



**Review on Recent Issues of  
Agriculture, Forestry, and Bio-Energy  
Sectors in Indonesia**

**Brighten Institute**

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## **EXECUTIVE SUMMARY**

### **Agricultural Sector**

A majority of people in Indonesia are living and working in rural areas, and most of their income is derived from agricultural activities. Rice, which has dominated agricultural production in Indonesia, is the main staple food for most households for both urban and rural alike. The investment on food crops and plantation have been varying in value in the past six years, however, the number of projects that are approved by the government indicate an increasing trend. Food crops and plantation are included in primary sector, which also comprises of livestock, forestry, fishery, and mining. For the crops commodity, harvested area under rice and corn have been increasing in general in the last few years while that of soybean, sweet potato and cassava have been on the decrease.

### **Forestry Sector**

At the moment, Indonesia is faced crucial problems in the forestry sector such as forest fires and degraded land that tend to increase in the future. In recent years, Indonesia has been losing up to 2 million hectares annually (World Bank, 2006), mainly due to illegal logging and land conversion brought about by problems of excessive processing capacity, lack of effective management and poor law enforcement. Indonesia's forest areas are threatened with degradation, fragmentation and destruction. Forest loss undermines rural livelihoods and ecosystem services. Poor forest governance damages the investment climate, rural economic potential, Indonesia's competitiveness and international reputation. Forest crime exacerbates problems of budget and fiscal balance, and diverts public revenues that could be better spent on poverty reduction and development goals.

## **Bio-energy Sector**

The Minister for Energy and Mineral Resources of Republic of Indonesia launched a new ministerial regulation (No. 32/2008) on September 26, 2008 about supplying, utilizing, and trading arrangement of biofuels. It is a revision of the regulation No. 51/2006 concerning biofuels trading guidelines. The biofuels as stated in the regulation are categorized into three types; bio-ethanol (E100), bio-diesel (B100) and pure plantation oil (O100).

With respect to the utilization policy, the biofuels stated in this regulation are categorized into two types i.e. specific (regulated) and general type. The government regulation will group the utilization of the specific (regulated) biofuels, in terms of type, standard, specification, volume, pricing (subsidizing), and blending arrangement with the other type of fuels. Meanwhile, the government will not provide a subsidizing scheme for the general type, so business entities have an authority in managing their prices based on consumer purchasing power, sustainability of supply and distribution, and the economic margin consideration.

## **PREFACE**

This report consists of review on recent issues and development of agriculture, forestry, and bio-energy sectors in Indonesia. The report will be published every two weeks. The topic of each sectors may different in every publications but still with the same formats.

The issues addressed in this edition vary among sectors. In agricultural sector, we report the trend of investment on food crops and plantation, the trend of harvested area, production, and productivity of crops such as rice, corn, soybean, sweet potatoes, and cassava. Meanwhile, in forestry sector, we report about crucial problems that are facing Indonesia's forestry sector, that include forest fires and increased degradation of land. In addition, we cite some regulation that has been signed by Minister for Forestry. Lastly, the report outlines the recent issues on bio-energy sector, that include industrial strategy proposal on biofuel industry in Indonesia and ministerial regulation no.32/2008 comprising of the biofuels utilization stages and regulated vs. general type of biofuels.

Bogor, October 15, 2008

Brighten Team

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## I. INTRODUCTION

Indonesia can be categorized as an agrarian nation, where the role of agriculture in Indonesia economy really significant. Agriculture sector in Indonesia has a role in: (a) providing job opportunity for the majority of labor force, (b) producing foods for the nation, (c) raw material producer for industrial sector, and (d) strengthening food security and rural development. The role of agriculture becomes more important when Indonesia in the middle of economic crisis.

Normally, agriculture activities are done in rural area, where most of Indonesian population stays. That is why agriculture development in Indonesia can not be separated from rural development at large. The development of agriculture sector will bring a large impact to the welfare of rural population. Because of most of population in Indonesia live in rural area, the condition of their welfare will largely effect national development.

Agriculture development in Indonesia is also related to the effort to reduce poverty and strengthening food security. Most of farmer in Indonesia own small piece of farming land. The average of land ownership in Indonesia is below 0.35 hectare. The consequence of small size of land ownership is most of people live below poverty line exist in rural area. The farmer with small size of land and landless farmers are those who also prone to experiencing food insecurity. The decreasing of income or the rising of food prices is sufficient to make farmers and their families facing a hardship to get access to enough food.

The rate of unemployment in Indonesia is relatively very high, it is more than 10 per cent. The growth of employment opportunity much lower then the increasing of labor force itself. The role of agriculture sector in absorbing the surge of unemployment in is relatively high. In 1980 the agriculture sector could provide employment to labor force around 54 per cent of the total. The share decrease slowly and then going up when Indonesia was in economic crisis. If the central bank of Indonesia is called "the lender of the last resort", then agriculture became "the employer of the last resort". In 2007, the share of agriculture sector in absorbing labor force was still above 40 per cent.

The main objective of agriculture policy is maximizing the production growth rate, especially rice and other foodstuff such as corn and soybean. Most of agricultural programs were directed toward realizing food self sufficiency, particularly by means of expansion and intensification. Expansion was aimed to extent planted area through (a) opening or extending new farm land, mostly outside Java Island, (b) improving infertile land quality, (c) extending irrigation networks, (d) increasing the dry land utilization, and (e) improving the quality of swamp and tidal swamp land. On the other side, the objective of agriculture intensification was increasing productivity of food farming system. Agriculture intensification was done by (a) improving the methods of cultivation, (b) exploiting the benefits of high yielding variety seeds, and (c) the application of fertilizers and pesticide appropriately. Through expansion and intensification, it was hoped that Indonesia would capable to increase its food production, especially rice.

The agriculture policy had produced positive as well as negative impacts. The positive impacts that resulted from agriculture policy were: (a) farm production increased significantly, (b) the stability of food price, (c) improvement on farm income and lead to poverty reduction in rural area, (d) improvement on capital accumulation in rural area. Nevertheless agriculture policy brings negative impacts, and they are: (a) over use of agriculture input, especially nitrogen fertilizer, (b) land degradation in center area of paddy's production, (d) increasing dependency on rice as a major staple food, (f) declining of rice competitiveness in international market, and (g) the improvement of other commodities except rice was forgotten.

Although nowadays the role of rice in national economy is declining, but it's direct and indirect roles are still significant. Paddy's farming has contributed to earning of the farmers and providing job opportunities to more than 21 millions households. To paddy's farmer, the contribution of paddy's farming to its household income is between 25 per cent and 35 per cent. Rice is a main staple food of more than 95 per cent of Indonesian population. The contribution of rice to protein and energy intake is remaining high; it is more than 50 per cent.

The rice economic policy seems necessarily needed. However the policy that has been made in the past needs adjustments. There are already many changes in strategic environment that forced government to delete many existing policies. Strategic environment that has changed are domestically and globally.

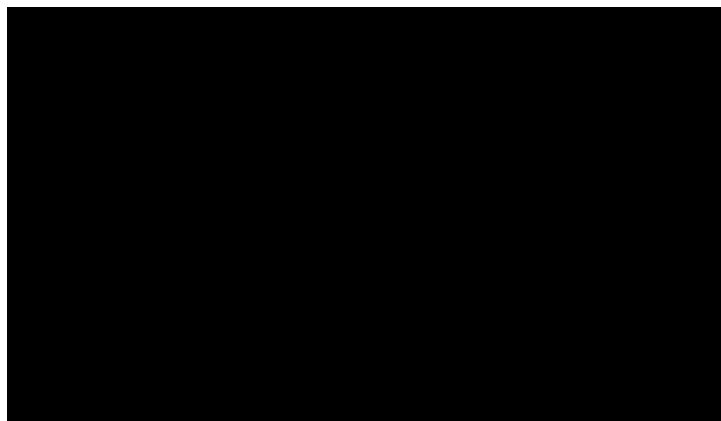
The change of domestically strategic environment is important to be counted on due to: (a) the availability of government budget is much more limited than before, because of economic crisis, (b) government has made decision to open Indonesia economy more widely to the competition of global market, (c) there is a significant shift in national decision making and development implementation from centralistic system to more decentralized system, and (d) Indonesia has depended much on foreign countries and other foreign institution in providing fund for its development. In accordance to those changes, the agriculture policy needs to be changed also.

## II. AGRICULTURE SECTOR

### 2.1. Investment Trend on Food Crops and Plantation

Investment on food crops and plantation has been varying in value in the last six years while the numbers of project that are approved by the government indicate an increasing trend. Fifty-two projects were approved in 2007, showing an increase of more than 200 percent from those projects approved in the year 2002. The value of project in the year 2007 was more than 1,210 million USD, registering 98 percent increase from 792 million USD in 2006. Food crops and plantation are clustered in primary sector that also comprises of livestock, forestry, fishery, and mining. In 2007, investment value in food crops and plantation was 3.0 percent of the total foreign direct investment planning approvals overall and 52.8 percent of foreign direct investment planning approvals in the primary sector.

**Table 1.** Foreign Direct Investment Planning Approvals on Food Crops and Plantation Sector.

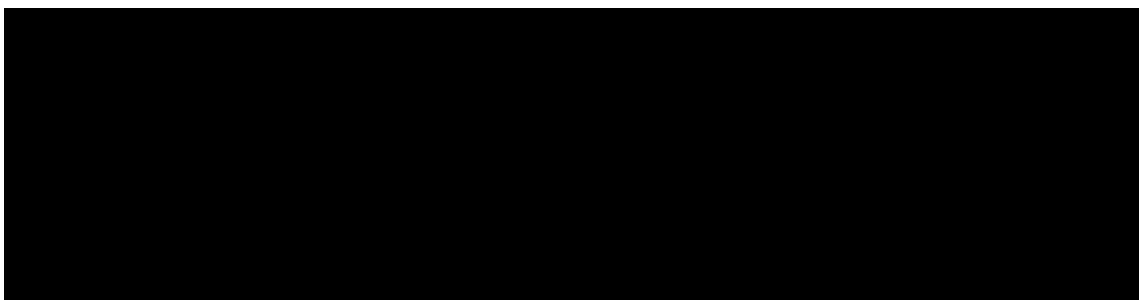


### Recent Trend on Food Crops Harvested Area, Production, and Productivity

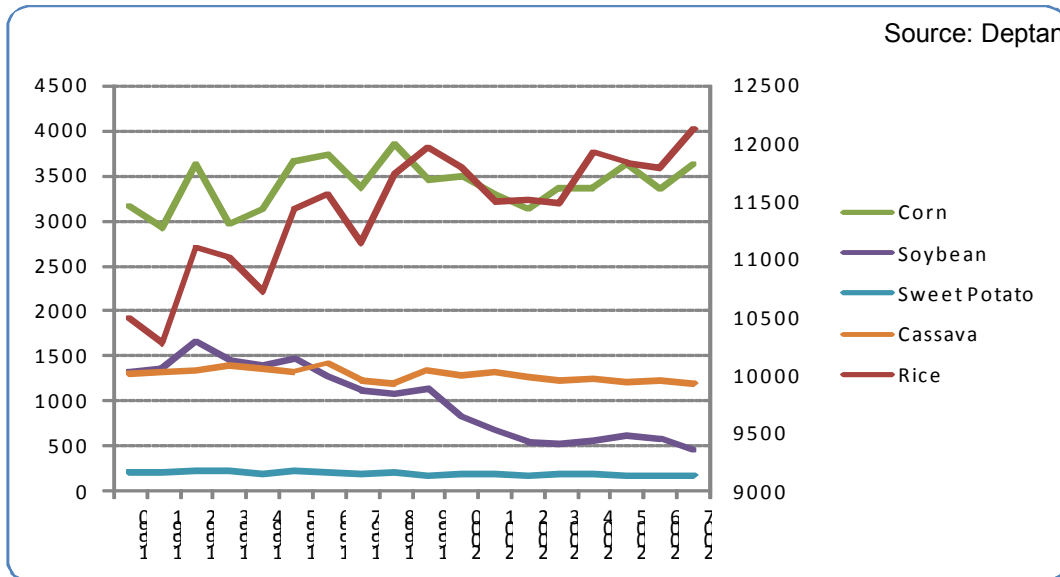
A large number of people are living and working at the same time in rural areas. These people earn most of their income from agricultural activities. Rice, which has dominated agricultural production in Indonesia, is the main staple food for most of the households in both urban and rural area alike. Harvested area for rice

and corn has recorded a general increase in the last few years. Harvested area under rice harvested increased in 2007 by 5.5 percent from 11.5 million Ha in 2003 to 12.1 million Ha in 2007. Harvested area under corn also increased significantly more than that of rice. It increased by 8.1 percent from 3.4 million Ha to 3.6 million Ha. However, harvested area for soybean, sweet potato and cassava all recorded decreasing values during that period. Soybean declined in harvested area by 12.9 percent from 0.6 million Ha to 0.5 million Ha in 2007, while sweet potato and cassava decreased by 10.8 percent and 3.6 percent respectively. Soybean was the commodity that recorded the biggest drop in harvested area and followed by sweet potato during that period as shown in Table 2.

**Table 2.** Harvested Area in Ha



The trends of harvested area for rice and corn have been consistently increasing but not steady as it fluctuates over the ten year period. Harvested area for rice rose by 8.8 percent in ten years. Soybean, sweet potato, and cassava, on the other hand, showed a decreasing trend in harvested area though cassava showed a minimal decrease over the years. Soybean decreasing trend was consistent for the last ten years. Harvested area for soybean has drop 58.9 percent in ten years and was the most affected area among the crops observed. In the same period, sweet potato and cassava also decrease 9.9 percent and 3.5 percent each. Sweet potato was found to register a decrease though the harvested area tended to be deviating just slightly over the period. The decrease in harvested area under any commodity would automatically affect its rate of production.



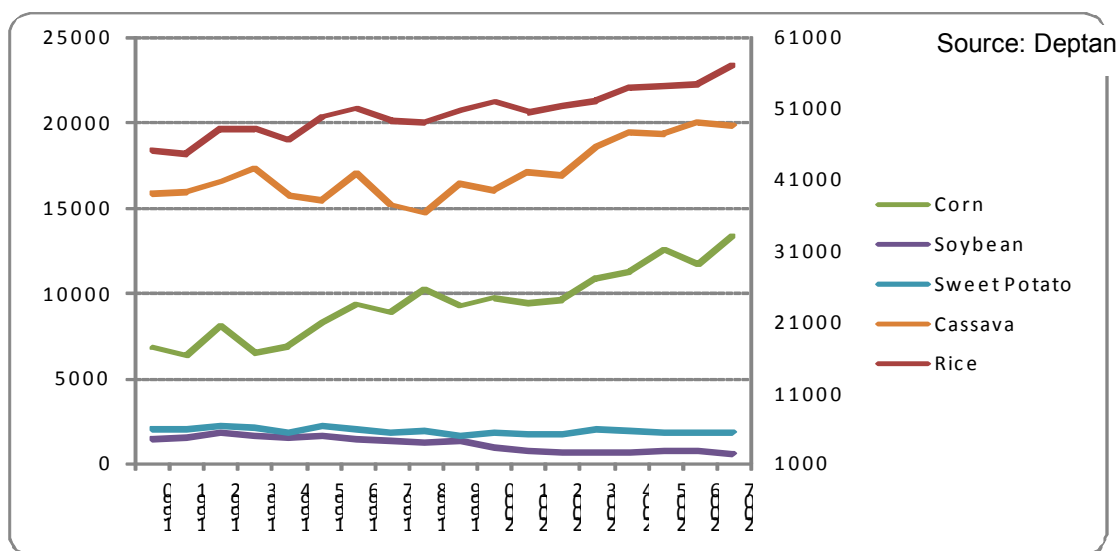
**Figure 1.** Harvested Area in 000 Ha

Most of the crops recorded an increase in production with time. The reality shows that there are some difficulties encountered in the development of agricultural production. Rice production increased by 9.4 percent from 52.1 million ton in 2003 to 57.1 million ton in 2007. Corn production showed the biggest increase of about 22.0 percent from 10.9 million ton in 2003 to 13.3 million ton in 2007. Although harvested area under cassava has been on the decrease over the period, its production recorded a rise of about 6.9 percent. The increased production of cassava can be attributed to increased productivity of the crop in Indonesia. the production of soybean and sweet potato decreased during the period in which the latter had its production reduced by 5.8 percent from 1.9 million ton in 2003 to 1.8 million ton in 2007.

**Table 2.** Crop Production in Ton

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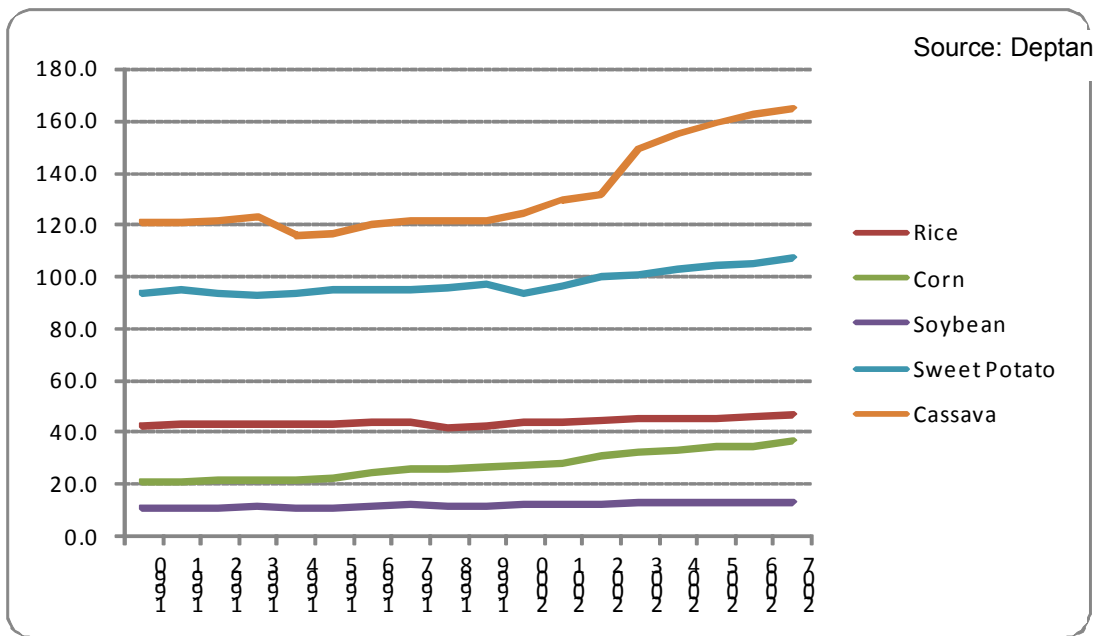
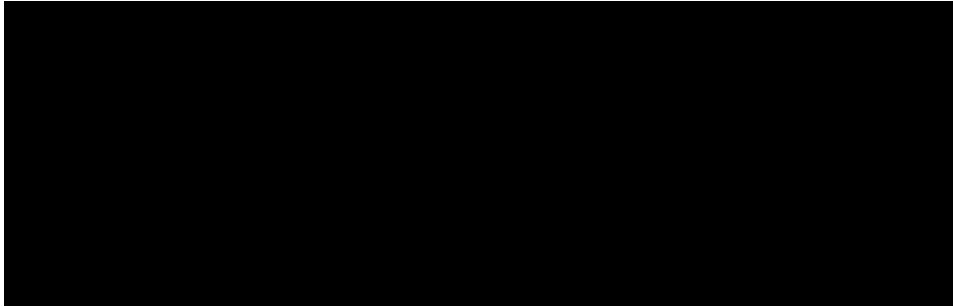
With regards to trend, the production of most of these crops recorded a general increase. On the contrary, soybean's production dropped by 56.3 percent in last ten years. The crop with the highest increase in production over the last ten years was corn which was up 51.5 percent in the same period. Rice production in ten years just increased by 15.5 percent from 49.4 million ton in 1997.



**Figure 2.** Crop Production in 000 Ton

Investment in agricultural technology is one of the key measures to agricultural productivity growth and development. Historically, the limited ability of smallholder agriculture to finance or conduct its own technology development has meant that most of the responsibility for agricultural research has rested with the public sector. In the last five years, corn productivity has risen by 13.0 percent from 32.4 Ku/Ha in 2003 to 36.6 Ku/Ha in 2007. Cassava also has shown a significant growth in productivity. Cassava productivity rose by 10.7 percent from 149.0 Ku/Ha in 2003 to 165.0 Ku/Ha in 2007. Rice productivity during the same period increased by 3.7 percent from 45.4 Ku/Ha to 47.1 Ku/Ha. The government has been intensively involved in the rice economy with intention to stabilize prices for urban consumers and to expand domestic output to achieve national self-sufficiency in rice production. Agricultural output and productivity vary greatly with the stages of economic development, resource endowments, government policy and agronomic-ecological conditions.

**Table 3.** Crop Productivity in Ku/Ha



**Figure 3.** Crop Productivity in Ku/Ha

### **III. FORESTRY SECTOR**

#### **3.1. Forest Fires and Increasing Critical Land as a Crucial Problems**

The total territory of the Indonesia archipelago is about 780 million ha, of which about 191 million ha or about 25 percent devoted to forests, which form about 45 per cent of the tropical forest in Southeast Asia. In addition to forest conversion for human activities, permanent and shifting agriculture, and development purposes, illegal logging and forest fire are two major causes of deforestation in Indonesia. The latter activities have seriously contributed to land degradation.

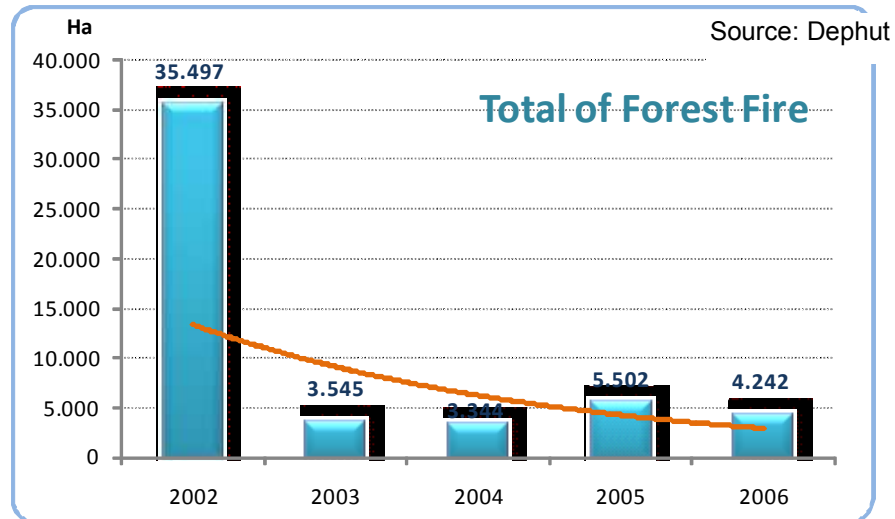
At the moment, Indonesia is faced by crucial problem in forestry sector such as forest fires and land degradation that tend to increase with time. In recent years, Indonesia has been losing up to 2 million hectares annually (World Bank, 2006), mainly due to illegal logging and land conversion fueled by excessive processing capacity, lack of effective management and law enforcement. Indonesia's forest areas are threatened with degradation, fragmentation and destruction. Forest loss undermines rural livelihoods and ecosystem services. Poor forest governance damages the investment climate, rural economic potential, Indonesia's competitiveness and international reputation. Forest crime exacerbates problems of budget and fiscal balance, and diverts public revenues that could be better spent on poverty reduction and development goals.

Based on the table below, Indonesia had experienced a serious forest fires in 2002. Human activities associated with land utilization constitute the major cause of forest and land fire in the tropics. As a forest function, production forest and national park are the main contributors in most extensive area of forest fire in 2002. As in the figure shown below, in general, forest fire occurrences in 2002-2006 have been on a decreasing trend. A huge shock due to a forest fire in 2002 was already reduced in 2003, and remained stable around 4,000 Ha until 2006. A slow process of the completion of forest fires is due to the complexity of the domestic problems. Community attitude, lack of a leading agency, lack of law enforcement and slow initial response all contributed in the failure of the forest recovery program.

**Table 4.** Estimated Forest Fire Occurrences by Forest Function in 2002-2006

No	Forest Function	Forest Fire Area (Ha)				
		Year				
		2002	2003	2004	2005	2006
1	Protection Forest	160.50	0.50	20.43	4,002.12	355.00
2	Production Forest	15,396.77	3,277.00	886.00	82.00	1,508.34
3	Sanctuary Reserve	3,664.02	58.75	1,080.45	651.80	508.70
4	Nature Recreational Park	472.41	28.50	33.52	4.50	350.50
5	National Park	15,752.36	169.70	1,261.59	595.05	1,324.55
6	Grand Forest Park	23.00	11.00	47.00	-	30.00
7	Research Forest	-	-	9.00	-	2.00
8	Urban Forest	-	-	6.00	85.00	-
9	Hunting Park	27.17	-	-	-	162.50
10	Community Forest	0.50	-	-	82.00	-
<b>Total</b>		<b>35,497</b>	<b>3,545</b>	<b>3,344</b>	<b>5,502</b>	<b>4,242</b>

Source: Dephut



**Figure 1.** Total of Forest Fire Occurrences in 2002-2006

Indonesia's forest has experienced an increase in total degraded land drastically during 1990-2006. According to official data, degraded land in Indonesia in 1990 was about 6.8 million ha with annual increment of about 1.7 million ha during 1990-2000 (MoF, 2001). This increased significantly up to 23.7 million ha. In addition, during 2000-2006 period, as shown in the table, total degraded land increased from 23.24 million hectare in 2000 to 70.92 million hectare in 2006, or arise of 205.11 percent. According to the island, the most increase in degraded land occurred in Sumatera which accounted for 273,86 percent, followed by Kalimantan (269.72 percent), Sulawesi (177,07 percent), others (113,34 percent), and Java (50,35 percent). However, in absolute terms, the most land degradation occurred in Kalimantan (19.36 million ha), followed by Sumatera (17.37 million ha), others (6.50 million ha), Sulawesi (3.40 million ha), and Java (1.04 million ha). If the increase of degraded land aforementioned is not anticipated seriously, the trend of increase degraded land area is predicted to continue in the future.

**Table 5.** Extent and Distribution of Critical Land Up to 2006

No	Island	Extent of Critical Land (000 Ha)			
		Year 2000		Year 2006	
		Critical and Very critical	Total	Level of Critical	Total

		<b>Inside Forest</b>	<b>Outside Forest</b>		<b>Very Critical</b>	<b>Critical</b>	<b>Slight Critical</b>	
1	Sumatera	1,988.88	4,353.01	6,341.89	15,395.56	8,314.11	2,189.30	25,898.97
2	Java	366.99	1,699.69	2,066.68	2,103.62	1,003.56	386.37	3,493.54
3	Kalimantan	2,612.96	4,565.75	7,178.71	21,234.58	5,306.76	1,376.70	27,918.04
4	Sulawesi	974.71	948.22	1,922.93	3,617.83	1,709.99	890.41	6,218.21
5	Others	2,193.11	3,539.59	5,732.70	5,258.50	6,971.83	2,047.77	14,278.10
	<b>Total</b>	<b>8,136.65</b>	<b>15,106.26</b>	<b>23,242.91</b>	<b>47,610.09</b>	<b>23,306.25</b>	<b>6,890.55</b>	<b>77,806.86</b>

### 3.2. Some Regulations on Forestry Sector

Since July 2008, Minister of Forestry has signed some regulations. Some of them are:

1. P.46/Menhut-II/2008 dated 25 July 2008, concerning Names and Job Descriptions of Structural and Non Structural Positions of the Unit of Production Forest Utilization Monitoring (BP2HP).
2. P.46/Menhut-II/2008 dated 25 August 2008, concerning Guidance on Conflict Resolution between Human and Wild Fauna.
3. P.49/Menhut-II/2008 dated 25 August 2008, concerning Village Forest.
4. P.50/Menhut-II/2008 dated 3 September 2008, concerning Alteration of Forestry Ministerial Regulation No. P.45/Menhut-II/2005 concerning Guidance on Assignment for Study for Civil Servant of the Ministry of Forestry.
5. P.51/Menhut-II/2008 dated 5 September 2008, concerning Second Alteration of Forestry Ministerial Regulation No. P.21/Menhut-II/2007 concerning Activity Implementation of Forest and Land Rehabilitation National Movement 2007.
6. P.52/Menhut-II/2008 dated 5 September 2008, concerning Procedures and Requirements for the Extension of Business License to Utilize Timber in Natural Production Forest.

The latest regulation is Forestry Ministerial Regulation No. P.52/Menhut-II/2008. This regulation is derived from the Government Regulation No. 6 of 2007 jo. Government Regulation No. 3 of 2008. This regulation consist of 7 chapters and 14 articles and came into force on 5<sup>th</sup> September 2008. Some areas covered by the regulations are:

1. Chapter 1: General Provision  
Some terminologies are defined, such as Business License to Utilize Timber in Natural Production Forest, Extension of Business License to Utilize Timber in Natural Production Forest, Levy on Business License to Utilize Forest Resource, etc.
2. Chapter 2: Procedures and Requirements  
Description on procedures and requirements should be fulfilled by the license holder to request for the extension.
3. Chapter 3: Assessment Procedure  
Description on the procedure in assessing the request for the extension.
4. Chapter 4: The Issuance of the Ministerial Decree of Extension of Business Licenses to Utilize Timber in Natural Production Forest  
Description on the process of issuing the ministerial decree on extension of business license to utilize timber in natural production forest.
5. Chapter 5: The Issuance of instruction to pay the Levy on Business License to Utilize Forest Resource.  
Description on the process of issuing the instruction to pay levy on business license to utilize forest resource.
6. Chapter 6: Transitional Provision  
Description on the process of the assessment based on the status of the request.
7. Chapter 7: Closing  
Revoked the Forestry Ministerial Decree No. 6885/Kpts-II/2002.

The Ministry of Forestry (MoF) in Indonesia is developing the Forest Resource Information System (FRIS) to improve the transparency in the forest sector by providing relevant, reliable and updated information to decision makers and the general public, supported by the World Bank, AusAID, and other organizations. A

grand design of FRIS will encompass: 1) forest monitoring and assessment systems to estimate changes of forest cover, deforestation rate, timber volume, biomass, and carbon; 2) forest resource information databases to develop forest thematic maps and forestry spatial data management networks; 3) data sharing/exchange mechanisms to formulate a disclosure policy, protocol data, public service mechanisms, and related guidelines; and 4) decision making tools to introduce proper regulations/standards, spatial analysis, web-based GIS (intranet-internet), and improved reporting systems. The MoF would require technical assistance in harmonization of international reporting processes, development of effective database structure, and comparative analysis of different remote sensing technologies. Complementary collaboration with the MAR Project would be suggested to support the development of FRIS by introducing FAO's approaches to forest resources monitoring and assessment.

## **IV. BIOENERGY SECTOR**

### **4.1. Industrial Strategy Proposal on Biofuel Industry in Indonesia**

As reported at [www.esdm.go.id](http://www.esdm.go.id) on September 10<sup>th</sup> 2008, the Governments of Indonesia and Japan have agreed on the formation of an Industrial Joint Forum on Investment. The government of Indonesia was represented by KADIN, while The Jakarta Japan Club represented the Japanese government. This forum aimed at improving the investment climate between the two countries and find practical solutions toward problems faced by investors.

One routine agenda of this forum is dialogue on Biofuel. The Sub Working Group aim at finding recommendations and has prepared a blueprint on the biofuel industry, titled "Industrial Strategy Proposal on Biofuel Industry in Indonesia". This proposal contains among others: policies issued by the Department of Energy and Mineral Resources, other regulations such as the removal of value added tax, regulations which mandate the use of biofuel in the energy mix, and other recommendations.

Moreover, it is also reported that, after considering the proposal, The Head for Research and Development of the Department of Energy and Mineral Resources, Bambang Dwiyanto advised that the government should review existing regulations and mandate the use of biofuel in the energy mix (for both gasoline and diesel), and monitor the biofuel program. To carry out the content from the sub working group proposal would need further coordination with the National Team on Biofuel.

According to Bambang Dwiyanto, biofuel use needs a careful watch on its quality and production efficiency, considering the high food prices which forms the basic materials of biofuel. He also suggested the intense research and development on biofuel products and licensing the most effective biofuel system and technology.

Regarding the difficulties biofuel faces to become a stable form of energy, Bambang Dwiyanto called for increased cooperation between Indonesia and Japan. This form of cooperation includes the promotion of Indonesian biofuel products in Japan, creating a network between research institutions in both countries, and exchange of information to overcome problems together.

#### 4.2. Ministerial Regulation no. 32/ 2008

The Minister for Energy and Mineral Resources of Republic of Indonesia has launched new ministerial regulation (No. 32/2008) on September 26, 2008 about supplying, utilizing, and trading arrangement of biofuels. It is a revision of the regulation No. 51/2006 concerning biofuels trading guidelines. The biofuels stated in the regulation are categorized into three types; bio-ethanol (E100), bio-diesel (B100) and pure plantation oil (O100).

##### 4.2.1. The Mandatory of the biofuels utilization stages

According to the regulation, there is an obligation for business entities that already have the permission to operate the fuel business, as well as the entities who consume the fuels directly (except households) to follow the stages of the biofuel utilization in their businesses as described in Tables 6-8. For this, the regulation also stated that the entities must prioritize the utilization of the biofuels from domestic production.

**Table 6.** The Mandatory of Bio-diesel (B100) utilization

Sectors	Oct-Dec 2008	Jan 2009	Jan 2010	Jan 2015**	Jan 2020**	Jan 2025**	Note
Households	-	-	-	-	-	-	
Transportation (PSO)	1% (existing)	1%	2,5%	5%	10%	20%	With respect to total demand
Transportation (Non PSO)	-	1%	3%	7%	10%	20%	
Industry and Commercial	2,5%	2,5%	5%	10%	15%	20%	
Power Plant	0,1%	0,25%	1%	10%	15%	20%	

\*\* Specification is adjusted with the global specification and domestic interest

**Table 7.** The Mandatory of Bio-ethanol (E100) utilization

Sectors	Oct-Dec 2008	Jan 2009	Jan 2010	Jan 2015*	Jan 2020*	Jan 2025*	Note
Households	-	-	-	-	-	-	
Transportation (PSO)	3% (existing)	1%	3%	5%	10%	15%	With respect to total demand
Transportation (Non PSO)	5% (existing)	5%	7%	10%	12%	15%	
Industry and Commercial	-	5%	7%	10%	12%	15%	
Power Plant	-	-	-	-	-	-	

\*\* Specification is adjusted with the global specification and domestic interest

**Table 8.** The Mandatory of Pure Plantation Oil (O100) utilization

Sectors	Oct-Dec 2008	Jan 2009	Jan 2010	Jan 2015**	Jan 2020**	Jan 2025**	Note
Households	-	-	-	-	-	-	
Industry and Transportation (Low and Medium Speed Engine)	Industry	-	1%	3%	5%	10%	
	Marine	-	1%	3%	5%	10%	
Power Plant	-	0,25%	1%	5%	7%	10%	With respect to total demand

\*\* Specification is adjusted with the global specification and domestic interest

#### **4.2.2. Regulated vs. General Type of Biofuels**

With respect to the utilization policy, the biofuels stated in this regulation are categorized into specific (regulated) and general type.

The government regulation specifies the utilization of the specific (regulated) biofuels, in terms of type, standard, specification, volume, pricing (subsidizing), and blending arrangement with the other type of fuels. Meanwhile, the government will not provide a subsidizing scheme for the general type, so the business entities have an authority in managing their own pricing based on consumer purchasing power, sustainability of supplying and distributing, and the economic margin consideration.

## **V. CONCLUDING REMARKS**

Despite the fact that investment on food crops and plantation varied during 2002-2007, the numbers of project that were approved by the government indicated an increasing trend. In general, harvested area under rice and corn has been on increasing trend in the last few years (2003-2007). Conversely, harvested area under soybean and sweet potatoes has been reducing during this period. In the production side, all food crops registered an increase during this period. Notably, corn production showed the biggest increase in all the crops during the period. However, the productivity for all crops generally tends to remain stable except that of rice that showed a huge up.

It has also been observed that the forest fire occurrences in Indonesia during 2002-2006 have been on a decreasing trend. A huge shock due to a forest fire in 2002 was already absorbed in 2003, and remained stable around 4,000 Ha until 2006. A slow process of the completion of forest fire is due to a complexity of the domestic problems that include: community attitude; lack of a leading agency; lack of law enforcement; and slow initial response that made the forest recovery program not to function properly.

Indonesia's forest experienced a huge increase in land degradation that happened drastically during 1990-2006. According to official data, degraded land in Indonesia in 1990 was about 6.8 million ha with annual increment of about 1.7 million ha during 1990-2000. And during 2000-2006 period, total degraded land had increased from 23.24 million hectare in 2000 to 70.92 million hectare in 2006, or an increase of 205.11 percent. If the increase in degraded land aforementioned is not properly and accurately anticipated, the trend of increasing degraded land is predicted to continue in the future.

On the September 10, 2008, the governments of Indonesia and Japan agreed on the formation of an Industrial Joint Forum on Investment. One routine agenda of this forum is a dialogue on Biofuel. The Sub Working Group aimed at finding recommendations and prepared a blueprint on the biofuel industry, titled "Industrial Strategy Proposal on Biofuel Industry in Indonesia". This proposal contains among others: policies issued by the Department of Energy and Mineral

Resources, other regulations such as the removal of value added tax, regulations which mandates the use of biofuel in the energy mix, and other recommendations.

## **VI. RESEARCH ISSUES/EVENTS**

### **I. NATIONAL SEMINAR ON DEVELOPMENT OF LOCAL FOOD CONTENT BASED PRODUCT**

#### **Time**

Thursday, 18 December 2008

#### **Place**

Faculty of Agro-industry, Mercubuana University, Jl. Wates Km. 10  
Yogyakarta

#### **Topic**

Developing Agroindustri based on food local content to increase food  
sovereignty.

#### **Objective**

- a. To get input on Agroindustri development system in national scale.
- b. To get information and frame work in increasing Agroindustri  
development base on non rice local food.
- c. To get input in food security policy as a food sovereignty support.

#### **Target**

- a. To get information and frame work in increasing food local  
empowerment.
- b. To get mind frame of food security as a food sovereignty support.

#### **Keynote Speaker and Speaker**

1. Jend. (Purn.) H. Prabowo Subiyanto
2. Prof. Dr. Ir. Sri Rahardjo, M.Sc.
3. Prof. Dr.Ir. Mochamad Maksum Kabul
4. Ir. Tukijo, M.P.
5. Ir. H. A.R. Iskandar

**Registration**

Place : Prodi Teknologi Hasil Pertanian UMBY

Phone :(0274) 6622982

E-mail : [seminarnasumby@yahoo.com](mailto:seminarnasumby@yahoo.com)

**II. NATIONAL SEMINAR ON THEORY AND APPLICATION OF MARINE TECHNOLOGY**

**Date**

December 17-19, 2008

**Place**

Faculty of Marine Technology, Surabaya Technological Institute (ITS)

**Topic**

Energy Engineering for Application of Marine Technology

**Description**

The aim of this event is to be a place of dialog and presentation of the research institutions, industries, and education. To raise the innovation of maritime technology, we concern to the energy and global warming issues. We hope, those institution agents can give valuable inputs to our marine technology.

**Contact Person**

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