

# A COUNTRY REPORT THE IMPACT OF AFTA ON INDONESIA ECONOMY AND SMALL SCALE PRODUCERS



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KOALISI RAKYAT  
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# **THE IMPACT OF AFTA ON INDONESIAN ECONOMY AND SMALL SCALE PRODUCERS**

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(Pictures provided by and courtesy of ELSPPAT/Indro Surono)**

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## Executive Summary

### *The ASEAN Free Trade Area (AFTA) in Indonesia*

Indonesia is a founding member of the Association of Southeast Asian Nations (ASEAN) and an original signatory to the ASEAN Free Trade Area (AFTA). It is one of the Southeast Asian economies that have adopted outward-oriented and market-driven economic development policies over the past decades. These policies were supposed to spur its economic development and contribute towards turning ASEAN into an attractive region for trade and investment.

Like other ASEAN members, Indonesia had to face a more competitive global environment and the progressive integration of markets at the international level through the conclusion of the General Agreement on Trade and Tariffs – Uruguay Round (GATT-UR) negotiations in 1994 and the establishment of the World Trade Organisation (WTO) in January 1995. In the region, the integration of ASEAN markets was given further push with the establishment of AFTA in 1992 and the formation of the Asia and Pacific Economic Cooperation (APEC), which committed members to undertake trade liberalisation, more broad ranging than their commitments to the GATT-UR.

After more than 10 years of AFTA and WTO, there has been increasing concerns over the effects of trade liberalisation on ASEAN economies in general and on small producers in the region in particular.

**Agreement on the Common Effective Preferential Tariff (CEPT) Scheme for the ASEAN Free Trade Area (AFTA):** 10 years implementation time frame starting on January 1, 2000; phasing in products the Temporary Exclusion List (TEL) in Five equal installments beginning on January 1, 2003 and completing on January 1, 2007 and ending at the tariff rates of 0%-5% by January 1, 2010; phasing in agriculture products which are temporarily excluded on January 1, 2004 and completing on January 1, 2010 at 0%-5%; phasing in sensitive agriculture products beginning from January 1, 2008 but not later than January 1, 2010 and ending on January 1, 2017 at rate 0%-5%; maximizing the number of its tariff lines with tariffs between 0-5% by 2007 and expand the number of tariff lines in the 0% category by 2010; and submitting the various products lists for the CEPT scheme to ASEAN by June 30, 1999.

**ASEAN framework Agreement on Services:** according unconditionally from the date of accession to the Agreement to services and service suppliers of any other ASEAN Member State treatment no less favorable than that it accords to like services and service suppliers of any other country, exceptions to the above could be given up to the year 2005 provided the measures favoring certain countries have been in existence before the accession.

**Framework Agreement on the ASEAN Investment Area:** having up to five years after its accession to the Agreement to maintain existing measures that are inconsistent with the Agreement with regard to opening up of industries and according to nation treatment to ASEAN investors. Phasing out all items on the TEL by no later than 2010 for ASEAN investors.

## **Indonesia and the AFTA**

Indonesia had high growth rate on intra-ASEAN exports. From 1992 to 2001, the average value of Indonesian exports to ASEAN countries was US\$7,952.39 million and its growth rate over the same period was 10.7 per cent. Indonesia experienced negative export growth rate in 1999 (11.43 per cent) and 2001 (12.65 per cent) as shown in Table 17.

Indonesia enjoys an overall positive trade balance in the ASEAN. While it imported US\$5,464 million-worth of goods from ASEAN countries in 2001, it exported US\$9,557 million-worth of products as well. The value of Indonesia's exports to Malaysia, Thailand, the Philippines and Singapore has increased from 1992 to 2001.

As one of the original signatories to AFTA, Indonesia had been adhering to its commitments. Almost 100 per cent of its tariff lines are in the Inclusion List (IL) in the Tentative 2005 CEPT Package. Less than 1 per cent of tariff lines remain under the General Exclusion List and Sensitive & Highly Sensitive Lists (GEL and SL/HSL). One hundred per cent of its tariff lines have 0-5 per cent tariff.

Indonesia, however, had been protective of some agricultural products, particularly rice, sugar, wheat flour and soybeans. It put back 15 agricultural commodities under its SL at the 1995 ASEAN Summit and postponed the liberalisation of these commodities. In the 1996 AFTA Council meeting, Indonesia proposed a new list – highly sensitive list and included two products – rice and sugar – in that new list. This proposal was accepted and the liberalisation of sensitive commodities will start in January 2003 and end in 2010 but Indonesia and the Philippines were given flexibility regarding ending tariff rates and utilization of safeguards in 2010. As such, Indonesia can still apply tariff rates above 5 per cent after 2010 and enact safeguard measures to protect its domestic producers

## **Challenges Faced by Indonesia:**

### ***Problems of Small-scale Farmers***

- *Problem by crops:*

Market expansion and trade liberalisation under AFTA will boost intra-ASEAN flows of capital, labour and technology. This will help member states including Indonesia to speed up the transformation of the production structure. Indonesia is trying to use its cheap labour resources and apply appropriate technologies to boost agricultural production. Indonesia's main strategies are to expand production in sectors with heavy labour and natural resources content, such as textiles, garments, handicraft and processing of agricultural produce for export. However, in the early stage of international economic integration, Indonesians, especially small-scale farmers, face many difficulties. As shown in Table 33, farmers face two major problems: high production expenses and high input costs.

- ***High production expenses***

39.5 per cent of small producers said one of their major difficulties is the increase in input cost as well as production expenses. In the new agricultural production environment, farmers incur higher production expenses such as buying hybrid seeds, chemical fertilisers and pesticides. In some households, income from crops is not enough to cover expenses.

- ***Limited Government Support***

About 86.3 per cent of respondents said the government did not provide adequate support for small farmers. All small sugarcane producer-respondents (100 per cent), 96 per cent of small potato producers and 76 per cent of small rice farmers said the government did not give them adequate support. Most respondents (32.6 per cent) said the government could support them by providing them subsidised production inputs, while another 21.9 per cent wanted the government to build better infrastructure (roads) so that they could have easy access to the market. Regarding other problems, small farmers have limited sources of capital (13.3 per cent) and they get low prices for their produce (10.7 per cent).

- ***State Policies and Programmes for Agriculture and Small-scale Farmers***

Majority of the respondents said the government did not give adequate support to small farmers. However, some respondents admitted getting adequate government support in the form of irrigation facilities, special loans for farmers, training, and price and marketing support.

- ***Respondents' Awareness of AFTA***

About 75 per cent of the respondents did not know about AFTA and only 25 per cent said they had heard about it. These respondents had heard about over television (34 per cent), from fellow farmers (21 per cent), from their organisations (21 per cent) and from government information (16 per cent). Among respondents who were aware of AFTA, 11 per cent said it is about free trade/ globalisation, 5.2 per cent just saw the word from newspaper, and 4.7 per cent had no idea of its benefits (Table 39).

- ***Gender Issues in Agriculture and Trade***

**Role of women in agriculture:** Farming in Indonesia is still male-dominated. Focus group discussions (FGDs) among rice and potato farmers highlighted that both male and female farmers perform significant roles in agricultural production: in land clearing and preparation, seed planting and transplanting, fertiliser and pesticide application, spraying, weeding, harvesting, threshing, transporting and hauling, marketing and processing.

However, some production activities – the so-called “hard work” – are the domain of men: land clearing and preparation, fertiliser application, pesticide spraying and transporting. Women farmers do the so-called “soft jobs” – seed planting, weeding, harvesting and threshing.

**Access and control of resources, markets and basic services:** Indonesian women have similar rights as men in land ownership (based on Marriage Law of 1970, Section 33), education, credit accessing and other opportunities. However, banking policies obligate women borrowers to get approval from their spouses when applying for credit. The Agriculture Ministry's training programmes usually target both male and female farmers. However, women farmers seldom attend these trainings sessions. Rural women have limited access to health and education services. Many women respondents also claimed that they never visited hospitals when they fell ill and they relied mainly on traditional treatment and medicine (AFA & AsiaDHRRA 2002).

## **Recommendations**

There is a need to enhance the living standards of small agricultural producers in Indonesia. They not only have to compete in a liberalized market brought about by AFTA and other trade agreements but they also have to struggle to lead decent lives. The Indonesian government should seriously consider the following:

- There is a need to subsidize agriculture inputs and provide other relevant protection for small farmers.
- Farmers need to gain knowledge and skills in processing commodity and to improve post harvest activities. This will lead to greater efficiency, increase the quality of agricultural produce and enable farmers to get better prices.
- Better infrastructure such as roads should be built. This will make farming and marketing of produce more efficient and less costly.
- Central and local governments have to formulate a comprehensive and coherent agricultural policy.
- The government must provide training, up-to-date market information and access to all farmers. This would enhance the farmers' marketing capabilities.
- The government needs to provide better education (especially to young farmers) to improve the quality of human resources in rural communities.
- The government needs to expand rural development and economic growth in order to create employment in these areas and decelerate the process of urbanisation.



# Chapter 1

## INTRODUCTION

Indonesia is a founding member of the Association of Southeast Asian Nations (ASEAN) and an original signatory to the ASEAN Free Trade Area (AFTA). It is one of the Southeast Asian economies that has adopted outward-oriented and market-driven economic development policies over the past decades. These policies were supposed to spur its economic development and contribute towards turning ASEAN into an attractive region for trade and investment.

Like other ASEAN members, Indonesia had to face a more competitive global environment and the progressive integration of markets at the international level through the conclusion of the General Agreement on Trade and Tariffs – Uruguay Round (GATT-UR) negotiations in 1994 and the establishment of the World Trade Organisation (WTO) in January 1995. In the region, the integration of ASEAN markets was given further push with the establishment of AFTA in 1992 and the formation of the Asia and Pacific Economic Cooperation (APEC), which committed members to undertake trade liberalisation, more broad ranging than their commitments to the GATT-UR.

After more than 10 years of AFTA and WTO, there has been increasing concerns over the effects of trade liberalisation on ASEAN economies in general and on small producers in the region in particular.

It is in this context that a research on AFTA and its impact had been undertaken. The Southeast Asian Council for Food Security and Fair Trade (SEACON), a regional network that provides a coordinated approach to food security, agriculture and trade issues, was the prime initiator of this region-wide research.

### Objectives of the study

1. To assess the impacts (both positive and negative effects) of AFTA from the perspective of small men and women farmers in Indonesian.
2. Provide recommendations to address and mitigate its negative impact and enhance its positive impact, especially on rice and priority-based commodities (e.g. maize/corn, sugarcane and potato) and to promote fair trade in the region.

### Limitations of the study

1. This research covered only small producers in selected commodities (farmers tilling three hectares and below).
2. With limited budget, the research covered limited sample areas and respondents.
3. The field research in Indonesia was undertaken during the general election for legislative and presidency, which made it difficult to meet respondents and key informants.
4. The number of women farmers in the research areas were very limited, especially sugarcane farmers. In several regions, many women sugarcane farmers are now producing other crops.

## Chapter 2

# INDONESIAN AGRICULTURE, TRADE AND INVESTMENTS

Indonesia, the world's largest archipelago country, comprises more than 17,000 tropical islands between the Pacific and Indian oceans stretching along the equator between the mainland of Southeast Asia and the northern part of Australia. This strategic position has always influenced the cultural, social, political and economic life of the country.



Figure 1. Map of Indonesia

Extending 5,000 kilometres from east to west, Indonesia consists of five major islands – Sumatra, Kalimantan, Java, Sulawesi and Irian Jaya – and about 30 smaller island groups. Forests cover 72 per cent of the total land, whereas its significant areas are mountainous and heavily forested. Total arable land currently amounts to some 14 million hectares, of which eight million hectares are wetlands suitable for rice production. Of the total arable land, six million hectares are located on Java, the most fertile island and home to 60 per cent of Indonesia's population.

Agriculture has long been the primary sector in the Indonesian economy, with a strategic, multi-purpose role closely integrated with wider objectives of national development. The success of Indonesia's agriculture is attributable to segments of both this sector and other related sectors. Indonesia's agricultural sector has achieved a significant increase in production to meet growing domestic demand resulting from an expanding population and rising per capita consumption.

Indonesia had over 214 million people in 2003, which is growing at 1.71 per cent per annum. The overall population density is about 106 persons per square kilometre, making it the fourth most populous nation in the world. It has a land area of 1.9 million square kilometers and 59 per cent of the population lives on Java island. Java has a population density of 944 persons per square kilometre.

Indonesia has a free-market economy, dominated by the private sector. The economy is becoming more resilient to shocks, as fiscal consolidation and debt reduction continues.

While agriculture plays an important role in Indonesia's economic stability, the service industry sector has grown significantly during the last three years.

## **2.1 MACRO-ECONOMIC PERFORMANCE (SELECTED INDICATORS)**

### **2.1.1 Review and Analysis of GDP Performance**

Twenty-five years ago, Indonesia was one of the poorest countries in the world, with an annual per capita income of only US\$50. Since then, it has made great strides, achieving an average GDP growth of almost 7 per cent per annum, a growth performance that ranks among the 10 fastest in the world, and is on a par with that of the dynamic East Asian economies (World Bank, 1993). During this period, Indonesia has moved from being a low-income country to a middle-income one. Indonesia's per capita income rose by 4.5 per cent each year to reach US\$1,020 in 1995. In real terms, the current per capita income is three times higher than that of 30 years ago, implying a substantial improvement in the living standards of the Indonesian population and poverty alleviation (Suryana et al., 1996).

During the 1970s and 1980s, Indonesia followed a well-recognised trend among developing nations: a decline in agriculture's share of Gross Domestic Product (GDP). As shown in Table 1, almost 60 per cent of the (GDP) in 1965 was accounted by agriculture and only 7.6 per cent by manufacturing. By 1985, agriculture's contribution to the GDP went down to almost 24 per cent and 17 per cent by 1999.

The same trend is observed in 2004. Agriculture accounts for only 17 per cent of GDP and industry and mining accounts for almost 46 per cent of GDP and services, 37.6 per cent (Table 3).

Indonesia's agricultural sector, however, was still vital for several reasons. The vast majority of people lived and worked in rural areas, and most of their income was from agricultural activities. Rice, which dominated agricultural production in Indonesia, was the staple food for most households, urban and rural alike. The government considered adequate supplies of affordable rice necessary to avoid political instability. The New Order's most striking accomplishment in agriculture was the introduction of so-called Green Revolution rice technology, which moved Indonesia from being a major rice importer in the 1970s to self-sufficiency by the mid-1980s.

In terms of economic growth, Indonesia's economy has been growing about 4 per cent per year since 2000 (ASEAN Statistical Yearbook, 2004). GDP per capita (at current market prices) has been fluctuating. From US\$1,154 in 1996, it went down drastically to only US\$485 in 1998 and US\$690 in 1999, at the height of the Asian financial crisis.<sup>1</sup> After the Asian financial crisis years, GDP per capita increased slowly to US\$906 in 2004.

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<sup>1</sup> ASEAN Statistical Yearbook 2004, p.41

**Table 1: Structural Change in the Indonesian Economy**

Indicators	1965	1975	1985	1999	2000
			(Million)		
Population	105.4	135.2	164.6	194.8	210.5
			(Billions of international dollars)		
Gross Domestic Product	72.8	143.7	280.3	202	152
Share of GDP			(Percentage)		
Agriculture	58.7	31.7	23.7	17.1	17.0
Mining, Oil & Gas	2.5	19.7	16.3	8.8	12.9
Manufacturing	7.6	8.9	13.5	24.1	26.0
Services	31.2	39.8	46.5	49.9	44.1
Share of employment					
Agriculture	69.2	61.6	54.7	44.0	45.3
Manufacturing	6.9	8.4	9.3	12.6	13.0
Services	23.9	30.1	36.1	43.4	41.8
			(1999 international dollars)		
Per capita income	691	1,063	1,703	1,038	723
Exports as share of GDP	na	23.4	21.9	22.6	41.1
Imports as share of GDP	na	15.7	12.1	20.2	22.2

Source: Population, GDP, Sector Share, Employment, Export, and Import from Statistical Yearbook of Indonesia, BPS

**Table 2: Share of GDP by industrial origin**

At Constant 1983 / 1993 Market Prices

Sector	Percentage (%)									
	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002
<i>Agriculture</i>	<i>22.68</i>	<i>20.15</i>	<i>16.12</i>	<i>15.42</i>	<i>14.88</i>	<i>16.90</i>	<i>17.13</i>	<i>16.63</i>	<i>16.24</i>	<i>15.94</i>
Mining	18.19	10.11	9.25	9.12	8.90	9.96	9.72	9.77	9.45	9.32
Manufacturing	15.79	20.59	23.88	24.71	24.84	25.33	26.11	26.38	26.55	26.64
Electricity, gas & water	0.42	0.95	1.12	1.18	1.26	1.50	1.61	1.65	1.72	1.76
Construction	5.30	5.78	7.61	7.96	8.16	5.97	5.81	5.85	5.89	5.92
Trade	14.57	15.85	16.74	16.79	16.97	15.98	15.84	15.95	16.25	16.24
Transport and communications	5.27	7.02	7.12	7.18	7.34	7.17	7.06	7.30	7.58	7.89
Finance	6.44	8.16	8.94	8.79	8.90	7.51	6.92	6.90	6.90	7.02
Public administration	7.59	7.88	6.00	5.64	5.45	5.82	5.87	5.67	5.54	5.36
Others	3.74	3.50	3.22	3.21	3.30	3.88	3.94	3.89	3.89	3.92

Source: Asian Development Bank (ADB) - Key Indicators 2003, [www.adb.org/statistics](http://www.adb.org/statistics)

**Table 3. General Economic Indicators**

Indicators	2002	2003	2004
GDP (US\$ billion)	200.1	238.5	257.6
Real GDP growth ( <i>constant prices</i> )	4.4 %	4.9 %	5.1%
GDP per capita (US\$)	844	874	906
Inflation rate	11.9 %	6.6 %	6.2%
Unemployment rate	9.1%	..	..
External debt (US\$ billion)	132	134	..
Indonesia rupiah rate on 12/31 (US\$1)	8962.2	8464.7	9393.1

Sources : IMF – 2005 data, World bank, Oanda

GDP per activity sector	2002	2003	2004
Agriculture and fishing	17.1%	16.6%	16.9%
Industry and mining	44.2%	43.6%	45.6%
Services	38.7%	39.9%	37.6%

Sources : World bank

### 2.1.2 Population, Labour and Employment

The 1980 census indicated that 78 per cent of the population was in rural areas. This share continued to decline during the 1980s, but for a country at Indonesia's level of development, urbanisation proceeded slowly. Though agriculture's share of GDP declined from 25 per cent in 1978 to 20.6 per cent in 1989, about 41 million workers, or 55 per cent of the total labour force in 1989, still found employment in this sector. Within the agriculture sector, food crops accounted for 62 per cent of the value of production in 1988, tree crops 16 per cent, livestock 10 per cent, and fisheries 12 per cent and forestry 12 per cent equally for the remaining 12 per cent (Fuglie and Piggott, 2003).

The majority of Indonesia's labour force is employed or dependent on the agriculture sector. But employment in agriculture has decreased from 1995/96 to 1997/98 because of these factors:

1. Lower export earnings of the agriculture sector compared to the industrial and service sectors.
2. Decreasing farm productivity.
3. Conversion of agriculture farms into housing and industrial uses.
4. Increasing landlessness and more farmers owning smaller farms (Siswono, 2000).
5. Indonesian workers still face many constraints: low productivity, lack of skills, lower global competitiveness. Before 1990, more than 50 per cent of the labour

force worked in agriculture. After 1995, the share of labour in agriculture sector decreased to below 40 per cent in 2002 as shown in Table 4.

**Table 4: Percentage of Labour Force Distribution by Main Sectors, 1991 - 2002**

Sector	Percentage (%)									
	1990	1995	1996	1997	1998	1999	2000	2001	2002	Average
Agricultural	54.47	40.80	41.86	39.25	42.50	40.46	42.51	40.22	38.77	<b>44.15</b>
Manufacturing	9.89	11.73	11.96	12.28	10.71	12.14	12.17	12.23	12.52	<b>11.54</b>
Mining	0.68	0.74	0.86	0.98	0.73	0.77	0.55	0.00		<b>0.70</b>
Services	32.46	39.49	40.43	42.80	40.60	40.27	38.66	39.45	39.86	<b>38.58</b>
Unemployed	2.51	7.24	4.89	4.68	5.46	6.36	6.12	8.10	8.85	<b>5.02</b>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Processed from Asian Development Bank (ADB) - Key Indicators 2003 ([www.adb.org/statistics](http://www.adb.org/statistics))

The following table shows the labour situation by sex. Indonesian males still dominate the labour market, garnering almost 65 per cent of work. Male workers still dominate in the field of transportation, electricity, gas, and water, meanwhile women have significant role in the field of trading, manufacturing and social service.

**Table 5: Employment by industries and sex, 2000**

Sector	Male	%	Female	%
<b>1. Agriculture</b>	<b>23,104,276</b>	<b>64.66</b>	<b>12,625,552</b>	<b>35.34</b>
2. Mining and quarrying	513,058	87.50	73,275	12.50
3. Manufacturing Industry	5,874,675	59.26	4,039,385	40.74
4. Electricity, Gas and Water	136,326	91.39	12,849	8.61
5. Contraction	3,122,876	97.12	92,627	2.88
6. Wholesale trade, Retail Trade	8,843,363	55.06	7,218,666	44.94
7. Transportation, Storage, and Communication	4,185,772	96.55	149,668	3.45
8. Financing, insurance, real estate, and business services	857,928	73.31	312,361	26.69
9. Community, social and personal services	5,560,620	58.39	3,962,335	41.61
0. Others	25,005	58.42	17,795	41.58
<b>Total</b>	<b>52,223,899</b>	<b>64.69</b>	<b>28,504,513</b>	<b>35.31</b>

Source: Central Statistic Agency (BPS, 2001).

### 2.1.3 Poverty Situation

Indonesia's record in reducing poverty in the two decades preceding the crisis has been exceptional. From a country with widespread poverty, it rose to the ranks of a middle-income country in two decades. According to the Central Bureau of Statistics, the incidence of poverty fell from 40 per cent in 1976 to about 11 per cent in February 1996.

Indonesia's rapid economic growth thus proved to be effective in reducing poverty, although the crisis in 1997 revealed unsustainable elements in this pattern of development. The crisis in 1997 had an immediate impact on the poor and near poor. The percentage of the Indonesian population below the national poverty line increased to 24.2 per cent in 1998. Although the sharp increase in the incidence of poverty (17.4 per cent in 2003) went down with the economic recovery, the surge in the number of poor people during the crisis has left a large segment of the population in a vulnerable state. As in other Southeast Asian countries, poverty in Indonesia is a rural phenomenon. Most of the poor live in rural areas (Table 6).

Poverty in Indonesia tends to be relative rather than absolute. Sumodiningrat (1989) contends that the exact number of people living in absolute poverty is not known but it is believed to be small in compared with those on or near the official poverty line. While those in absolute poverty must be given immediate assistance, it is the latter group that requires the greatest amount of attention. These are subsistence farmers and people who earn meagre income from the urban informal sector and live on the edge of economic disaster.

Sumodiningrat (1994) believes a realistic and appropriate target is not to eliminate relative poverty but to raise the level of welfare of the poorest citizens. He says:

Quality of life is a prime concern. Minimum acceptable standards must be met and eventually surpassed. Key words such as decentralisation, participation, empowerment, accountability and sustainability have entered development rhetoric in recent years, but in order to reduce the gap between rich and poor it is essential that the actions implied by those words are put into effect. That is necessary in order to ensure that even the poorest citizens are capable of enjoying a reasonable standard of living, secure from the threat of absolute poverty.

**Table 6: Poverty line and the number of poor people in Indonesia**

Year	Poverty Line		Number of Poor People (Million)				Percentage of Poor People			
	Rp/capita/month				Absolute					
	Urban	Rural	Urban	Rural	Total	Change	Urban	Rural	Total	Change
1990	20,614	13,295	9.4	17.8	27.2	-2.8	16.8	14.3	15.1	-2.3
1993	27,905	18,244	8.7	17.2	25.9	-1.3	13.4	13.8	13.7	-1.4
1996	38,246	27,413	7.2	15.3	22.5	-3.4	9.7	12.3	11.3	-2.3
1998	96,959	72,780	17.6	31.9	49.5	15	21.9	25.7	24.2	6.5
1999	89,845	69,420	12.4	25.1	37.5	-10.9	15.1	20.2	18.2	-5.3
2000*	91,632	73,684	13.1	25.2	38.3	-0.2	14.58	22.14	18.95	4.1
2001*	100,011	82,382	8.5	28.6	37.1	-0.2	9.76	24.95	18.4	-2.9
2002*	130,499	96,512	13.3	25.1	38.4	1.3	14.46	21.1	19.2	-1.1

Source: Puguh Irawan dll (BPS, 2001). \* Indonesia Statistical Yearbook 2001.

## 2.2 Review and Analysis of Agriculture Performance

### 2.2.1 Trend in Indonesian agriculture

Much has been written about the Indonesian “success story” in relation to increased agricultural output over the past three decades, particularly in rice production. Indonesia was the world’s largest rice importer in the mid-1960s but became nearly self-sufficient by the mid-1980s (Jatileksono, 1987). But agricultural growth in Indonesia has not been limited to rice. Since taking on a more outward orientation in 1985, exports of agricultural commodities grew substantially.

Agricultural exports as a share of agricultural GDP increased from 16 per cent in 1985 to nearly 30 per cent a decade later. By the mid-1990s, Indonesia emerged as the world’s second largest exporter of rubber and oil palm and third largest exporter of cacao and coffee. The value of shrimp exports also grew dramatically over this period, surpassing all but rubber as an agricultural export earner. Imports of agricultural products grew at an even more rapid rate over this period (Erwidodo, 1999).

Real agricultural GDP has been increasing and food crop production dominates the sector at 56 per cent of the total. However, there has been a decline in the relative importance of crop production (food crops in particular) and increases in the relative importance of livestock, forestry and fisheries production (Fuglie and Piggott, 2003).

**Table 7: Trends in Indonesian agriculture**

Indicators	1961-65	1971-75	1981-85	1991-95
	(Million, 1999 international dollars)			
Agricultural GDP	39,748	46,28	61,256	90,554
<b>Share of Ag GDP</b>	(Percentage)			
Food Crops	65.1	59.9	61.8	55.8
Non-food crops	17.3	17.1	15.7	16.6
Livestock	6.6	7.1	9.9	11.4
Forestry	3.0	10.3	5.7	6.9
Fisheries	8.0	5.7	6.8	9.3
Rice output (Million tons of paddy)	12.4	21.2	35.8	47.5
Livestock (million head)	10.5	9.9	12.0	16.2
Total crop land	17.6	(Million, hectares)		33.3
Java and Madura	9.0	8.8	8.5	8.9
Other islands	8.6	10.0	17.9	24.4
	(Million, farm household)			
Number of Farm	12.14	13.88	15.63	18.10
Java and Madura	7.95	8.27	9.21	10.16
Other islands	4.19	5.61	6.42	7.94
Average size of Farms	1.07	1.02	1.06	1.17
Java and Madura	0.73	0.66	0.67	0.63
Other islands	1.72	1.54	1.61	1.85

Source: Central Statistical Agency (BPS).



## 2.2.2 Land Use and Ownership

About 20 million hectares, or nearly 10 per cent of Indonesia's total land area, were cultivated in the 1980s, with an additional 40 million hectares of potentially cultivatable land, primarily in Sumatra and Kalimantan. Smallholder cultivation of both food and estate crops predominated, accounting for about 87 per cent of total land under cultivation. Large plantations accounted for the remaining 13 per cent. The pattern of cultivation and landholding in modern Indonesia reflected the distinctive natural ecosystems of Java and the outer islands, and the profound impact of colonial agricultural practices.

The Indonesia's land use/ allocation seen on the following table:

**Table 8: Land used/ Allocation**

Land Used	Area (ha)	%
Settlement	3,637,380	1.91%
Manufacture	128,850	0.07%
Paddy Field		0.00%
Technical Irrigation	3,231,630	1.69%
Simple Irrigation	922,880	0.48%
Cistern	3,459,340	1.81%
Dry Land	9,954,270	5.22%
Mix crop estate	4,339,134	2.27%
Plantation	14,332,280	7.51%
Forestry	125,584,710	65.81%
Underbrush	15,488,120	8.12%
Critical Land	1,323,940	0.69%
Wet Land	3,406,640	1.79%
Others	5,015,760	2.63%
<b>Total</b>	<b>190,824,934.0</b>	<b>100.00%</b>

Source: National Agrarian Agency.

Under Sukarno's leadership in the early 1960s, there was a highly visible yet ultimately ineffective land reform. The land reform was part of a larger and more successful effort to modernise the colonial legal system of landownership. During the Dutch regime, a dual system of land laws permitted non-Indonesians to register and obtain land titles based on Western civil law principles, whereas Indonesian ownership was governed by *adat* (custom), based on unwritten village practices. The dual system was intended to protect peasants. However, the more flexible, communal-based *adat* system also permitted the Dutch to rent communal village land for sugar cultivation by contracting only with the village headman (*penghula*). In 1960, the proportion of settled land still recognised only under the *adat* system, with no formal survey or title, was 95 per cent.

The Basic Agrarian Law, enacted in 1960, was a comprehensive legal effort to modernise Indonesian landownership. The law recognised previous ownership rights under both *adat* and Western systems, but provided a new certification process under which land was to be surveyed, mapped, and registered. All unclaimed land reverted to government ownership. Land certification, however, was not compulsory and registration was still far from complete by the end of the 1980s. The law also set limits on the size of landownership, depending on the population density of the region and the type of land. In areas with over 401 people per square kilometre, rice fields were limited to a maximum of five hectares and a minimum of two hectares. Absentee ownership was forbidden.

Some concentration of landownership had followed the collapse of the colonial sugar cultivation system on Java, but in essence the problem was one of land shortage, not distribution. A wealthy landholder may possess three to five hectares, so the maximum of five hectares left very little surplus land.

Only a small amount of land was redistributed before Suharto's New Order shifted the emphasis of agricultural policy away from land reform towards increasing production. The 1983 agricultural census showed that about 44 per cent of all farm households were either landless or operated holdings too small to meet more than subsistence requirements. The average landholding on Java was 0.66 hectares, and ranged from about 1.5 to 3 hectares in other parts of the archipelago.



By the 1980s, the New Order had achieved undisputed success in expanding rice production, but the distribution of benefits among villagers was still debatable. Some observers suggested that only prosperous farmers benefited from the new technology. Disputes continued in part because conditions varied in different parts of Java, yielding different results in village-level studies. However, by the late 1980s, sufficient evidence has been gathered to show that the benefits from increased rice production, together with growing employment opportunities outside agriculture, had reached even the landless or near landless population.

However, small farms cultivated by small producers predominate while landlessness and skewed landownership patterns remain as major agricultural issues in Indonesia. A UN report shows that Indonesian farmers who have lands only own an average of 0.2 hectare, while the majority remains landless (UN, 1996: 11 as cited in AsiaDHRRA and AFA 2004). Another study reveals that about 71 per cent of people in the rural areas do not own land.

### 2.2.3 Situation in Selected Food Crops

#### ▪ *Rice*

Rice is the staple food in Indonesia, accounting for more than half of the calories in the average diet, and the source of livelihood for about 20 million households or about 100 million people in the late 1980s. Rice is cultivated in about 10 million hectares throughout the archipelago. The supply and control of water is crucial to the productivity of rice land, especially when planted with high-yield seed varieties. In 1987, irrigated lands covered 58 per cent of the total cultivated area, rain-fed land accounted for 20 per cent, and *ladang* or dry land cultivation, together with swamp or tidal cultivation covered the remaining 22 per cent of rice cropland.

The government was intensely involved in the rice economy, both to stabilize prices for urban consumers and to expand domestic output to achieve national self-sufficiency in rice production. Various governmental policies include the dissemination of high yield seed varieties through government-sponsored extension programmes, direct investment in irrigation facilities and control of the domestic price of rice through the National Logistical Supply Organisation (Bulog), the government rice-trading monopoly. In the 1970s, Indonesia was a major rice importer. By 1985 however, rice self-sufficiency has been achieved after six years of annual growth rates of over 7 per cent per year. From 1968 to 1989, annual rice production had increased from 12 million to 29 million tons, and yields had increased from 2.14 tons of paddy (wet rice growing) per hectare to 4.23 tons per hectare.

The most significant factor in this impressive increase in output and productivity was the spread of high-yielding rice varieties. By the mid-1980s, 85 per cent of rice farmers used high yield seeds, compared with 50 per cent in 1975. High-yield varieties were promoted together with subsidised fertiliser, pesticides, and credit through the "mass guidance" or *Bimas* rice intensification programme. This extension programme also offered technical assistance to farmers unfamiliar with the new cultivation techniques. The new technology was not without its problems, however. Several major infestations of the brown plant hopper, whose natural predators were eliminated by the heavy use of subsidised pesticides, led to a new strategy in 1988 to apply the techniques of integrated pest management, relying on a variety of methods aside from pesticide to control insects and rodents. The subsidy on pesticides was eliminated in 1989 to help reduce pesticide use.

Government investments in irrigation had also made a significant contribution to increased rice production. From 1969 to 1989, 2.5 million hectares of irrigated land were rehabilitated, and irrigation was expanded to cover about 1.2 million hectares.

**Table 9. Rice Harvested Area, Yield and Production (1990-2003)**

Year	Harvested Area (000 ha)	Yield (Tons/ha)	Paddy Production (MMT)	Milled Rice (MMT)	Rice Import (MMT)
1990	10.502	4.30	45.179	29.336	0.029
1991	10.282	4.35	45.689	29.048	0.178
1992	11.103	4.34	48.240	31.356	0.634
1993	11.013	4.38	48.181	31.318	0
1994	10.734	4.35	46.641	30.317	0.876
1995	11.439	4.35	49.744	32.334	3.014
1996	11.569	4.41	51.101	33.215	1.090
1997	11.141	4.43	49.377	32.095	0.406
1998	11.613	4.17	48.472	30.537	5.765
1999	11.963	4.25	50.866	31.118	4.183
2000	11.793	4.40	51.898	32.345	1.513
2001	11.415	4.39	50.181	31.283	1.400
2002	11.521	4.47	51.379	32.369	3.100
2003*	11.453	4.53	51.849	32.697	2.000

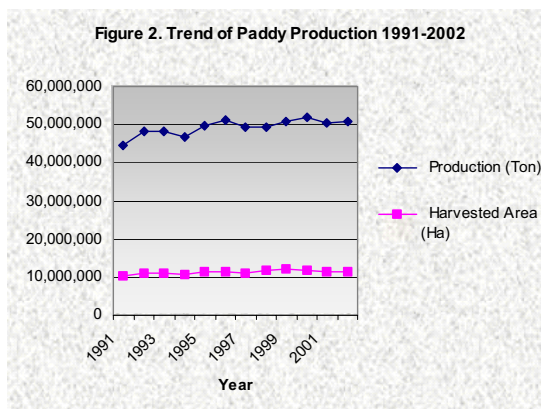
Notes: a) Milling recovery rate of paddy to milled rice before 1998 was 0.65 and 0.63 after 1998.

b) MMT: million metric tons.

\*) Based on third forecast of Central Statistic Agency.

Source: Central Statistic Agency (2003).

Because the government objective of price stability for urban consumers could potentially undermine efforts to increase production by reducing the profitability of the rice crop, Bulog's operations evolved to take into consideration producer incentives as well as consumer costs. Domestic rice prices were permitted to rise gradually during the 1970s, although they were generally held below world rice prices. However, domestic prices were kept above world prices in several periods during the 1980s. Bulog influenced the domestic rice price by operating a buffer stock on the order of two million tons during the 1980s. When domestic prices fell, Bulog purchased rice through village cooperatives. When prices rose above the price ceiling, Bulog released buffer supplies. The margin between the producer floor price and urban ceiling price was sufficient to permit private traders to operate profitably, and Bulog's distribution of rice was limited to fewer than 15 per cent of total rice consumed domestically in a given year.



The Indonesian rice sector is beset with major problems as follows:

1. Limited land availability is still a problem and land ownership by small farmers is getting smaller.
2. The sector is affected by both natural disasters (floods, prolonged droughts, landslides, and pest attacks) and man-made disasters (deforestation).
3. Rice production has not fulfilled the national rice demand. Over the last six years, Indonesia has been importing about three million metric tones of rice per year (Table 9). Aside from huge legal rice imports, there is also the huge volume of rice being smuggled into the country, which affect local rice prices especially during the harvest season.

The Indonesian government imposed an import tariff (about 30 per cent of world rice price) in 2000 because of the negative impact of rice market liberalisation. The effectiveness of such a measure was questionable because of its inability to enforce the implementation of the rice tariff policy and weak coordination and inefficient institutional arrangement, which led to rice smuggling or under invoicing (Mulyo Sidik, 2004: 6).

4. In January 2003, Bulog was reorganised and its status changed from a para-statal agency to a state-owned enterprise (SOE). The agency is no longer tasked with price stabilisation and improving farmers' welfare. Its remaining service functions are distributing rice to the poor under the Raskin programme and maintaining the national stock reserve in times of shortages due to natural disasters or political unrests. (Mulyo Sidik, 2004: 8). There are some criticisms that Bulog had not been transparent in its national food reserve management.

#### ▪ **Corn and other Food Crops**

Although rice is by far the most important food crop, corn is the major source of calories for about 18 million people, especially in *Jawa Timur* and *Jawa Tengah* provinces. About 75 per cent of corn production was consumed as a staple food source. Corn cultivation was concentrated on Java and Madura under a variety of conditions, but most frequently on *tegalan*, or rain-fed land without the system of dikes characteristic of floodable *sawah*.

Maize imports started in 1973. Indonesia imported bigger quantities in 1987 (220,998 tons) and 1991 (323,176 tons) and 1.1 million tons in 1994 and 1997 and 2000s (Table 10). The need of Indonesian feed industry accounts for the large maize imports. The major suppliers of Indonesian maize imports were Argentina, the United States, South Africa and Vietnam.

**Table 10. Maize Production, Exports and Imports (Mt)**

Year	Production	Exports	Imports
1991	6,255,906	33,223	323,262
1992	7,995,459	149,695	55,876
1993	6,459,737	60,837	494,470
1994	6,868,880	37,441	1,118,284
1995	8,245,902	79,144	969,193
1996	9,307,423	26,830	616,942
1997	8,770,851	18,957	1,098,354
1998	10,169,490	632,515	313,463
1999	9,204,036	90,647	618,060
2000	9,677,000	28,066	1,264,575
2001	9,347,200	90,474	1,035,797
2002	9,654,105	16,306	1,154,063
2003	10,886,400	33,691	1,345,452
2004	No data	32,679	1,088,928

Source: FAOSTAT data 2006 (last updated on March 3, 2006).

Other food crops included cassava, potatoes, sweet potatoes, sugarcane, peanuts, and soybeans.

**Potato** ranks sixth among the major vegetable commodities in Indonesia. Demand for potato (Table 12) grew significantly in response to the growing demand of fast food and processed food industries. The increased in consumption came mainly from the higher income consumers in urban areas. The main sources of imported potato are Australia, the United States and the Netherlands for potato seeds and the United States for frozen potato. Indonesian potatoes are exported mainly to Malaysia and Singapore (Erwido and Hadi, 1999).

**Table 11: Production of Secondary Food Crops in Indonesia (in tons)**

Year	Maize	Soybean	Peanuts	Mungbeans	Cassava	Sweet Potatoes
2002	9,654,105	673,056	718,071	288,089	16,913,104	1,771,642
2003	10,886,442	671,600	785,526	335,224	18,523,810	1,991,478
2004	11,225,243	723,483	837,495	310,412	19,424,707	1,901,802
2005*)	12,413,353	808,054	834,594	320,461	19,231,495	1,857,169
2006**)	12,352,831	800,023	843,950	315,402	19,745,227	1,868,957

\*) Preliminary

\*\*) First Forecast

Source: Central Statistical Agency (BPS, 2005).

**Table 12: Potato Production, Exports and Imports (Mt)**

<b>Year</b>	<b>Production</b>	<b>Exports</b>	<b>Imports</b>
1991	525,839	98,782	16,833
1992	702,584	96,764	16,666
1993	809,457	127,974	27,380
1994	877,146	89,244	26,938
1995	1,035,260	103,126	35,578
1996	1,109,560	82,970	42,481
1997	813,368	38,111	57,874
1998	998,032	32,017	24,848
1999	924,058	32,703	79,255
2000	977,349	32,158	48,529
2001	831,140	30,232	59,713
2002	893,824	37,597	96,322
2003	1,009,979	21,002	92,275

Source: FAOSTAT data, 2006 (last updated on March 3, 2006).

### ▪ Sugar

Sugar is one of the key food crops in Indonesia. However, the Indonesian sugar industry is hobbled by high input costs, poor management practices, inefficient government policies and the influx of cheaper sugar imports.<sup>2</sup> Area planted to sugarcane has been declining as many sugar farmers are driven to shift to other crops (e.g. rice or horticulture) or are forced out of sugarcane production as they cannot compete with cheaper imports (USDA, 2000).

There are some 400,000 hectares of sugarcane plantations in Indonesia and almost three-quarters of this on Java. Productivity in Sumatra, at eight tons a hectare, outstrips those in most Javanese plantations, which average only between four and five tons per hectare.

More than a decade ago, more than half of Java's cane was irrigated, but this was substantially diminished, reflecting a shift to the cultivation of more profitable crops. Farmers have switched to higher-profit, shorter-duration food crops. Sugarcane has had to compete with other crops, especially rice. Relatively less attractive returns compared with other crops have discouraged many farmers from growing cane, leaving factories without sufficient raw materials to operate at capacity (AsiaTimes, 2002).

Farmers with small-to-medium-sized holdings cultivate the bulk (about 70 per cent) of sugarcane areas and the rest by sugar-factory plantations. Farmers' system of sugarcane cultivation (Kelompok Tani) is where small groups are responsible for at least 20 hectares of land and coordinate the supply of cane to the mills. Many cane farmers have production-sharing agreements with the state sugar mills. The sharing arrangement is about 65-35 per cent in favor of the farmers. Other farmers just opted to sell their cane and are paid based on the present official procurement price. Farmers in this scheme get 90 per cent of their payment in cash and 10 per cent in kind. The government also subsidises cane farmers by authorising mills to pay the farmers based on the volume of raw cane they bring to the mill and on the extraction yields of their cane.

<sup>2</sup>USDA Gain Report #1D0021, 2000, p.2; Bill Guerin, "How the mighty Indonesian industry fell," AsiaTimes Online. [www.atimes.com](http://www.atimes.com)

The sugar milling sector is generally inefficient with only 12 of 59 sugar mills nationwide are operating efficiently and 12 more have already been shut down. Ninety per cent of mills are publicly-owned. The state-operated mills lack decent equipment and sufficient supply of good quality cane.

Households consume about 90 per cent of sugar and the rest by industries. Imported refined sugar is largely for industrial use (food, beverage and pharmaceutical industries). Attracting investments to modernise Indonesian sugar mills is hindered by high incidence of smuggling of sugar, under-invoicing of consignments into Indonesia and declining returns to sugar farmers. The small domestic production base cannot cope with the rapidly increasing direct domestic consumption backed by an equally fast-growing food-processing industry. In general, domestic sugar cannot compete in price and quality with imports at present.

Indonesia has been a net importer of sugar since the 1960s and now ranks as one of the world's biggest sugar importers. Its annual consumption of sugar is about 3.3 million tons. The quantity of sugar imports went up dramatically (Figure 3) from 140,661 metric tons (Mt) in 1994 to 608,254 Mt in 1995 and 1.18 million Mt in 1996. The highest quantity of imports was registered in 1999 at 2.35 million Mt. Annual imports went down to about 1.7 million Mt in 2000. From 2001-2003, Indonesia has been importing more than 1 million Mt of sugar annually (Table 13). Imports come mainly from Thailand.

USDA Gain Report reveals that the major suppliers of sugar in 2000 were Thailand (36 per cent), Brazil (29 per cent) and China (9 per cent).

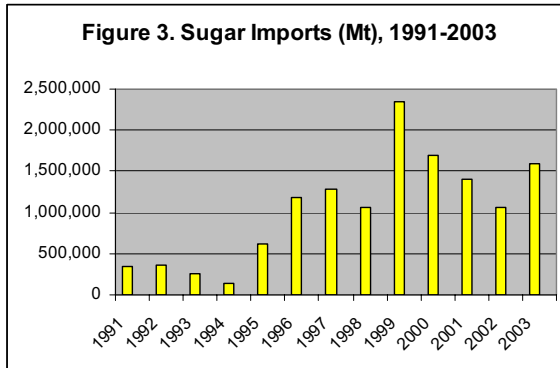
Indonesia applies the lowest import tariffs – a 25 per cent duty on white sugar and 20 per cent on raw sugar, levels set by the International Monetary Fund (IMF) in its Letter of Intent. Thailand and the Philippines impose an import duty of almost 100 per cent. Both the European Union and United States impose high tariffs at 240 per cent and 150 per cent import duty respectively. At the imposition of the IMF, Indonesia set a zero duty on sugar in 1998 but re-imposed tariffs in 2000 (AsiaTimes 2002).

**Table 13: Sugar Production, Exports and Imports – Raw Equivalent (Mt)**

Year	Production	Exports	Imports
1991	2,752,506	12,024	339,305
1992	2,824,771	14,279	366,876
1993	3,024,090	16,434	251,837
1994	2,966,700	18,218	140,661
1995	2,564,700	24,860	608,254
1996	2,527,624	30,058	1,182,020
1997	2,547,250	29,417	1,281,907
1998	2,332,888	15,357	1,066,972
1999	2,211,400	45,646	2,352,783
2000	2,190,100	42,837	1,688,680
2001	2,234,600	50,065	1,408,843
2002	2,487,600	50,104	1,070,100
2003	2,384,400	48,458	1,585,692

Source: FAOSTAT data, 2006 (last updated on March 3, 2006).





Source: Central Statistical Agency (BPS, 2004).

### ▪ Estate Crops

Spice crops first attracted Europeans to the East Indies, but the tropical climate and rich volcanic soils offered a fertile laboratory for the introduction of new commercial crops such as sugar, coffee, and rubber. Large private plantations controlled by European and American interests became the backbone of the colonial economy in the late nineteenth century, when the Dutch colonial government began to limit the practice of tax collection by forced crop cultivation on village land. Even at the height of the plantation economy, however, small-scale peasant cultivators were competitive suppliers of a variety of commercial crops. In 1929, just before the world market collapse in the Great Depression, agricultural products were 75 per cent of total Netherlands Indies exports, and about one-third of agricultural exports were from small-scale indigenous producers. Although sugar, then the single most important export crop, was entirely a plantation crop, a large share of rubber, next in export value to sugar, was supplied by smallholders; and coconut, then the third largest agricultural export, was produced almost exclusively by smallholders.

Although far less important in the overall economy, the estate crops were a significant share of exports and a vital source of income in the rural economy throughout the 1970s and 1980s. Smallholders continued to cultivate many estate crops grown on a large scale on government and privately owned plantations. Government-owned plantations were largely the legacy of nationalisation of foreign estates during the 1950s, and restrictions on ownership still limited foreign participation, although joint ventures were not uncommon.

Rubber was generally the most valuable export crop, followed by coffee and oil palm. Exports of palm oil and coconut were periodically restricted to ensure adequate domestic supplies. A variety of other estate crops, including tobacco, pepper, tea, and cocoa, were also exported. Sugarcane was still cultivated but never regained its prominence after the collapse of the sugar industry during the Great Depression.

During the mid-1980s, the government initiated an ambitious plan to improve the technology and plant stock of small-scale producers. One of the Nucleus Estate Programmes was a smallholder scheme that provided small plots of high-yielding tree crops to participating farmers in a determined location who shared the benefits of centralized technological and managerial assistance. A variety of difficulties were encountered with this strategy, and the planting area and productivity targets were rarely achieved. Outside observers criticised the nucleus-estate smallholder approach because only a small number of cultivators participated, leaving the majority of smallholders outside the nucleus estates without access to more productive hybrid tree stocks.

Rubber was cultivated on three million hectares of land in 1988, and smallholders owned about 80 per cent of that area with holdings of two hectares or less. Smallholder cultivation was concentrated in Sumatra, especially in the provinces of Sumatera Utara, Riau, Jambi, and Sumatera Selatan. Some smallholder cultivation was found on Kalimantan, but less than 2 per cent was outside Sumatra and Kalimantan. Government and private estates cultivated roughly equal areas, although private estates were subject to a legal maximum size varying by province, and so were smaller and more numerous than government estates. About 12 government-owned and more than 800 private rubber estates were concentrated in Sumatera Utara, Jawa Barat, Jawa Timur, and Kalimantan Tengah provinces.

Oil palm (*Elaeis guineensis*, Arecaceae) was the newest and fastest growing tree crop in the 1980s. Ten government estates – primarily in Sumatera Utara Province – were the major producers, although eighteen private estates accounted for about 25 per cent of the total 655,000 hectares devoted to oil palm in 1988. Smallholder cultivation of oil palm was insignificant. Exports of palm oil also expanded rapidly in the late 1980s, making Indonesia a major supplier, with 10 per cent of the world market in 1988.

Coconuts are cultivated almost exclusively by smallholders. In 1983, about three million hectares were devoted to coconut production throughout the archipelago, although a large share was on Java. In the early 1980s, the World Bank estimated that as much as 60 per cent of coconut products were not sent to the market but instead consumed by the cultivators, in part because of low producer prices reflecting government administration of the domestic coconut trade. Indonesia was the second largest producer of coconuts in the world after the Philippines, but remained an insignificant exporter because of government restrictions and inadequate processing facilities.

Coffee also is cultivated almost entirely by smallholders but, in contrast, remained an important export crop throughout the 1970s and 1980s. Processing and marketing of coffee was undertaken by the private sector with little government intervention. Most Indonesian coffee trees were of the Robusta variety, which is hardier but of lower quality than Arabica coffee. Cultivation was concentrated on Sumatra, especially Lampung Province, which accounted for almost 25 per cent of the estimated 500,000 hectares of smallholder cultivation in 1978.



#### ▪ Livestock

Smallholders, who owned nearly all of the livestock in the country, used their animals for draft power, manure, meat, and for future sale. Most livestock, including some 16 million goats and sheep, were simply tethered near the home or put out to pasture on communal grazing land. Beef cattle numbered over 10 million in 1989. The water buffalo, the most common draft animal, numbered 3.3 million. Several government-sponsored programmes to increase livestock productivity through better extension services to livestock farmers and the expansion of ranching were in operation on the Outer Islands in the early 1990s. Since 1978 the government provided technical assistance to poultry farmers, particularly in or near urban areas. The government also made great efforts to improve the dissemination of superior breeds and modern medicines. Chickens were the fastest growing commercial livestock, numbering 508 million in 1989, an increase of 65 per cent since 1984.

## ▪ Fishery

Fish was the main source of animal protein in the average diet, with a per capita availability of 12.76 kilogrammes per year in 1988, compared with a total of 3.8 kilogrammes from all other meats combined. The fishing industry continued to rely on traditional methods and equipment, although the government was attempting to promote motorisation for traditional fishing boats. About 14 per cent of the 270,000 coastal vessels were motorised in 1980, compared with 2 per cent of the total in 1970. Inland fish landings were estimated at 761,000 tons in 1989, an increase of almost 40 per cent since 1984; sea fish landings were estimated to be 2.2 million tons in 1989, an increase of 31 per cent since 1984. Foreign fishing vessels operating under license contributed to the growing fish exports, which reached 54,000 tons by 1988, an increase of 70 per cent since 1980. Most fish exports were shrimp and tuna caught for the Japanese market. The supply of fish in Indonesian waters was threatened by illegal fishing from foreign vessels and in some areas by severe environmental degradation.

## ▪ Forestry

Seventy-five per cent of Indonesia's total land area of 191 million hectares was classified as forest land, and tropical rain forests made up the vast majority of forest cover, particularly in Kalimantan, Sumatra, and Irian Jaya. Estimates of the rate of forest depletion varied but ranged from 700,000 to more than one million hectares per year during the mid-1980s. In a critical evaluation of Indonesian forestry policy, economist Malcolm Gillis argued that deforestation could not be blamed on a single major factor but was instead due to a complicated interplay among commercial logging, transmigration activities, and shifting or swidden cultivation, still practiced largely on Kalimantan. Gillis argued that the most immediate threat to Indonesia's forests was the government promotion of domestic timber processing, whereas the transmigration programme was the greatest long-term threat.

The government had ownership rights to all natural forest, as provided for in the 1945 constitution. Ownership could be temporarily reassigned in the form of timber concessions, known as Forest Exploitation Rights (*Hak Pengusahaan Hutan*), or permanently transferred, as in the case of land titles granted to transmigration families. The average concession size was 98,000 hectares, and the usual duration was twenty years. Foreign timber concessions were curtailed to conserve resources in the 1970s, and by the 1980s, of more than 500 active forest concessions; foreign firms operated only 9. Log production peaked in 1979 at 25 million cubic meters, of which about 18 million cubic meters were exported as unprocessed logs. Restrictions on unprocessed exports in the early 1980s contributed to a decline in total log production, which fell to 13 million tons in 1982. However, increasing demand for sawn timber and plywood began to boost production again, bringing it up to 26 million cubic meters by 1987. In that year, about half of total log production was exported in the form of sawn timber and plywood, the rest going into domestic consumption. Log production again dropped at the end of the 1980s, falling to 20 million cubic meters by 1989. The government attributed this decline to policies designed to preserve the natural forest. One such policy was the increase in a levy imposed on loggers for reforestation, which was raised from US\$4 to US\$7 for every cubic meter of cut log.

### 2.3 Situation of Small Farmer/ Producers

Farmers are both producers and consumers. With the transformation of Indonesian agriculture from subsistence production to commercial production, many small producers have become impoverished. They have also lost their control over their produce. For instance, many rice farmers are forced to sell their better quality rice and buy lower quality rice.

The low selling price of agriculture products accounts for the decreasing farmers' incomes. With lower incomes, their purchasing power becomes low which makes their lives harder with higher food prices.

Prices of agriculture commodities relatively increase every year. The price increases are not commensurate to the price increases of industrial goods such tractor machines, inputs and other goods. A West Java farmer said that in 1970, the price of a tractor is equivalent to 3 tons of rice. Now, the price of a tractor is the same as 15 tons of rice.

Farmers also have to contend with big fluctuation in prices of vegetables and other crops like rice and sugarcane. For instance, the price of red pepper can go as high as IDR 30.000 per kg but the price can also go down to as low as IDR 1.100 per kg.



Many Indonesian farmers own only about 0.34 hectare each.<sup>3</sup> Based on the research of the Agricultural Department in 2000, almost 88 per cent of Indonesian farmers has less than ½ hectare.

High cost of production is another major problem of farmers. With most farmers in Indonesia engaged on non-organic farming, they are dependent on inorganic inputs. Inputs (such seeds, fertilisers and pesticides) are expensive. Farmers have limited access agricultural credit. There is no official financial institution for small farmers.

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<sup>3</sup> Former President Abdurrahman Wahid's speech at the national farmers' meeting in July 2004 in Jakarta.

Moreover, the Indonesian government has difficulties in providing agricultural support such as roads, irrigation facilities, post-harvest facilities and other infrastructure. Small farmers also lack access to capital and technology. Indonesian farmers lack access to market information, thus the farmers have a hard time getting better prices.

Besides these economical problems, farmers face natural problems such as floods, long dry seasons, erosion and pest epidemic.

## **2.4 Pattern of Trade and Investments in Indonesia**

### 2.4.1 Strategic Direction of Indonesian Agriculture and Trade

Indonesia's agricultural policy has been focused on attaining rice self-sufficiency while undertaking rapid and export-oriented industrialisation. The Indonesian government undertook a strong intervention in agriculture in agriculture and food through Bulog and massive investments in infrastructure and technology (e.g. irrigation and high yielding rice varieties).

More market-oriented policies were adopted when Indonesia became members of regional and multilateral institutions such as the GATT-WTO, APEC and ASEAN-AFTA and when it had to be bailed out by the International Monetary Fund (IMF) after the Asian financial crisis. The Indonesian government agreed to a package of reforms that led to further liberalisation (trade and financial liberalisation). It committed to abolish import and marketing monopolies and price controls on agricultural commodities. As such, the government abolished Bulog's monopoly on importation of wheat and wheat flour, sugar and cloves. It also carried out currency devaluation.

### 2.4.2 Direction of Trade

During the 1980s, about 25 per cent of domestic production or GDP, was exported. Petroleum was Indonesia's most important export. It also exported agricultural products such as rubber and coffee and a growing share of manufactured exports. In the late 1980s, the government classified about 70 per cent of imports as raw materials or auxiliary goods for industry, about 25 per cent of imports as capital goods, primarily transportation equipment, and only around 5 per cent of imports as consumer goods.

Indonesian exports were based traditionally on the country's rich natural resources and agricultural productivity, making the economy vulnerable to the vagaries of changing world prices for these products. For example, the Dutch colonial economy suffered when world sugar prices collapsed during the Great Depression, and 50 years later, the New Order endured the dramatic oil market collapse in the mid-1980s. Manufactured exports offered the prospect of more stable export markets during the 1980s, but even these products were threatened by increased trade protection among industrial countries. To avoid heavy reliance on a few trade partners, the government pursued several measures to diversify export markets, especially to other developing nations such as China and Indonesia's fellow members of the Association of South East Asian Nations (ASEAN). Substantial trade reforms during the 1980s contributed to the surge in manufactured exports from Indonesia. The most important manufactured export was plywood, whose domestic production was facilitated by the ban on log exports in the early 1980s. In 1990, plywood accounted for over 10 per cent of total merchandise exports. Although not yet significant individually, a wide range of manufactured products, including electrical

machinery, paper products, cement, tires, and chemical products, helped bring overall manufactured exports to 35 per cent of merchandise exports, or a total of US\$9 billion in 1990, up from less than US\$2 billion in 1984.

The growth in non-oil exports helped Indonesia maintain a positive trade balance throughout the 1980s in spite of the oil market collapse. However, increases in imports, service costs such as foreign shipping, and interest payments on outstanding foreign debt all contributed to a worsening current account deficit in the late 1980s. The deficit more than doubled from US\$1.1 billion in 1989 to US\$2.4 billion in 1990. The 1991 current account deficit was predicted to reach as high as US\$6 billion.

In the early 1990s, Indonesia's trade partners included dozens of countries throughout the world. Imported goods came from markets as near as Singapore, one of the newly industrialising economies (NIEs) of Asia, and as far as Europe and the Middle East. Japan and the United States were the most important suppliers, together accounting for a 37 per cent of imports in the late 1980s. The growth in Indonesia's manufactured products contributed to a growing diversity of export markets. However, the importance of oil and liquefied natural gas in total exports gave Japan, the major market for these natural resources, predominance among export destinations

In 1990, more than 70 per cent of exports to Japan were crude petroleum, petroleum products, and natural gas, which represented 67 per cent of all petroleum exports and 75 per cent of all natural gas exports from Indonesia. Although Japan was also an important market for agricultural and manufactured goods, the markets for these products were more diversified among Indonesia's many trade partners. Half of Indonesia's natural rubber and one-third of its clothing exports were sent to the United States. One-third of Indonesia's plywood products was exported to Japan, but significant shares also were exported to the United States, South Korea, Taiwan, and several European nations.

The government participated in several initiatives to expand and diversify export markets. In 1991, the Department of Trade organised a mission to China, a country with which economic ties has been effectively severed from 1965 until the late 1980s. Recorded exports to China were 3.2 per cent of Indonesia's total exports in 1990 (although this measure may not have indicated a genuine increase in trade as before 1990 Indonesian products were shipped to China via Singapore and Hong Kong). Compared with trade with other trade-partner nations, 3.2 per cent ranked the China trade close to countries such as the Netherlands and Germany but ahead of all ASEAN partners except Singapore. Relations with China warmed after the trade mission and greater overall trade was anticipated.

The total volume of Indonesia's trade expanded substantially over the past decade, from US\$65 billion in 1993 to US\$10.8 in 2003. During this period, the total value of exports increased from US\$36.8 billion to US\$63.3 billion while the total value of imports grew from US\$28.3 billion to US\$39.5 billion. Overall, Indonesia enjoyed a positive trade balances over the last ten years (Table 14).

**Table 14. Foreign Trade, Indonesia, 1991-2001 (million, US\$)**

Year	Including oil and gas		Excluding oil and gas	
	Export	Import	Export	Import
1991	29,142.4	25,868.8	18,247.5	23,558.6
1992	33,967.0	27,279.6	23,296.1	25,164.5
1993	36,823.0	28,327.8	27,077.2	26,157.3
1994	40,053.4	31,983.5	30,359.8	29,616.1
1995	45,418.0	40,628.7	34,953.6	37,717.9
1996	49,814.8	42,928.5	38,092.9	39,333.0
1997	53,443.6	41,679.8	41,821.0	37,755.7
1998	48,847.6	27,336.9	40,975.4	24,683.2
1999	48,665.5	24,003.3	38,873.2	20,322.2
2000	62,124.0	33,514.8	47,757.4	27,495.3
2001	56,320.9	30,962.1	43,684.6	25,490.3

Source: Central Statistical Agency (BPS), 2002.

Indicators (US\$ billion)	2002	2003	2004
Imports of goods (f.o.b.)	35.7	39.5	..
Export of goods (f.o.b.)	59.2	63.3	..
Trade balance	23.5	23.7	..
Balance of payments	7.8	7.3	..

Source: World Bank, IMF.

Historically, three countries – Japan, the United States and Singapore – account for the bulk of Indonesia’s external trade. By the 2000s, Asian countries became the dominant trade partners of Indonesia. Japan remains its leading trade partner. In 2004, the bulk of Indonesia’s exports went to Japan, followed by South Korea and Taiwan (Table 15). The increase in the value of its exports to Taiwan and South Korea was dramatic. The values of exports to Taiwan grew from US\$2.2 million in 2003 to US\$24 million in 2004, a 978 per cent increase while exports to South Korea increased from US\$4,323 million in 2003 to US\$25,267 million in 2004 or a 484 per cent increase. Japan, Singapore, China and the United States are the main sources of Indonesia’s imports (Table 15).

Indonesia trade with ASEAN had been increasing. Its imports from ASEAN grew from US\$2,604 million in 1993 (9.19 per cent) to US\$11,494 in 2004 (Table 16). Imports Japan, the United States and the European Union have declined over the last 10 years.



**Table 15: Value Growth of Foreign Trade  
with Main Partner Countries, 2003 - 2004 (million, US\$)**

Partner Country	2003		2004		Growth (%)	
	Export	Import	Export	Import	Export	Import
<b>ASIA</b>						
1. Japan	13 603.5	4 228.2	57 646.4	6 081.6	323.76	43.83
2. South Korea	4 323.8	1 527.9	25 275.0	1 942.6	484.56	27.14
3. China	3 802.5	2 957.5	12 631.9	4 101.3	232.20	38.67
4. Taiwan	2 233.1	877.1	24 074.9	1 240.3	978.09	41.41
5. Singapore	5 399.7	4 155.1	18 390.9	6 082.8	240.59	46.39
6. Malaysia	2 363.9	1 138.2	10 509.7	1 681.9	344.59	47.77
<b>AUSTRALIA and OCEANIA</b>						
1. Australia	1 791.6	1 648.4	4 724.4	2 214.9	163.70	34.37
2. New Zealand	156.1	153.7	999.5	223.7	540.29	45.54
<b>AMERICA</b>						
1. United States	7 373.7	2 694.8	7 371.0	3 225.4	-0.04	19.69
2. Canada	382.1	321.8	245.4	551.8	-35.78	71.47
<b>EUROPE</b>						
1. United Kingdom	1 135.8	463.7	1 534.8	703.2	35.13	51.65
2. Netherlands	1 401.5	369.6	3 987.0	474.6	184.48	28.41
3. France	652.8	453.2	718.5	544.2	10.06	20.08
4. Germany	1 416.8	1 181.2	1 550.0	1 734.0	9.40	46.80
5. Italy	843.9	323.7	6 072.5	473.3	619.58	46.22

Note : Export in FOB, Import in CIF.

Source: Central Statistical Agency (BPS).

**Table 16: Import by Country Group of Origin, Indonesia, 1990 - 2004 (million, US\$)**

Year	Japan	United States	ASEAN	E.C	Other	Total
1990	5 299.9 (24.27)	2 520.1 (11.54)	1 835.8 (08.41)	4 399.3 (20.14)	7 782.0 (35.64)	21 837.1 (100.00)
1991	6 326.9 (24.46)	3 396.9 (13.13)	2 464.2 (09.53)	5 163.4 (19.96)	8 517.4 (32.92)	25 868.8 (100.00)
1992	6 013.7 (22.04)	3 822.4 (14.01)	2 592.8 (09.51)	5 977.5 (21.91)	8 873.2 (32.53)	27 279.6 (100.00)
1993	6 248.4 (22.06)	3 254.5 (11.49)	2 604.1 (09.19)	6 650.6 (23.48)	9 570.2 (33.78)	28 327.8 (100.00)
1994	7 740.1 (24.20)	3 587.8 (11.22)	2 927.5 (09.15)	6 611.9 (20.67)	11 116.2 (34.76)	31 983.5 (100.00)
1995	9 216.8 (22.68)	4 755.9 (11.71)	3 953.3 (09.73)	8 175.3 (20.12)	14 527.4 (35.76)	40 628.7 (100.00)
1996	8 504.0 (19.81)	5 059.8 (11.79)	4 884.8 (11.38)	9 233.6 (21.51)	15 246.3 (35.51)	42 928.5 (100.00)
1997	8 252.3 (19.80)	5 440.9 (13.05)	5 393.3 (12.94)	8 332.6 (19.99)	14 260.7 (34.22)	41 679.8 (100.00)
1998	4 292.4 (15.70)	3 517.3 (12.87)	4 497.1 (16.45)	5 865.6 (21.46)	9 164.5 (33.52)	27 336.9 (100.00)
1999	2 913.3 (12.14)	2 839.0 (11.83)	4 762.7 (19.84)	3 801.0 (15.84)	9 687.3 (40.35)	24 003.3 (100.00)
2000	5 397.3 (16.10)	3 390.3 (10.12)	6 461.0 (19.28)	4 163.3 (12.42)	14 102.9 (42.08)	33 514.8 (100.00)
2001	4 689.5 (15.15)	3 207.5 (10.36)	5 441.0 (17.57)	4 047.0 (13.07)	13 577.1 (43.85)	30 962.1 (100.00)
2002	4 409.3 (14.09)	2 639.9 (08.44)	6 767.4 (21.63)	3 871.1 (12.37)	13 601.2 (43.47)	31 288.9 (100.00)
2003	4 228.3 (12.99)	2 694.8 (08.28)	7 729.9 (23.75)	3 554.2 (10.92)	14 343.5 (44.06)	32 550.7 (100.00)
2004	6 081.6 (13.07)	3 225.4 (06.93)	11 494.4 (24.71)	5 252.2 (11.29)	20 470.9 (44.00)	46 524.5 (100.00)

Note : Figures in bracket indicate percentage share.

Source: Central Statistical Agency (BPS).

### *Overall Picture of Foreign Trade between Indonesia and ASEAN*

Indonesia had high growth rate on intra-ASEAN exports. From 1992 to 2001, the average value of Indonesian exports to ASEAN countries was US\$7,952.39 million and its growth rate over the same period was 10.7 per cent. Indonesia experienced negative export growth rate in 1999 (11.43 per cent) and 2001 (12.65 per cent) as shown in Table 17.

Indonesia enjoys an overall positive trade balance in the ASEAN. While it imported US\$5,464 million-worth of goods from ASEAN countries in 2001, it exported US\$9,557 million-worth of products as well. The value of Indonesia's exports to Malaysia, Thailand, the Philippines and Singapore has increased from 1992 to 2001.

**Table 17: Value of Indonesian Exports to ASEAN Country**

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Malaysia	487.50	586.00	738.50	986.60	1,109.70	1,357.20	1,358.50	1,335.90	1,971.80	1,778.60
Thailand	352.80	467.70	401.50	702.90	822.60	848.40	942.50	812.70	1,026.50	1,063.60
Philippines	181.30	285.00	365.10	590.20	688.40	794.10	707.40	694.70	819.50	814.80
Singapore	3,313.50	3,372.00	4,149.70	3,766.07	4,564.40	5,467.90	5,718.30	4,930.50	6,562.40	5,363.90
Brunei										
Darussalam	25.30	35.10	50.20	24.00	26.60	39.50	35.70	27.60	25.50	21.60
Vietnam	-	-	-	-	358.03	390.30	350.60	331.60	360.60	322.10
Kamboja/Cambodia	-	-	-	-	71.93	69.90	64.70	69.20	51.70	72.10
Myanmar	-	-	-	-	86.78	149.70	167.30	74.30	64.80	69.00
Laos	-	-	-	-	0.72	0.90	1.80	1.70	0.90	1.40
<b>ASEAN</b>	<b>4,360.40</b>	<b>4,360.40</b>	<b>5,811.06</b>	<b>6,178.65</b>	<b>7,807.34</b>	<b>9,330.68</b>	<b>9,436.17</b>	<b>8,164.89</b>	<b>10,924.67</b>	<b>9,557.60</b>

Source: Statistical Yearbook of Indonesia, BPS, 1996,2001.

**Table 18: Value of Indonesian Imports from ASEAN Country of Origin (CIF Value; million US \$)**

Country of Origin	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Malaysia	524.6	517.4	578.8	767.0	823.7	864.8	626.6	605.6	1,128.8	1,005.5
Thailand	344.7	235.3	406.2	737.1	1,095.4	866.7	842.0	933.4	1,109.1	986.0
Philippines	52.2	57.1	65.2	81.2	89.6	127.0	65.0	55.5	114.7	93.9
Singapore	1,670.7	1,793.3	1,877.1	2,367.5	2,875.3	3,410.9	2,542.8	2,525.9	3,788.6	3,147.1
Brunei	0.7	1.0	0.2	0.5	0.8	6.6	0.2	37.7	16.5	37.1
Vietnam	-	-	-	-	-	117.3	420.5	604.6	303.3	171.3
Cambodia	-	-	-	-	-	0.1	0.1	1.4	0.7	0.1
Myanmar	-	-	-	-	-	19.0	9.1	19.3	85.0	20.8
Laos	-	-	-	-	-	0.7	-	0.1	1.2	0.2
<b>Import Total</b>	<b>2,592.9</b>	<b>2,604.1</b>	<b>2,927.5</b>	<b>3,953.3</b>	<b>4,884.8</b>	<b>5,413.1</b>	<b>4,506.3</b>	<b>4,783.5</b>	<b>6,547.9</b>	<b>5,462.0</b>

Source: Statistical Yearbook of Indonesia, BPS, 1996, 2001.

As one of the original signatories to AFTA, Indonesia had been adhering to its commitments. Almost 100 per cent of its tariff lines are in the Inclusion List (IL) in the Tentative 2005 CEPT Package. Less than 1 per cent of tariff lines remain under the General Exclusion List and Sensitive & Highly Sensitive Lists (GEL and SL/HSL). One hundred per cent of its tariff lines have 0-5 per cent tariff.

Indonesia, however, had been protective of some agricultural products, particularly rice, sugar, wheat flour and soybeans. It put back 15 agricultural commodities under its SL at the 1995 ASEAN Summit and postponed the liberalisation of these commodities. In the 1996 AFTA Council meeting, Indonesia proposed a new list – highly sensitive list and included two products – rice and sugar – in that new list. This proposal was accepted and the liberalisation of sensitive commodities will start in January 2003 and end in 2010 but Indonesia and the Philippines were given flexibility regarding ending tariff rates and

utilization of safeguards in 2010. As such, Indonesia can still apply tariff rates above 5 per cent after 2010 and enact safeguard measures to protect its domestic producers.

### 2.4.3 Direction of Investments

From 1993 to 1996, Indonesia enjoyed the inflows of investments. In 1996, it generated some US\$6,194 million from only US\$2,004 million in 1993. Indonesia lost its attractiveness as an FDI destination after the Asian financial crisis. ASEAN FDI Database shows that that there had been disinvestments in Indonesia (Tables 19 and 20). The key factors that affected Indonesia's capacity to attract investments include weak legal system, increasing labour unrest, new regional autonomy laws and security concerns.

**Table 19: FDI Flows to ASEAN, US\$ Million**

Host Country	Years									Cumulative 95 - 04	
	1995	1996	1997	1998	1999	2000	2001	2002	2003		2004
Brunei	583	654	702	573	748	549	526	1,035	3,123	161	8,654
Cambodia 1	151	294	168	243	232	149	149	145	87	131	1,749
Indonesia	4,346	6,194	4,678	-356	-2,745	-4,550	-3,279	145	-596	1,023	4,861
Laos	88	128	86	45	52	34	24	25	19	17	519
Malaysia	5,815	7,297	6,323	2,714	3,895	3,788	554	3,203	2,473	4,624	40,686
Myanmar 2	318	581	879	683	304	208	192	191	128	145	3,629
Philippines	1,577	1,618	1,261	1,718	1,725	1,345	982	1,111	319	469	12,125
Singapore 3	11,503	9,303	13,533	7,594	16,067	17,218	15,038	5,730	11,431	16,059	123,476
Thailand	2,070	2,338	3,882	7,491	6,091	3,350	3,886	947	1,869	1,414	33,338
Vietnam	1,780	1,803	2,587	1,700	1,484	1,289	1,300	1,200	1,450	1,610	16,204
<b>ASEAN TOTAL</b>	<b>28,231</b>	<b>30,209</b>	<b>34,099</b>	<b>22,406</b>	<b>27,853</b>	<b>23,380</b>	<b>19,373</b>	<b>13,733</b>	<b>20,304</b>	<b>25,653</b>	245,240

Sources: ASEAN Secretariat, *Statistics of Foreign Investment in ASEAN, 2004*; Raul Cordenillo/ASEAN FDI Database 2005.

Note: (1) Cambodia's figures are estimated aggregate figures; (2) Myanmar's figures are in fiscal years, which ends in March of the following year; (3) Singapore's figures for 2004 are preliminary.

**Table 20: FDI Flows to Indonesia by Economic Sector, 1999-2003**

Economic Sector	1999	2000	2001	2002	2003
Agriculture, Fishery & Forestry	-103.01	24.52	-118.90	385.44	180.14
Mining and Quarrying	-210.97	-275.34	-233.66	-242.25	232.31
Manufacturing	-1,601.77	-3,268.86	-1,723.56	-1,168.72	-450.31
Construction	50.28	-271.31	-305.39	38.85	60.79
Trade / Commerce	-175.17	-41.07	-128.55	230.46	-353.11
Financial Intermediation and Services (inc. insurance)	-90.16	-57.19	83.95	1,409.03	666.66
Real Estate	-230.81	-143.51	-341.84	0.40	-0.40
Services	-334.78	-424.43	-406.37	-676.58	-933.44
Others	-48.66	-92.79	-104.10	168.05	1.78
<b>TOTAL</b>	<b>-2,745.06</b>	<b>-4,549.98</b>	<b>-3,278.53</b>	<b>144.68</b>	<b>-595.59</b>

Source: ASEAN Secretariat – ASEAN FDI Database, 2004. Data provided by Bank of Indonesia.

## **Chapter 3**

### **METHODOLOGY**

#### **3.1 Methods of Data Collection**

##### 3.1.1 Literature survey (Secondary data)

Various sources of secondary materials were used to gather pertinent information regarding this research such as books, reports, magazines, journals, statistical reports, the internet and various newspapers. Statistics from the Statistical Bureau Centre (BPS), Asian Development Bank, ASEAN Secretariat were extensively used in this study. Data gaps were identified such as the lack of the number of farmers per crop, data related to gender. The internet was also a source of information for this study as well as university libraries.

##### 3.1.2 Administered interviews (Survey questionnaire)

The questionnaire that was provided by the South East Asian Council for Food Security and Fair Trade was translated into the national language i.e. Bahasa Indonesia for easy administration. The lead researcher was assisted by some experienced field researcher/ enumerator. Survey interviews were conducted by two phases: first phase was implemented in December 2003 and the second phase in March 2004.

##### 3.1.3 Case studies

Individual case studies were documented through in-depth interviews with individuals. The purpose was to obtain real-life illustrations of trends and patterns emerging from group methods and to gain deeper insights not possible to explore in group situations. Every site generated between two to three case studies of individuals profiles. The individuals selected for case studies could be from the focus discussion group. Sometimes they were people not in the focus discussion group but identified by group members and put in touch with the research team.

##### 3.1.4 Focus group discussions

The research team conducted several focus group discussions using visualised participatory tools. All topics that were not covered using the visual tools were explored through open-ended facilitated group discussion questions, the major issues in this discussion were:

- Gender relation in agriculture (now and 10 years ago)
- Cost of production for each food crop cultivation (now and 10 years ago).
- Government policy upon agriculture sector.
- Major problem faced small farmer
- Impacts of AFTA implementation to men and women small farmer

##### 3.1.5 Key informant interviews

Key Informant interviews were conducted to gain deeper understanding of the situation, problems and various government programmes and policies in the field of agriculture and

trade and also to know the problem of faced by the government in implementation of AFTA.

### 3.1.6 Observation of facilities in research areas

The field researcher team noted the presence of facilities in each research areas, field visits to cropland, rice mill centre, sugar cane factory, shop and market as additional inputs in understanding the situation of small farmers in the local community.

## 3.2 Sampling Design

The Sampling design was divided by two major activities i.e. Site Selection and *Selection of Farmer Groups for Interviewed and discussion*.

- *Site Selection*

There was much discussion with BioTani PAN Indonesia, local government officials and other research institutions before sites could be selected. Since the locations that could be covered were only two villages for each respected crop, a representative sample was clearly out of the question. The consensus to focus on West Java Province emerged from the fact that Java has the largest number of small farmers as well as the highest concentration of the food crops production in the country. The decision then was to select four sites (districts). A long list of communities in West Java was first made, from SUSENAS (National Socio-Economic Survey) data of percentages of population classified as food crop farmer in each district in 1999.

The final selection of communities was made in consultation with district level government personnel and NGOs to ensure an equal mix of men and women farmers, coastal and plains sites and a mix of remote and accessible communities. The following communities were finally selected.

- *Selection of Farmer Groups for Interviewed and discussion*

The research team followed a certain sequence of activities to ensure that they identified the men and women small farmer and farmer leader. From past experience it was known that the small farmer people are hard to find in community meetings. They are either too busy earning their livelihoods, are not invited when outsiders visit, or they themselves avoid meeting outsiders or attending meetings due to their own feelings of diffidence and inadequacy. For instance, just the lack of acceptable quality of clothes can be a potent deterrent to participation in a social setting where it is customary to put the best foot forward in front of guests from outside.

Field research teams of 4 people spent five to seven days working with each community. Each team was able to hold parallel sessions with groups of men and women. As a first requirement, the team dressed very casually and simply and carried no items suggesting wealth, e.g. mobile phones or sunglasses.

They were experienced field researchers and knew ways to bridge the gaps. As a required protocol they first approached the village/*desa* chief with an official introduction letter given by the research partner institution and explained their purpose as “learning from the small farmers about how they are coping with their problems and what did they knew

about AFTA and it's impact to them". They also clarified that this work was part of a regional study including nine other ASEAN countries. The fact that they came from a field-based NGO greatly helped them establish credibility with the community heads and the discussion groups.

They examined the community map available in every village/*Kelurahan* office and requested the *Kepala Desa/Pak Lurah* to identify the neighborhoods where the poorest households live. The next two days were spent doing transect walks in those neighborhoods making introductions, meeting and talking with community members in their homes, crop fields, water points and shops. Meeting the neighborhood chiefs and explaining their purpose was part of this exercise. Meeting with local religious/ farmer leaders and joining in during communal prayers were strategies that helped establish report.

Appointments were made with men and women farmers during this two day period about when and where they could meet as groups of 10-15 people, at their convenience. The appointments were then followed through for the next three to four days with respective groups. Before leaving each community the team reported back outcomes of the consultations to larger groups. Fieldwork was conducted during December 2003 and March 2004.

**Table 21: Research Location and Sample Proportion**

Research Areas	Target Sample		Actual Sample	
Total Sample	250		233	
Rice:				
1. Garut	Male	50	Male	35
	Female	35	Female	25
2. Subang	Male	25	Male	40
	Female	15	Female	25
<b>Total - Rice</b>		<b>125</b>		<b>125</b>
Sugar cane:				
1. Cirebon	Male	30	Male	50
	Female	15	Female	8
2. Subang	Male	20	Male	0
	Female	10	Female	0
<b>Total - Sugar cane</b>		<b>75</b>		<b>58</b>
Potato:				
1. Bandung	Male	15	Male	10
	Female	10	Female	15
2. Garut	Male	15	Male	20
	Female	10	Female	5
<b>Total - Potato</b>		<b>50</b>		<b>50</b>

### 3.3 Training of researchers

3.3.1 The training of lead researchers (two trainings and several consultations were conducted)

The training of lead researchers was conducted by resource persons or experts from this field during the South East Asian Council for Food Security and Fair Trade's training for lead researchers that were conducted in April 2003 and January 2004 respectively.

Some of the topics discussed were:

- Briefing on the research design;
- The objective of the research;

- Methodology and scope of research;
- Drafting, testing and finalizing all research instruments;
- Briefing on the background and objectives of AFTA;
- Present situation of food security and agriculture development regarded AFTA implementation from each ASEAN member country;
- Gender framework, approaches and issues;
- Present situation of water in Southeast Asia;
- Globalization and Free Trade Agreement;
- Research implementation and potential problems and how to address them.

### 3.3.2 Training of field interviewers (c/o lead researchers)

The lead researcher conducted the training for field researchers as an enumerator, tabulator and data encoder. The training was conducted in November 2004 after final questionnaire, other instruments and manual was received.

- Background and objective of AFTA
- The objective of the research
- Methodology and research manual
- Sampling design
- Studying of questioner and simulation
- Editing of accomplished survey questionnaires
- Survey data encoding and processing

### 3.4 Data Processing

The questionnaires that were filled underwent a thorough inspection by the lead researcher to inspect among others for discrepancy in answers, logical checks and adherence to skipping instructions.

The data from the questionnaires was then encoded in to the database that was created by SEACON in the Microsoft Access format. Microsoft Access was the main software used in data encoding as all countries were familiar with this format. The completed data entry was then sent to SEACON for processing. The processing of data was carried out using the Statistical Package of Social Science (SPSS) software. This software was used because it was easier and faster in producing the results required. The encoded data was then sent to SEACON for processing. Prior to processing, the data was cleaned first as to ensure there was no existence of errors during the data entry stage. The processed data was sent back to the Indonesia for interpretation and analysis.

#### *Transcription of interviews and FGDs*

Results of all interviews and FGDs were transcribed. Resource persons revalidated some of the results.



## Chapter 4

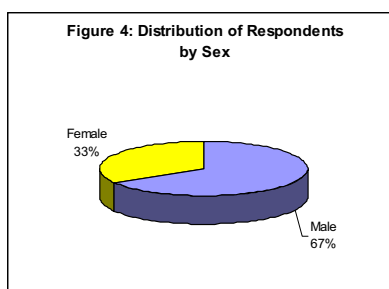
# THE SOCIO-ECONOMIC SITUATION OF SMALL PRODUCERS IN THE ERA OF AFTA

### 4.1. Major Research Findings

#### 4.1.1 Demographic Characteristics of Respondents and their Households

The research was carried out in four regions: Subang, Garut, Bandung, and Cirebon in West Java Province. The respondents of the survey are all small agricultural producers. They have the same situation: limited land, low income and living mainly on agricultural production. The results of the research show that 64.8 per cent of respondents are in the ages of 40 and older. Only 14.6 per cent of respondents are in the ages below 35 years old. Therefore, most of them have certain knowledge and skills as well as experiences in agricultural production. Most of respondents have over 10 years of experience in agricultural production. This fit the criteria for the research.

In term of sex, 66.5 per cent of respondents are men and 33.5 per cent are women (Figure 4). According to Indonesian Central Bureau of Statistic 2003, the whole country's average populations by sex in 2003: 49.14 per cent are male and 50.86 per cent are female.



The survey data also show that most of respondents have low educational attainment as 78.1 per cent of them reached primary educational level and 18 per cent of them completed secondary educational level.

**Table 22: Educational situation of small agricultural producers**

Educational Attainment	Number of Responses	Percentage
Primary	182	78.1
Secondary	42	18
Tertiary	8	3.4
University	1	0.4
<b>TOTAL</b>	<b>233</b>	<b>100.0</b>

From primary educational level-involving number of respondents who did not complete their primary school. (Source: Survey data 2003)

However, the educational attainment varies among farmers groups. The survey shows that:

- **Rice producers**

Most of rice producers have reached or finished primary school level (79.2 per cent) and 16.8 per cent of them reached or finished secondary school level; 3.2 per cent have tertiary level education and 0.8 per cent has university education.

- **Potato producers**

The potato producers have the same educational attainment as the rice producers: 86 per cent reached or finished primary school level, 10 per cent have secondary level education and 4 per cent, the tertiary level. No potato farmer has attained university education.

- **Sugarcane producers**

About 78.1 per cent of sugarcane producers also have low educational attainment as most of them reached or completed their primary level education. Only 18 per cent and 3.4 per cent reached or finished their secondary and tertiary level education respectively.

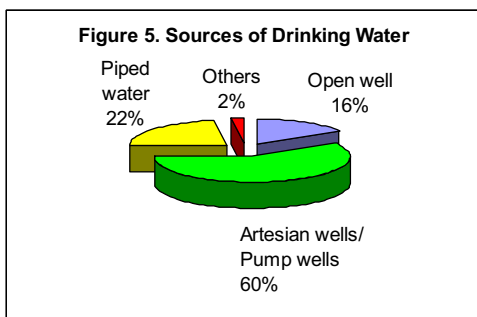
**Table 23: Highest Educational Attainment**

		Highest Educational Attainment				Total
		Primary	Secondary (until high school)	Tertiary (college)	University	
Paddy	Count	99	21	4	1	125
	% within Crop	79.2%	16.8%	3.2%	0.8%	100.0%
Potato	Count	43	5	2		50
	% within Crop	86.0%	10.0%	4.0%		100.0%
Sugarcane	Count	40	16	2		58
	% within Crop	69.0%	27.6%	3.4%		100.0%
Total	Count	182	42	8	1	233
	% within Crop	78.1%	18.0%	3.4%	0.4%	100.0%

In term of house ownership, most (98.7 per cent) of the respondents are house owners while only 1.3 per cent have free use of their houses (Table 24). This is a very common situation in Indonesia. Both husband and wife own their houses and the right to sell the houses is equal between husband and wife. Farmers still live in poor conditions. Their houses are mostly built from materials available in their gardens and forests like bamboo, palm leaves, wood, or other cheap materials. About 33.5 per cent of households are living in temporary houses and 66.5 per cent of households have better dwellings.

**Table 24. House Ownership**

		Who owns the house					Total
		Both husband & wife	Wife	Husband	Parents	Landowner	
Owned	Count	125	24	69	10	2	230
	% of Total	53.6%	10.3%	29.6%	4.3%	0.9%	98.7%
Free use	Count				3		3
	% of Total				1.3%		1.3%
Total	Count	125	24	69	13	2	233
	% of Total	53.6%	10.3%	29.6%	5.6%	0.9%	100.0%



Regarding sanitary conditions, respondents use four types of toilets – open-pit, water flush, water sealed and composting toilets. However, the sanitation condition among small farmers is very poor. The most common type used by almost half (45.1 per cent) of the households is the open-pit toilet and 4.7 per cent of them do not have toilet facilities.

Drinking water comes mainly from artesian wells/pump wells (about 60 per cent). A considerable percentage of respondents have piped water (22%).

#### 4.1.2 Farm and Land Ownership Profile

Majority of the respondents do not own the lands they till (Table 25) as 32.6 per cent are leaseholders and 18.5 per cent are tenants. It is significant to note that almost 50 per cent (46.4 per cent) own their farmlands.

**Table 25: Tenure Status**

Tenure	Frequency	Percentage
Owner-cultivator	108	46.4
Part-owner	6	2.6
Tenant	43	18.5
Leaseholder	32.6	32.6
Total	233	100.0

As shown in Table 26, the most common mode of land acquisition is through renting (36.1 per cent), inheritance (26.6 per cent) and purchase (21 per cent). Of those who already own their lands, 52.4 per cent

of farm owners acquired their lands through inheritance and 45.4 per cent by purchase.

#### ▪ Rice Producers

Respondents of rice producers acquired land by renting (36 per cent), by inheritance (27.2 per cent) and by purchase the land (16 per cent). Tenure statuses of rice producers are: owners (42.4 per cent), leaseholders (34.4 per cent), tenants (20 per cent) and part owners (2.4 per cent).

**Table 26: Mode of Land Acquisition**

MODE	Frequency	Per cent
Bought	49	21.0
Inherited	62	26.6
Bought planting right	1	0.4
Squatting	2	0.9
Renting	84	36.1
Stewardship/agrarian reform	5	2.1
Others	30	12.9
Total	233	100.0

#### ▪ Potato Producers

Respondents of potato producers acquired land through purchase (44 per cent), by inheritance (22 per cent) and by renting (16 per cent). Tenure statuses of potato producers are: owners (64 per cent), tenants (18 per cent), leaseholders (16 per cent) and part owners (2 per cent).

▪ **Sugarcane producers**

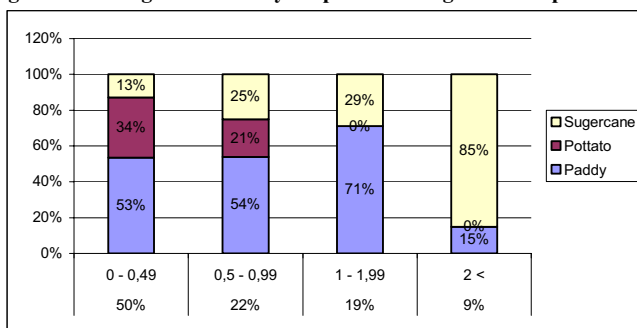
Respondents of sugarcane producers acquired land by renting (53.4 per cent), by inheritance (29.3 per cent), by purchase (12.1 per cent). Tenure statuses of potato producers are: leaseholders (43.1 per cent), owners (39.7 per cent), tenants (13.8 per cent), and part owners (3.4 per cent).

**Table 27: Tenure Status by Crop**

	Tenure Status				Total
	Owner	Part-owner	Tenant	Leaseholder	
Paddy Count	53	3	26	43	125
% of Total	27.7%	1.3%	11.2%	18.5%	53.6%
Potato Count	32	1	9	8	50
% of Total	13.7%	0.4%	3.9%	3.4%	21.5%
Sugarcane Count	23	2	8	25	58
% of Total	9.9%	0.9%	3.4%	10.7%	24.9%
Total Count	108	6	43	76	233
% of Total	46.4%	2.6%	18.5%	32.6%	100.0%

In terms of farm sizes, Figure 6 shows that most of rice and potato producers have less than 0.5 hectares of farm while most of sugarcane producers have more than two hectares of farm. Moreover, there is difference between low land and up land. 63.9 per cent of land for production still depends on rainwater. According to the survey data, 33 per cent of land of small agricultural producers is irrigated low land, 3 per cent is irrigated upland, 16.7 per cent is rain fed low land, and 47.2 per cent is rained-fed low land.

**Figure 6: Average farm size by crops of small agricultural producers**



Overall, survey data show the predominance of very small farm lots (one hectare and below) even among small producers, whether male or female producers (Table 28). A study done by Bina Desa in 2003 shows that about “70 per cent of female farm workers covered by the survey do not own land, both for housing and farming.” Of those who land, 30 per cent own lands that are less than 100 sq. m. (AFA & AsiaDHRRA 2004).

**Table 28. Cultivated hectares by Sex**

Hectarage	Male		Female		Total	
	Frequency	%	Frequency	%	Frequency	%
Below 0.5 hectare	82	52.9	40	51.3	122	52.4
Between 0.5 – 1 ha.	51	32.9	27	34.6	78	33.5
Between 1 – 1.5 ha.	13	8.4	9	11.5	22	9.4
Between 1.5 – 2 has.	4	2.6	0	0	4	1.7
Between 21 – 2.5 ha.	2	1.3	1	1.3	3	1.3
Between 2.5 – 3 has.	3	1.9	1	1.3	4	1.7
Total	155	100.0	78	100.0	233	100.0

The average farm size varies across crops and regions.

- **Rice:** On an average, 46.4 per cent of rice farmers have less than 0.5 hectare; 35.2 per cent of them have from 0.5 to 1 hectare, 12 per cent have from 1 to 1.5 hectares. Only 6.4 per cent have from 1.5 to 3 hectares.
- **Potato:** The average farm size of small farmers is less than 0.5 hectare (74 per cent) while only 26 per cent of them have 0.5 to 1 hectare.

In term of changes in land ownership, majority of respondents said there is no change in their land status (86 per cent) and the other 14 per cent experienced changes on their land tenure ownership. Of the 14 per cent of respondents who experienced changes in their land ownership, most are sugarcane respondents (72.7 per cent) as shown in Table 29. In Indonesia due to AFTA implementation, a large number of sugarcane small producers sell their land to the big sugarcane plantations and factories. Small producers of sugarcane are not able to compete with imported sugar. Smuggling sugar from other countries has affected the small producers' ability to gain good income from farming.

**Table 29: Changes in Land Tenure Status**

Crop		Yes	No	Total
Paddy	Count	2	123	125
	%	6.1%	61.5%	53.6%
Potato	Count	7	43	50
	%	21.2%	21.5%	21.5%
Sugarcane	Count	24	34	58
	%	72.7%	17.0%	24.9%
Total	Count	33	200	233
	%	100.0%	100.0%	100.0%

#### **4.1.3 Cropping, Production and Expenses**

Because of natural, economic and social condition, as well as characteristics of animals and crops, the cropping circle is different in different economic regions. Rice producers can plant from two to three rice seasons per year. However, 57.9 per cent of farmers have two crop seasons per year. These crops are rice and potato. For rice producers, 85.6 per cent plant twice per year and only 14.4 per cent three times a year. For potato producers, 56 per cent twice a year and 44 per cent three times a year. Sugarcane producers have only one crop season per year.

The adoption of new techniques and modern technologies in agricultural production has led to increases in input costs. With the use of high yield varieties and hybrid seeds,

fertiliser and pesticides) in Indonesia, the cost of production had increased significantly. The increase was attributed to rising costs of fertilisers and pesticides, high yielding and hybrid seeds and labour. According to the survey data, most of farmers use high yielding varieties for production (68.7 per cent).

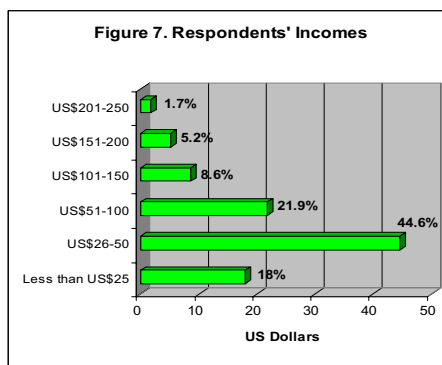
The percentage of farmers using traditional seeds is 17.2 per cent and hybrid seed, 14.2 per cent. All of sugarcane producers claim to be using hybrid seeds for production. Rice producers use high yielding varieties (68 per cent) and traditional seeds (32 per cent). All potato producers use high yielding varieties (100 per cent).

About 63.9 per cent of all respondents save seeds for next planting seasons. About 80 per cent of rice producers save seeds for next planting season while among potato producers, 96 per cent save seeds. It is different with sugarcane producers where they do not save seeds for next planting season because all of them use hybrid seeds and it is available from companies, state enterprises or cooperatives. One farmer's reason for saving seeds is to press a cost of production.

Besides seeds, fertilisers and pesticides are also very important for production. Agricultural production in Indonesia now is still chemical-based production. The agricultural production development and economic integration has made prices of fertilisers and pesticides increased by 100 – 150 per cent during AFTA's implementation.

#### 4.1.4. Farm Incomes

According to the results of the survey (Figure 7), the average net income of respondents is low: 44.6 per cent of them have monthly income from US\$26 to US\$50; 21.9 per cent of them have income from US\$51 to US\$100. About 18 per cent of them have income less than US\$25. Only 15.5 per cent have income from US\$101 to US\$250.



Across various crops, about 61 per cent of rice farmer-respondents said that they have income of only US\$50 and below per month. The same trend is observed among sugarcane producers. Among potato farmers, a considerable percentage (22 per cent) said they have monthly income ranging from US\$150-US\$200 (Table 30).

**Table 30: Respondents' Monthly Net Incomes**

		<\$25	\$26-50	\$51-100	\$101-150	\$151-200	\$201-250	Total
Rice	Count	30	46	33	14	1	1	125
	% within crop	24.0%	36.8%	26.4%	11.2%	0.8%	0.8%	100.0%
Potato	Count	7	19	8	6	11	3	50
	% within crop	14.0%	38.0%	8.0%	12.0%	22.0%	6.0%	100.0%
Sugarcane	Count	5	39	14				58
	% within crop	8.6%	67.2%	24.1%				100.0%
Total	Count	42	104	51	20	12	4	233
	% within crop	18.0%	44.6%	21.9%	8.6%	5.2%	1.7%	100.0%

Monthly households' net income is also low: 46.8 per cent of households have income in the range of US\$51 to US\$100 and 29.6 per cent of households have income ranging from US\$26 to US\$50. Only 20.4 per cent have income in the range of US\$101 to US\$400 and only 1.7 per cent of respondents have income above US\$501 (Table 31). The primary crops, in particular rice, potato and sugarcane, play very important part in household's income. These crops are the main sources of livelihood of farmers in Indonesia.

Across crops, 48 per cent of rice respondents say that their household net incomes is in the range of US\$51-US\$100 a month while 26.4 per cent say that their household incomes belong to the US\$26-50 range. Among sugarcane farmers, 74.1 per cent say that their household net incomes are also in the income bracket of US\$51-US\$100. The same trend is observed among potato farmer-households. It should be noted that a considerable per cent (22 per cent) said they have incomes in the US\$250-US\$300 and 12 per cent in the US\$351-US\$400 income brackets (Table 32).

**Table 31: Respondents Monthly Net Incomes**

	Frequency	%
Less than \$25	4	1.7
\$26-50	69	29.6
\$51-100	109	46.8
\$101-150	22	9.4
\$151-200	5	2.1
\$201-250	2	0.9
\$251-300	11	4.7
\$301-350	1	0.4
\$351-400	6	2.6
\$401-450	2	0.9
\$451-500	2	0.9
Total	233	100.0

**Table 32: Household Net Incomes by Crop (US\$)**

		Rice	Potato	Sugarcane	Total
Less than \$25	Count	3	1		4
	% within crop	2.4%	2.0%		1.7%
\$26-50	Count	33	22	14	69
	% within crop	26.4%	44.0%	24.1%	29.6%
\$51-100	Count	60	6	43	109
	% within crop	48.0%	12.0%	74.1%	46.8%
\$101-150	Count	20	1	1	22
	% within crop	16.0%	2.0%	1.7%	9.4%
\$151-200	Count	5			5
	% within crop	4.0%			2.1%
\$201-250	Count	2			2
	% within crop	4.0%			0.9%
\$251-300	Count		11		11
	% within crop		22.0%		4.7%
\$301-350	Count		1		1
	% within crop		2.0%		0.4%
\$351-400	Count		6		6
	% within crop		12.0%		2.6%
\$401-450	Count				
	% within crop				
\$451-500	Count				
	% within crop				
Above \$500	Count	2	2		4
	% within crop	2.4%	4.0%		1.7%
Total	Count	125	50	58	233
	% within crop	100.0%	100.0%	100.0%	100.0%

**Table 33: Major Sources Income \* Crop**

			Crop			Total
			Padd	Pottat	Sugarcan	
Major Sources Income	50%	Count	39	1		40
		% within Crop	31.2%	2.0%		17.2%
	between 51%-60%	Count	24	8	2	34
		% within Crop	19.2%	16.0%	3.4%	14.6%
	between 61%-70%	Count	30	10	6	46
		% within Crop	24.0%	20.0%	10.3%	19.7%
	between 71%-80%	Count	22	23	16	61
		% within Crop	17.6%	46.0%	27.6%	26.2%
	between 81%-90%	Count	8	8	13	29
		% within Crop	6.4%	16.0%	22.4%	12.4%
	between 91%-100%	Count	2		21	23
		% within Crop	1.6%		36.2%	9.9%
	Total	Count	125	50	58	233
		% within Crop	100.0	100.0	100.0	100.0

Most respondents said their major sources of households' income are from primary crop (71 to 80 per cent), Income from primary crop constitute 61-70 per cent of households income. This shows that most of households depend on incomes from primary crops

Generally, farm gate prices of most agricultural products increased over five years ago.

Among small agricultural producers, the monthly incomes of households are also different.

- **For rice producers**

Regarding average household net income, 46.8 per cent of rice respondents have monthly income of US\$51 to US\$100, 29.6 per cent have monthly income from US\$26 – US\$50, 9.4 per cent have monthly income from US\$101 – US\$150. Only 12.4 of households have monthly income of more than US\$150. For rice producers, rice is not only their main income source but also main foodstuff for their families. The low monthly income, the high family and production expense, limited area, redundancy of labour force, have been putting the small rice producers into difficult situation. That also led movement of labour from the rural areas to urban areas.

- **For potato producers**

The average household net income of potato producers is higher than rice producers with 44 per cent of them having monthly income from US\$26-US\$50. About 12 per cent get from US\$51 – US\$100 per month and 38 per cent get income above US\$250 per month.

- **For sugarcane producers**

Mostly, the average household net income of sugarcane producers (74.1 per cent) is US\$51-US\$100 monthly.



#### 4.1.5. Production Cost, Prices and Net Income

In term of farm prices, the research concentrated on three main crops – rice, potato and sugarcane. Among primary crops, the prices of rice, potato and sugarcane have increased compared to five years ago. The study shows that the prices of agricultural products increased because of many factors like high production cost, shortage of product, natural disasters and government sets higher prices.

Production cost was divided into three main elements: input cost, labour cost and miscellaneous cost. The net income is total revenue from selling commodity minus total production cost.

**Table 34: Production cost for three commodity and net income for one cropping season**

Amount (USD)	Production Cost				Net Income For Primary Crop			
	Input Cost	Labour	Mics	Total	Rice	Sugarcane	Potato	All
Less Than 25	4.3%	13%	21.0%	0.4%	2.4%	0.0%	0.0%	1.3%
26 - 50	14.6%	14%	7.7%	2.6%	9.6%	5.2%	0.0%	2.1%
51-100	15.9%	18%	11.2%	8.2%	21.6%	13.8%	0.0%	15.0%
101-150	10.7%	20%	7.3%	6.4%	19.2%	10.3%	4.0%	13.7%
151-200	6.9%	13%	3.4%	2.6%	8.0%	12.1%	20.0%	11.6%
201-250	6.4%	3%	4.7%	4.7%	7.2%	8.6%	4.0%	6.9%
251-300	5.2%	3%	1.3%	4.7%	7.2%	6.9%	24.0%	10.7%
301-350	3.4%	4%	4.3%	1.3%	4.8%	1.7%	2.0%	3.4%
351-400	2.1%	0%	5.2%	1.3%	2.4%	8.6%	12.0%	6.0%
401-450	0.9%	0%	2.1%	3.4%	3.2%	3.4%	10.0%	4.7%
451-500	1.3%	0%	3.0%	2.1%	3.2%	1.7%	2.0%	2.6%
more than 500	29.2%	11%	28.8%	62.2%	11.2%	20.7%	22.0%	15.9%
<b>Total</b>	<b>100.0%</b>	<b>100%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 34 shows that more than 62 per cent of respondents spent their money (more than US\$500) in financing the cultivation. Majority of respondents have low incomes.

**Table 35: Average Production Cost for Three Crops**

Crops	Average Cost /Ha (\$)			Average Total Cost / Ha (\$)	
	Input	Labour	Miscellaneous	Leaseholder	Owner
<b>Rice</b>	\$150.24	\$116.95	\$172.41	\$600.55	\$277.69
<b>Sugarcane</b>	\$189.50	\$399.50	\$895.02	\$1,484.03	\$1,307.05
<b>Potato</b>	\$3,410.88	\$285.69	\$679.15	\$4,625.10	\$4,529.65

Table 35 shows the cost of production for three commodities in Java island.

- **Rice**

The average cost of agricultural input in the case of seeds, fertilisers and pesticide is US\$150.24, while the average cost of labour is US\$116.95. Miscellaneous cost has two variations, the average cost of leaseholder farmer is about US\$350 per hectare and owner-farmers are not burdened by land rent cost. Thus, the average cost of production for an owner farmer is US\$277.69 per hectare while for a leaseholder farmer it is US\$600.55 per hectare.

- **Sugarcane**

The average cost of agricultural input is US\$189.50 per hectare; the average cost of labour is US\$399.50 per hectare and miscellaneous cost is between US\$780 for a farmer who has his own land and US\$1,070 for leaseholder. Thus, total cost of production for sugarcane is US\$1,658.42 per hectare for leaseholders and \$1,309.64 for farmers who own the land.

- **Potatoes**

The average cost of agricultural input for potatoes is US\$3,385.69 per hectare. The average cost of labour is US\$283.57 per hectare and miscellaneous cost is US\$674.36. Thus, the total cost of production is US\$4,408 per hectare for leaseholders and US\$4,279.2 for farmer-landowner.

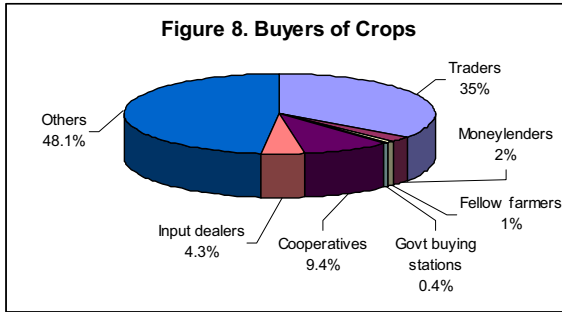
About 75 per cent of interviewees said price increase was due to higher production cost; 12 per cent believed it is because of good quality and rareness of the product at the market; and 6 per cent said government sets the higher price (Table 36).

**Table 36: Reasons for increase in crop prices**

REASONS FOR INCREASE IN CROP'S PRICES	Frequency	%
Price increase due to the shortage of the product in the market	10	4.3
Prices increased after natural disasters	5	2.1
Prices increased since the traders often withheld products in order to hike prices	1	0.4
Cost of production has increased	175	75.1
The government sets higher price	14	6
Good quality products/rareness product in the market	28	12
<b>TOTAL</b>	<b>233</b>	<b>100</b>

#### **4.1.6 Agricultural Markets**

Most respondents (35 per cent) sell their farm produce to traders/middlemen (Figure 8). About 35 per cent of respondents, especially sugarcane farmers, sell their produce to traders because there is no alternative market and they are not able to process their produce. After harvest they sell their produce to the factory.



The respondents cited these reasons for their decision to sell to selected buyers: they pay in cash (34.8 per cent), they offer higher prices (31.8 per cent), and other factors such as habit and simple transaction (26.2 per cent).

About 63.3 per cent of respondents did not know whether their produces were exported while 36.9 per cent thought that they were not exported. The fact is a large number of farmers do not know where their produces end up. Their main preoccupation is to sell their produces to earn high incomes. This situation arises because the small producers lack of market information.



#### 4.1.7 Problems of Small-scale Farmers

##### a. Problem by crops:

Market expansion and trade liberalisation under AFTA will boost intra-ASEAN flows of capital, labour and technology. This will help member states including Indonesia to speed up the transformation of the production structure. Indonesia is trying to use its cheap labour resources and apply appropriate technologies to boost agricultural production. Indonesia's main strategies are to expand production in sectors with heavy labour and natural resources content, such as textiles, garments, handicraft and processing of agricultural produce for export. However, in the early stage of international economic integration, Indonesians, especially small-scale farmers, face many difficulties. As shown in Table 33, farmers face two major problems: high production expenses and high input costs.

**Table 37: What do you consider to be your major problem for small farmer \* Crop Crosstabulation**

			Crop			Total
			Paddy	Potato	Sugarcane	
What you consider to your major problem for farmer	indebtedness/owe people	Count	2			2
		% within Crop	1.6			.9%
	limited sources of for	Count	4	1		5
		% within Crop	3.2	2.0		2.1
	lack of	Count			16	16
		% within			27.6	6.9
	calamity/natural	Count	2			2
		% within Crop	1.6			.9%
	landlessness/no land	Count			3	3
		% within			5.2	1.3
	competition with imported products	Count			16	16
		% within Crop			27.6	6.9
	high production	Count	61	18	13	92
	% within Crop	48.8	36.0	22.4	39.5	
high cost	Count	35	5		40	
	% within Crop	28.0	10.0		17.2	
low price of	Count	15	10		25	
	% within Crop	12.0	20.0		10.7	
high land	Count	6			6	
	% within Crop	4.8			2.6	
no sources of productio	Count		16	10	26	
	% within		32.0	17.2	11.2	
Total	Count	125	50	58	233	
	% within Crop	100.0	100.0	100.0	100.0	

**High production expenses:** 39.5 per cent of small producers said one of their major difficulties is the increase in input cost as well as production expenses. In the new agricultural production environment, farmers incur higher production expenses such as buying hybrid seeds, chemical fertilisers and pesticides. In some households, income from crops is not enough to cover expenses.

- Rice farmers: 48.8 per cent of the respondents said one of their problems is high production expense and 28 per cent faced difficulties because of high cost input.
- Small potato producers: 36 per cent of the respondents said high production expense is their major problem and 32 per cent had no source of capital to expand their farm production.
- Small sugarcane producers: 27.6 per cent of the respondents have difficulty competing with cheaper imports, while 27 per cent said lack of water supply is a problem and 22 per cent cited high production expense as their main problem.

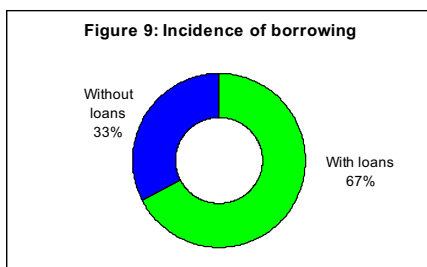
### ***Limited Government Support***

About 86.3 per cent of respondents said the government did not provide adequate support for small farmers. All small sugarcane producer-respondents (100 per cent), 96 per cent of small potato producers and 76 per cent of small rice farmers said the government did not give them adequate support.

Most respondents (32.6 per cent) said the government could support them by providing them subsidised production inputs, while another 21.9 per cent wanted the government to build better infrastructure (roads) so that they could have easy access to the market.

Regarding other problems, small farmers have limited sources of capital (13.3 per cent) and they get low prices for their produce (10.7 per cent).

#### ***4.1.8 The Credit Market and Indebtedness among Small-scale farmers***



Because of changes in agricultural production as well as other economic activities, small farmers need more capital. They tend to borrow money. More than two thirds of respondents said that they had loans to repay (Figure 9). They borrow from several sources (Table 38). In Indonesia, the most common sources of loans are banks/financial institutions (20.4 per cent) and government credit (19.1 per

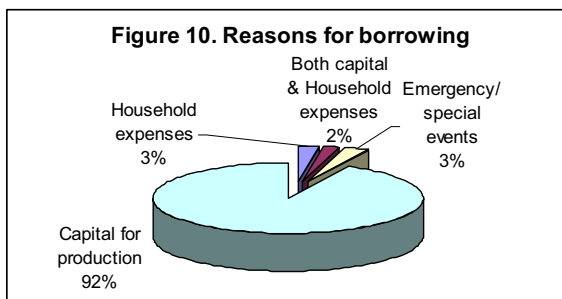
cent). Their situation differs from other countries where the major sources of credit are traders/middlemen, relatives and friends.

In the case of the Indonesian sugar industry, a Rp23 billion (about US\$2.5 million) credit line was given to cane farmers. But this was seen as “of little help” (AsiaTimes 2002).

Farmers who incurred debts generally borrow for production expenses as shown in Figure 10.

**Table 38: Sources of Loans**

Source	Frequency	%
Relatives	10	6.4
Banks/financial institutions	32	20.4
Friends	2	1.3
Traders/middlemen	13	8.3
Cooperatives	16	10.2
Government/GO-enterprise	30	19.1
Landowner	11	7.0
Fellow farmers	21	13.4
Input dealers	17	10.8
Rice miller/factory	5	3.2
Total	157	100.0



By crop, 43.2 per cent of rice producers do not get any loan. About 18.4 per cent get loans from financial institutions and 15.2 per cent from fellow farmers. More potato producers secure loans compared to rice producers. They get loans from trader/middlemen (22 per cent), input dealers (34 per cent) and from financial institutions (10 per cent). Sugarcane producers get more loans compared to rice and potato producers. Small sugarcane producers get loans from government-owned enterprise (51.7 per cent) and cooperatives (27.6 per cent).

On the reasons for borrowing, 63.1 per cent of the farmers said they took loans to meet production expenses. About 49.4 per cent of the respondents said they could settle the loan within the agreed period. About 33 per cent of respondents said they had enough money to repay their loans. About 38.6 per cent of the respondents said that they borrowed money two to three times a year while another 20.6 per cent borrowed only once a year.

#### **4.1.9 State Policies and Programmes for Agriculture and Small-scale Farmers**

Majority of the respondents said the government did not give adequate support to small farmers. However, some respondents admitted getting adequate government support in the form of irrigation facilities, special loans for farmers, training, and price and marketing support.

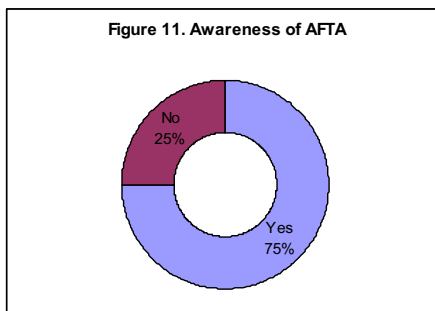
Small farmers, however, still expect more support from the government especially in marketing, credit programmes and agricultural extension services. Their expectations are:

- **Rice producers** expect to be provided with subsidised fertiliser (32.8 per cent), good/durable roads from their farms to the markets (24.8 per cent) and guaranteed prices (12.8 per cent).
- **Potato producers** seek subsidised fertilisers (66 per cent), durable farm-to-market roads (16 per cent) and pesticide subsidies (8 per cent).
- **Sugarcane producers'** expectations are a bit different from rice and corn farmers. Small sugarcane producers seek appropriate agricultural extension services (27.7 per cent), good roads (20.7 per cent), marketing support (12.1 per cent) and price support (13.8 per cent).

#### 4.1.10 Respondents' Awareness of AFTA

About 75 per cent of the respondents did not know about AFTA and only 25 per cent said they had heard about it (Figure 11). These respondents had heard about over television (34 per cent), from fellow farmers (21 per cent), from their organisations (21 per cent) and from government information (16 per cent).

Among respondents who were aware of AFTA, 11 per cent said it is about free trade/ globalisation, 5.2 per cent just saw the word from newspaper, and 4.7 per cent had no idea of its benefits (Table 39).



**Table 39: What do you know about AFTA?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Don't	176	75.5	75.5	75.5
	I just saw the word from newspaper	12	5.2	5.2	80.7
	I have no idea what benefit it brings to me	11	4.7	4.7	85.4
	it will create more market for us to sell our product	1	.4	.4	85.8
	it will cut down the subsidies currently enjoyed by us	4	1.7	1.7	87.6
	wider choices and cheaper goods for consumers	1	.4	.4	88.0
	free	27	11.6	11.6	99.6
	others	1	.4	.4	100.0
	Total	233	100.0	100.0	

#### 4.1.11 Gender Issues in Agriculture and Trade

**Role of women in agriculture:** Farming in Indonesia is still male-dominated. Focus group discussions (FGDs) among rice and potato farmers highlighted that both male and female farmers perform significant roles in agricultural production: in land clearing and preparation, seed planting and transplanting, fertiliser and pesticide application, spraying, weeding, harvesting, threshing, transporting and hauling, marketing and processing.

However, some production activities – the so-called “hard work” – are the domain of men: land clearing and preparation, fertiliser application, pesticide spraying and transporting. Women farmers do the so-called “soft jobs” – seed planting, weeding, harvesting and threshing (Table 40).<sup>4</sup>

**Table 40: Gender Roles in Agriculture**

Activities	Rice/Paddy		Potato	
	Male	Female	Male	Female
Land clearing and preparation	100%		75%	25%
Seeds planting	10%	90%	20%	80%
Fertiliser application	100%		50%	50%
Spraying (pesticides)	100%		100%	
Weeding	30%	70%	30%	70%
Harvesting	50%	50%	50%	50%
Threshing	50%	50%		
Transport	90%	10%		
Marketing	100%		100%	
Watering/irrigating			100%	

The FGDs among farmers revealed that there is no increase in female labour in potato and rice production. This situation is influenced by the farmers’ decision to send their daughters for formal and better education so that they can take up formal employment or help in household chores. The FGD participants claimed that only older women (mainly their wives) assist them in the field. In terms of wages in potato production, women labourers are paid US\$0.58 to US\$0.82 per day. Male labourers are paid higher at US\$ 1.17 per day (working hours from 7am to 2pm). The difference in wages is because the “hard work” is generally done by male labour and “soft work” by female labour. Wages for female labour in rice farming is between US\$1.17 and US\$1.47 per day (working hours from 7am to 4pm). On the other hand, the wages for male labour is from US\$2.4 to US\$2.94 per day, which are higher than female workers although they work for the same number of hours.



<sup>4</sup> The focus group discussion (FGD) took place on March 6, 2004 in Legon Kulon, Indonesia. Ten male rice farmers attended the FGD. Another FGD was undertaken in Sarimukti, Indonesia on Jan 1, 2004, which was attended by 11 potato farmers.



**Access and control of resources, markets and basic services:** Indonesian women have similar rights as men in land ownership (based on Marriage Law of 1970, Section 33), education, credit accessing and other opportunities. However, banking policies obligate women borrowers to get approval from their spouses when applying for credit. The Agriculture Ministry's training programmes usually target both male and female farmers. However, women farmers seldom attend these trainings sessions.

Rural women have limited access to health and education services. Bina Desa's survey (2003) reveals that 70 per cent of female farm worker-interviewees dropped out of school, 20 per cent graduated from elementary school and the rest dropped out of high school. Many women respondents also claimed that they never visited hospitals when they fell ill and they relied mainly on traditional treatment and medicine (AFA & AsiaDHRRA 2002).



## **Chapter 5**

# **CONCLUSION AND RECOMMENDATIONS**

### **5.1 Conclusion**

Trade policies – whether global, regional, national or at the local level – affected all sectors including small farmers. AFTA, as a multilateral trade agreement, has affected small agricultural producers in Indonesia. However, it is difficult to measure the impact on farmers, as other liberalisation measures are also being implemented along with AFTA such as Indonesia's commitments to GATT-WTO, APEC and IMF conditions.

At the national level, Indonesia benefited from increased trade with ASEAN countries. The Asian financial crisis as well as internal strife had negatively affected Indonesia's capacity to mobilise foreign direct investments. In fact, after the crisis, there have been disinvestments in many economic sectors.

In spite of declining economic significance, the agricultural sector continues to play an important role in Indonesia's economy and development. There have been structural changes in the economy. There are also problems such as poverty and landlessness especially among small producers, lack of capital, widespread use of in-organic inputs, high cost of production, middlemen/ traders' control of markets and farm prices and competition from imported cheaper products. The Indonesian government has also been viewed as not providing adequate support to its small producers. This is difficult in an era of globalisation.

Small farmers in Indonesia have to contend with competition, notably from more well-off farmers in Southeast Asia like the Thais and Malaysians who get subsidies from their governments. Imported products flood the domestic market. They depress local prices because they are relatively cheaper than locally produced agricultural crops.

It does not help that many Indonesian farmers are not aware of AFTA and other trade liberalisation measures. Therefore, a more meaningful engagement with government need to evolve.

### **5.2 General Recommendations**

There is a need to enhance the living standards of small agricultural producers in Indonesia. They not only have to compete in a liberalised market brought about by AFTA and other trade agreements but they also have to struggle to lead decent lives. The Indonesian government should seriously consider the following:

1. There is a need to subsidise agriculture inputs and provide other relevant protection for small farmers.
3. Farmers need to gain knowledge and skills in processing commodity and to improve post harvest activities. This will lead to greater efficiency, increase the quality of agricultural produce and enable farmers to get better prices.
4. Better infrastructure such as roads should be built. This will make farming and marketing of produce more efficient and less costly.
5. Central and local governments have to formulate a comprehensive and coherent agricultural policy.

6. The government must provide training, up-to-date market information and access to all farmers. This would enhance the farmers' marketing capabilities.
7. The government needs to provide better education (especially to young farmers) to improve the quality of human resources in rural communities.
8. The government needs to expand rural development and economic growth in order to create employment in these areas and decelerate the process of urbanisation.

#### *Recommendations for Particular Crops*

##### *Recommendations for Rice*

1. Government must improve and strengthen agricultural infrastructure – transport facilities, production processes, post-harvest facilities and marketing.
2. Organic agricultural system needs to be promoted in order to reduce dependency on chemical inputs which are costly and damaging to the environment.
3. The government has to ensure that rice imports do not depress prices of locally produced rice. Rice must also not be imported during the harvest seasons.
4. The government must ensure that its rice price policy benefits small farmers and supports rural economic development.

##### *Recommendations for Potato*

1. The government needs to provide clear market information to small farmers in order to prevent drastic fall in potato prices during the harvest period.
2. Provision of quality seeds and post-harvest treatment can improve the quality of the commodity.
3. A transparent and professional method should be devised to provide agriculture credit to farmers.

##### *Recommendations for Sugarcane*

1. The government should assist in the improvement, repair and management of sugar factories.
2. Sugar imports should be banned during the milling season to prevent the fall in sugar prices.
3. The government needs to ensure that the sugarcane price is high enough for small farmers to continue their production and improve their livelihood.
4. Effective measures should be put in place to prevent sugar smuggling.
5. The quality of infrastructure, specially roads and irrigation facilities, should be improved.

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## Appendices

### 1. CASE STUDY OF FARM EXPENSES AND INCOME

#### Personal Information of Farmer

Tenure : Leaseholder

1. Name of interviewee: AMIN

2. Name of Village: LEGON KULON

Name of the Crop RICE (PADDY)

Cropping period:

Itemised Expenses	Provide Details	Amount
<b>Seeds / Nursery planting material</b>	<b>15 Kg @ 3.400</b>	Rp.51.000 (\$6)
<b>Fertilisers</b>	Urea 300 Kg @ 1.250	Rp.655.000
	TSP 100 Kg @ 1.600 Poska 60 Kg @ Rp. 2.000 <b>There is no subsidy</b>	(\$77.06)
<b>Chemicals (Pesticides, Fungicides,Herbicides)</b>	<b>Pesticides</b>	Rp.305.000
	Regen 1 Lt Rp. 85.000 Pontan 3 Btl @ Rp. 35.000 Skor ¼ Lt @ 95.000 Fungicides Ally 4 pacs @ 5.000	(\$35.88)
<b>Hired Labour:</b>		
Land preparation	6 persons' wages Rp 20.000	Rp.120.000 (\$ 14.11)
Planting/Replanting	per pacs	Rp.300.000 (\$ 35.3)
Weeding	3 person ½ day @ 10.000,-	Rp.30.000 (\$ 3.52)
Fertilisers application	2 persons needed 2 times @ 20.000	Rp.80.000 \$ 9.41)
Chemical Spraying or application	1 person needed 6 times @ 20.000	Rp.120.000 (\$ 14.11)
<b>Other Expenses:</b>		
Land rent	per season	Rp.3.000.000 (\$353)
Irrigation fee	per season	Rp.30.000 (\$3.52)
Land Taxes	SUKSARA	Rp.238.311 (\$ 28)
Rental cost for tractor	1 pacs	Rp.300.000 (\$ 35.3)
<b>Expenses in Kind:</b>		
Harvester's share	600 Kg @ 1.350 from output 6.000Kg	Rp.840.000,- (\$ 98.8)
<b>Work done without payment:</b>		
Family Labir	2 persons @ 20.000 need 6 day	Rp.240.000 (\$ 28.23)
<b>GROSS INCOME</b>	<b>6000 Kg @ 1.400</b>	<b>Rp.8.400.000 (\$ 988.2)</b>
<b>NET INCOME</b>	<b>8.400.000 – 6.301.000 (\$741.29) (TC)</b>	<b>Rp2.099.000 (\$247)</b>

## 2. CASE STUDY OF FARM EXPENSES AND INCOME

### Personal Information of Farmer

Tenure: Owner

1. Name of interviewee: TAMIN

2. Name of Village: LEGON KULON

Name of the Crop: RICE (PADDY)

Cropping period:

<b>Itemised Expenses</b>	<b>Provide Details</b>	<b>Amount</b>
<b>Seeds / Nursery planting material</b>	15 Kg @ 3.400	Rp.51.000 (\$6.00)
<b>Fertilisers</b>	Urea 350 Kg @ 1.250 TSP 100 Kg @ 1.600 Poska 60 Kg @ Rp. 2.000 There is no subsidy	Rp.717.500 (\$84.41)
<b>Chemicals (Pesticides, Fungicides, Herbicides)</b>	Pesticides Regen 1 Lt Rp. 85.000 Pontan 3 Btl @ Rp. 35.000 Asodrin 2 btl @35.000 Arpo 3 btl @ 20.000 Desin 3 btl @23.000 Skor ¼ Lt @ 95.000 Fungicides Obat Ally 4 pacs @ 5.000 Indamin 1 btl @23.000	Rp.527.000 (\$62.00)
<b><u>Hired Labour:</u></b>		
· Land Preparation	9 persons wages Rp 20.000	Rp. 180.000 (\$21.18)
· Planting / Replanting	per pacs	Rp.300.000 (\$35.29)
· Weeding	3 persons ½ day @ 10.000,-	Rp.30.000 (\$3.53)
· Fertiliser application	2 persons needed 2 times @ 20.000	Rp.80.000(\$9.41)
· Chemical spraying or application		
	1 person needed 7 times @ 20.000	Rp.140.000(\$16.47)
<b><u>Other Expenses:</u></b>		
· Land rent	-owner	
· Irrigation fees	per season	Rp.30.000(\$3.53)
· Land taxes	SUKSARA	Rp.238.311(\$28.04)
· Rental cost for tractor	1 pacs	Rp.300.000(\$35.29)
<b><u>Expenses in Kind:</u></b>		
· Harvester's share	600 Kg @ 1.350 from output 6.000 Kg	Rp.810.000,-(\$95.29)
<b><u>Work done without payment:</u></b>		
· Family Labour	2 persons @ 20.000 needed for four days	Rp.160.000(\$18.82)
<b>GROSS INCOME</b>	6000 Kg @ 1.350	Rp.8.100.000 (\$952.94)
<b>NET INCOME</b>	<b>8.100.000 – (3.563.000 (\$419.17)(TC))</b>	<b>Rp4.536.189 (\$533.67)</b>



### 3. CASE STUDY OF FARM EXPENSES AND INCOME

**Personal Information of Farmer**

Tenure: Leaseholder

1. Name of interviewee: MAMAN

2. Name of Village: Sarimukti

Name of the Crop: Potatoes

Cropping period

Itemized Expenses	Provide Details	Amount
Seeds / Nursery planting material	2.000 Kg @ 6.000	Rp.12.000.000 (\$1411.77)
Fertilisers	P. Kandang 600 Krg @ 5.000 TSP 1.500 Kg @ 1.500 ZA 1.500 Kg @ 1.100 NPK 500 Kg @ Rp. 6.000  There is no subsidy	Rp.8.650.000 (\$1017.65)
Chemicals (Pesticides, Fungicides, Herbicides)	Pesticides Pilaram 126 Kg @ 32.000 Agrimek31,5 Kg @ 105.000 Culakron 31,5 Kg @ 75.000	Rp.9.702.000 (\$1141.41)
<u>Hired Labour:</u> • Land Preparation • Planting / Replanting • Weeding  • Fertiliser application  • Chemical spraying or application	154 persons wages Rp 10.000 14 persons day @ 5.000,- - 34 persons day @ 5.000,- (W) - 3 persons @ 10.000 (M) - 28 persons @ 5.000 (W) - 14 persons @ 10.000 (M) 18 persons @ 10.000 - 70 persons @ 5.000 (W) - 21 persons @ 10.000 (M)	Rp.1.540.000 (\$181.18) Rp. 70.000 (\$8.23)  Rp. 350.000 (\$41.18)  Rp. 280.000 \$32.94 Rp.180.000 (\$21.18)  Rp. 560.000 (\$65.88)
<u>Other Expenses:</u> • Land rent • Irrigation fees • Land taxes • Rental cost for tractor • Transport		Rp.250.000 (\$29.41)  Rp.6.000.000 (\$705.88)
<u>Expenses in Kind:</u> • Harvester's share		
<u>Work done without payment:</u> • Family Labour		
<b>GROSS INCOME</b>	30.000 Kg @ 2.000	Rp.60.000.000 (\$7058.82)
<b>NET INCOME</b>	60.000.000 – 39.582.000 (\$) (TC)	Rp20.418.000 (\$2402.12)

:

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## About SEACON

The Southeast Asian Council for Food Security and Fair Trade (SEACON) provides a coordinated approach to food security, agriculture and trade issues. We integrate local initiatives of agrarian reform and agricultural development with trade concerns at the Southeast Asian level. In each of our member countries, we support people centred national based food security councils that enable government, private sector and civil society representatives to meet and dialogue on agriculture and trade issues.

The establishment of the national food council is to ensure that whatever analysis / positions taken on at the regional level, would have the secure backing from the grassroots and vice versa.

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