of activity implementation 	<ul style="list-style-type: none"> • Target, strategy and implementation in the permit area • Implementation
10	Conservation	<ul style="list-style-type: none"> • NSPK • Fund Support • Guidance and Control 	<ul style="list-style-type: none"> • Fund Support • Guidance and Control 	<ul style="list-style-type: none"> • Fund Support • Guidance and Control 	<ul style="list-style-type: none"> • Target at FMU level • Strategy • Implementation outside permit area • Monitoring and evaluation of activity implementation 	<ul style="list-style-type: none"> • Target, strategy and implementation in the permit area • Implementation

Annex 3. Map of Distribution of KPHK/KPHL/KPHP



Annex 4. Map of Distribution of KPH Model



Forest Management Unit Development (**FMU**)

Concept, Legislation
and Implementation



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