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Article 1

## **Towards a Coexistence of Economic Integration and Poverty Alleviation: Tentative Output of the ECOIN Project during 2006-2007**

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**E**ast Asia has attained high degrees of food self-sufficiency and economic growth; however, in doing so, income inequalities have expanded within rural areas and between urban and rural areas. It has become increasingly important to alleviate rural poverty by various means including increasing agricultural income and creating rural jobs.

It has been frequently commented that the recent and rapid integration of the East Asian economy will provide both good opportunities for reducing poverty. In fact, even some less-advanced developing countries and areas such as Cambodia, Lao People's Democratic Republic and inland China are expanding their opportunities to export agricultural products to advanced developing countries and international markets via trade liberalization and transportation network development in the region. The liberalization of capital movements has also enhanced the investment by international food processing and supermarket companies in such developing countries; and this has promoted the production of high-value agricultural commodities and created rural jobs. The shift toward such high-value agriculture will result in a deeper integration between firm and farm sectors and will enable the structural change of traditional agriculture.

Attention should also be paid to the reality that economic integration does not always provide positive effects for every region and social class. It has been often said that – especially in the marginal areas where crop diversification and market access are difficult due to insufficient infrastructure – economic integration has worsened poverty and even reproduced poverty due to failure to capitalize on educational opportunities.

The Japan International Research Center for Agricultural Sciences (JIRCAS) has been implementing a four-year collaborative research project “Impact Analyses of Economic Integration on Agriculture and Policy Proposals toward Poverty Alleviation in Rural East Asia (ECOIN)” since April 2006, under a close collaboration with UNESCAP-CAPSA and in association with the National Agricultural Research Centres in the selected Asian countries. The project aims at clarifying the impacts of economic integration on East Asian (South-East Asia and China) agriculture, especially on diversified and high-value agriculture, and



diversified income resources and employment opportunities through farming-marketing integration, thereby determining ways to take advantage of economic integration for poverty reduction and to minimize negative influences. The project focuses not only on the impacts of economic integration but also on measures for supporting the poor. The results of the study will be presented to policymakers as practical information for poverty alleviation.

In the middle of the project period, a seminar with counterpart researchers from the major participating countries (China, Indonesia, Lao PDR and Thailand) of the project was organized on 27 June 2008 in Bangkok, Thailand. The objectives of the seminar were: (i) to discuss the results of the country studies carried out during 2006 to 2007; (ii) review the work plan for 2008 to 2009; and (iii) discuss other future plans and ideas. This article describes the current progress of the ECOIN project by providing a summary of papers presented at the seminar.

### Highlights of the country studies

The seminar participants were invited to present papers highlighting the output of their country studies during 2006 and 2007. In this section, the major findings of country studies are presented.

#### China

Dr. Kang Yunhai, Director, Economic Research Institute, Yunnan Academy of Social Science, China presented a paper titled "Influence Analysis of Agricultural Trade Liberalization on Crop Intensity, Forest Conservation and Poverty Alleviation". The border areas between China (Yunnan), Lao PDR and Viet Nam have rich natural resources which are typified by high biodiversity in mountainous areas. However, the level of economic development is relatively low compared to the coastal area of China. This is partly due to lack of investment in the area. Recently, with a rapid development of infrastructure (railways, waterways and highways), accessibility to the area was much improved, and trade liberalization, which mainly resulted from economic treaties such as the China-ASEAN FTA, promoted agro-product trade in the region. Meanwhile, liberalization of capital and increasing demand for high value agro-products further intensified the production of these commodities in the region. As a consequence of these changes, serious environmental problems like deforestation of rare tropical forests have emerged. In order to find an alternative development strategy for this area, comprehensive research on the relationships of trade transformation, cropping intensity, forest conservation and poverty alleviation are being conducted in Yunnan Province.

Shangyong Township in Xishuangbanna Prefecture, a border town with Lao PDR, and Hekou County in the south-east of Yunnan Province located at the intersection of the Red River and the Nanxi River, were selected as study sites.

In Shangyong, the study concluded that the free trade of farm products had little impact on local agricultural development and villagers' income generation. Most of the families in the study site have their relatives beyond the border and social interaction and commodity exchange with Lao people are very common among local people in Shangyong. However, the variety, amount and value of the exchanged commodities, especially farm products, are quite limited. The reasons are: firstly, the similarity of farm products on both sides of the border; secondly, the northern provinces of Lao PDR that are close to the study site are less-developed areas with low-level consumption; and thirdly, Lao authorities practise strict control over the import of farm products.

The Hekou region has a national port and four provincial ports. In Hekou, the main agro-products are banana, rubber, fruit, aniseed, etc. Border trade is a very common practice in the study area. However, the amount of agro-products that is exported from this Chinese region is not very large. Major export commodities produced by the local villagers are rice, seeds, potatoes and fruit. Local production of banana and rubber is mainly sold to domestic markets. Vegetables for export mainly come from the production areas outside the provinces. Therefore, free trade of agro-products would have little effect on planting structure and land use by the local farmers. On the other hand, it is suggested that free trade of agro-products has the potential to affect Hekou's agriculture. Firstly, it has led to a lot of trade in general, and has attracted the investment of enterprises at home and abroad. Such phenomena would promote the scale of agro-products and could increase farmers' incomes in the future. Secondly, free trade of agro-products would promote the shift of the surplus labour from less competitive products to other products. Thirdly, it has played an important role in environmental protection. It has attracted many farmers in remote areas to urban areas in search of employment opportunities. As a result, there has been less deforestation in the countryside.

#### Indonesia

Indonesia is the largest agricultural economy in South-East Asia in terms of its agricultural GDP, farm land area and agricultural population. The country has abundant natural and human resources and there is good potential for Indonesia to develop its agricultural sector by regional economic integration. However, compared to other ASEAN countries and China, economic integration in Indonesia is still in early stages. This is shown by a relatively low export value and foreign direct investment. Based on these backgrounds, the author and Dr. Henny Mayrowani, Researcher, Indonesian Center for Agriculture Socio Economic and Policy Studies, Indonesia, presented a paper titled "Economic Integration and Poverty in Indonesia". The major goals of the studies described in this paper, are to identify the impacts of economic integration on rural poor, and to propose policy options to alleviate rural poverty in

The most noteworthy news since the last edition of Palawija News is the departure of the regular author of this column, Dr. Taco Bottema, upon the completion of his term as Head of CAPSA. After more than three years at the helm, Dr. Bottema has left CAPSA and taken up a position in the private sector.

Dr. Bottema has had a long association with CAPSA, having worked at the Centre for many years in the 1980s and 1990s under its former name, the Centre for Coarse Grains, Pulses, Roots and Tubers (CGPRT). When the Centre changed its name to CAPSA and sharpened its focus on poverty alleviation in 2004, he returned as its Head and led the Centre until 1 August 2008. On behalf of the staff of CAPSA, I would like to thank Dr. Bottema for his leadership and wish him all the best in his future endeavours.

A recruitment process is underway for a new Head of CAPSA. In the meantime, the Executive Secretary of ESCAP has appointed me as Officer-in-Charge. My current position is with ESCAP in Bangkok, the UN department of which CAPSA is a subsidiary. In my

previous role as Chief of the Poverty Reduction Section in the Poverty and Development Division, I have had extensive interaction with CAPSA.

ESCAP is currently undergoing a restructure, and as a consequence of this, some changes are also planned for CAPSA. It is expected that the precise details and timing of these changes will be known over the remainder of 2008. Regardless of CAPSA's new format following this restructure, secondary crops and poverty alleviation will remain the main focus of the Centre.

Until the changes are set in place, it will be business as usual at CAPSA, especially in regard to completing the Centre's ongoing projects, which have been mapped out for 2008–10 and many of which are reported on in this issue of Palawija News.

**Yap Kioe Sheng  
Officer-in-Charge  
CAPSA**

Indonesia. To achieve these goals, three activities have been implemented during the project period. The tentative outputs of the studies are outlined below.

1. Primary and statistical data analysis to identify the competitiveness of agricultural commodities and their importance in rural households.

The Policy Analysis Matrix (PAM) method was applied to identify the comparative advantage of local agricultural production. Most of the domestic resource cost ratio (DRCR) of the target commodities (cassava, shallot, tomato and carrot) was below 1, indicating a comparative advantage in their production. However, the extent of profitability varied between the production areas. For example, in the case study of shallot production in Java, the revenue was much higher in the lowland area than the highland in spite of almost the same values of DRCR, which indicated that the other factors such as the bland image of the production area worked as a driving factor of the crop price and revenue. In the case of cassava in Lampung, the study determined that technical and financial support by emerging processing companies, including the foreign processors, contributed to the profitability of local cassava production.

2. Rural household survey to determine the household economic conditions.

A bench mark census survey was carried out in the study village in Majalengka, West Java. All the 369 households in

two hamlets were interviewed to determine the current conditions of household economy and agriculture. One of the factors examined in the survey, was 'diversified income source', which was used as an indicator of the impact of economic integration. The results of an attitude survey of farm households showed that non-farm income plays an important role in the household economy, occupying nearly 70 per cent of household income. On the other hand, farmers that rely on rice and vegetable production as a major source of income still have higher expectations of developing their current agricultural production and getting more income from agriculture. These farmers showed a strong interest in technological improvements such as the application of new varieties as a means to develop their farm economies.

3. Identification of key factors of poverty alleviation through agricultural diversification and their policy implications.

Organic farming was used as a case study. The study investigated its potential to contribute to rural poverty alleviation in the context of regional economic integration. The results of interviews and questionnaire surveys on organic vegetable farms and certification agencies showed that organic vegetable farms can enjoy better profit than conventional farms, although this higher profit is very marginal. Labour absorption of organic farming is very large, which indicates a positive impact on poverty alleviation by creating wider job opportunities. The high cost of organic

certification would be a serious problem if the current voluntary organic standard in Indonesia becomes compulsory. Consumers' preferences indicate that organic products in Indonesia can meet the quality standard required by the international market. It was concluded that there would be sufficient potential to develop organic farming in Indonesia by promoting export and import substitutes.

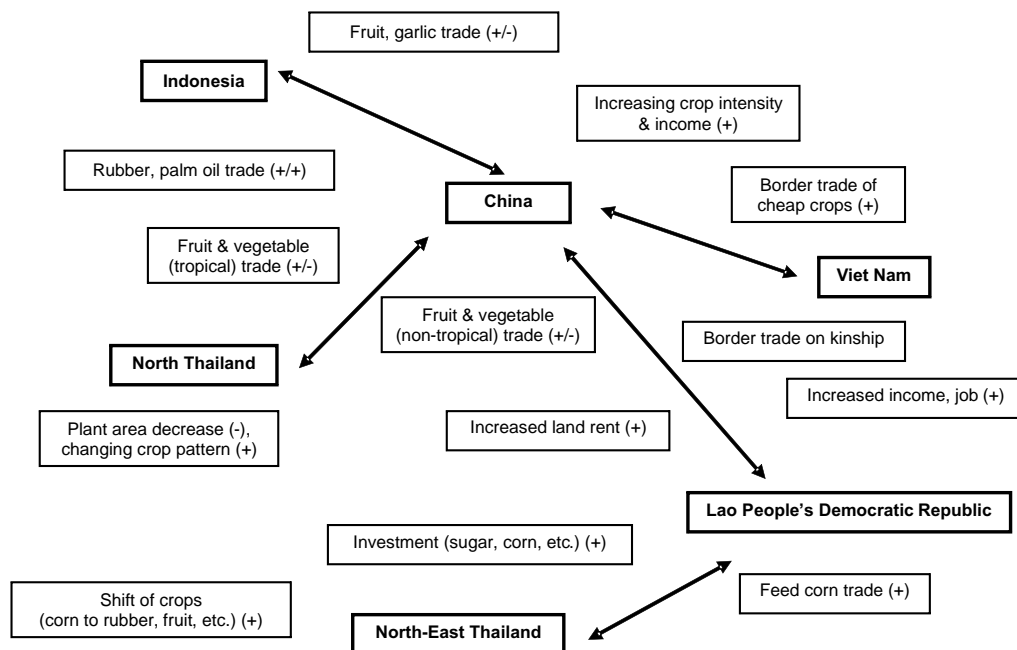
### Lao People's Democratic Republic and Thailand

Dr. Pornsiri Suebpongsang, Lecturer, Department of Agricultural Economics, Faculty of Agriculture, Chiang Mai University, Thailand, presented a paper titled "Impact Analysis of Economic Integration on Agriculture and Policy Proposals toward Poverty Alleviation in Rural East Asia: The Case of Northern Thailand". The study was conducted in Chiang Mai Province, North Thailand. Under an FTA that Thailand signed with China, which took effect in October 2003, the tariffs of 116 items of fruit and vegetables between Thailand and China were eliminated. Since then trade between these two countries has increased dramatically. China increased its fruit (especially pear, apple, grape and orange) and vegetable (mainly garlic, onion, broccoli, carrot and Chinese radish) export to Thailand. On the other hand, Thailand increased its fruit (mainly fresh and dry longan) and vegetable (mainly cassava) export to China. The study concluded that the case of fruit and vegetable farmers in Northern Thailand was a good example of losers under an FTA. For example, the expansion of garlic imports, especially from China decreased the price of Thai garlic

significantly, both at wholesale and farm-gate prices. With the low cost of production in China, Chinese garlic definitely has competitive advantages over Thai garlic. Despite a fluctuating and decreasing trend in the price of Thai garlic, and a government compensation programme to encourage farmers to switch from garlic to ornamental trees, some garlic farmers have not switched to other crops, due to their expertise in garlic planting and the difficulty in adjusting their planting techniques.

Dr. Nongluck Suphanchaimat, Associate Professor, Department of Agricultural Economics, Faculty of Agriculture, Khon Kaen University, Thailand and Mr. Khonesavanh Vongxay, Deputy Director, Huayson-Huaysua Agricultural Development and Service Center, Department of Agriculture and Forestry, Ministry of Agriculture and Forestry, Vientiane, Lao PDR, presented two papers, both of which focused on the impacts of expanding feed corn production in Lao PDR, by private feed companies in Thailand. The studies analysed potential impacts of economic integration on agriculture, especially in North-East Thailand and Lao PDR. Since 2003, direct investment from Thailand to Lao PDR has rapidly increased to about 14.7 million baht in 2007, a seven-fold increase during 2003 to 2007. Major commodities that received investments were sugar cane, feed corn, eucalyptus and canned food. The results of interview surveys indicated that feed corn has been fully adopted in Xayabury Province, North-Western Lao PDR, and that the quality of the product improved. An immediate impact of economic integration was

Figure 1. Impacts of economic integration



Note: (+) positive impacts observed, (-) negative impacts observed.

increased employment and income of Lao farmers. On the other hand, half of the interviewed farmers in Loei Province, North-East Thailand switched from feed corn to rubber, eucalyptus and fruit trees. The remaining farmers received a high price for feed corn due to better access to markets. It seemed that both Lao and Thai farmers received positive impacts from the development of feed corn production in Lao PDR. Some farmers in Lao PDR lost their land due to debts but presently they can easily seek new land thanks to abundant land resources. It was suggested that problems might arise in the near future when land resources became scarce and intensified land use causes soil depletion.

### Conclusions of the seminar and the future plans of the project

In the presentations at the seminar, we could observe both positive and negative impacts that resulted from regional economic integration (Figure 1). Economic integration will force farmers to compete with imported commodities and if it works effectively, the farmers who produce products with higher competitiveness may enjoy better profits from expanded export opportunities. This case was typically observed in the case study of feed corn production in Lao PDR. On the other hand, the farmers who produce products with less competitiveness should switch their products to the others with higher competitiveness and profits, as was observed in the case of garlic farmers in North Thailand. However, as clarified by the country studies, the actual cases are more complicated and there is no one-fit-for-all solution. As reported in the case study of China, in spite of the booming border trade, if the local agricultural production could not meet demand from its export destinations, then free trade, while of benefit to the country as a whole, may not be of much benefit in the border areas, which are often disadvantaged areas. The liberalization of foreign investment brings not only money but also opportunities for changes in marketing practices. The latter are not necessarily preferable for local farmers. This was observed in the case of cassava in Indonesia. It is important for the policy planners to consider the current social and economic situation and implement agricultural policies that benefit from regional economic integration.

The project will be completed in March 2010, and near the end of the project period, a regional workshop will be held to review the overall outputs of the country studies and to discuss their relevance for pro-poor policy formulation in participating countries. As a conclusion of the recent seminar in Bangkok, each country study team was requested to analyse deeply how the findings can be effectively used for poverty alleviation to achieve the final goal of the project, namely, to alleviate rural poverty by using economic integration as an opportunity for improving the welfare of local farmers. The proceedings of the seminar will be published as a JIRCAS Working Paper by the end of this year. ■

(References available upon request).

## Eradicate Extreme Poverty and Hunger (MDG-1): Performance and Policy for Accelerating the Attainment of National Goals in 2015<sup>1</sup>

By I Wayan Rusastra and J.W. Taco Bottema

Programme Leader of Research and Development, and former Director of UNESCAP-CAPSA, respectively.

### Introduction

The Millennium Declaration that was adopted by 189 nations has eight major goals and targets to be achieved by 2015. These goals are to: eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria and other diseases; ensure environmental sustainability; and develop a global partnership for development. Taking 1990 as the base year, poverty and hunger will be reduced by a half in 2015.

Developing countries including Indonesia face many problems in meeting the MDGs, as indicated by a slow-down of poverty and hunger reduction programme achievement, wide income disparity between rural and urban populations as well as inconsistent global and local development. The international constraints in achieving the MDGs include globalization, the lack of coherence of developed countries in fulfilling the commitments, and the food and energy crises. The domestic constraints are the poor co-ordination in implementing decentralization development, low capacity in improving food (agriculture) production, low access of the poor to employment opportunities and the failure of poverty reduction programmes, policies and approaches. The achievement of food security, agricultural and rural development programmes will have an impact on the achievement of poverty and hunger reduction.

Based on these justifications, a paper was prepared to analyse the status and identify priority actions for achieving the first MDG target, and to formulate policy recommendations on poverty and hunger eradication in the context of agricultural and rural development.

<sup>1</sup> Brief version of the paper presented in the Pra2-Widyakarya Nasional Pangan dan Gizi IX (Pre-National Workshop on Food and Nutrition IX) organized by Indonesian Institute of Science in co-operation with Indonesian Agency for Food Security, Ministry of Agriculture, in Jakarta on 3-4 June 2008.

## Status and achievement of the first MDG target

### Poverty reduction

This section discusses the prospects of reducing extreme poverty by half from 1990 to 2015, and progress towards this goal. The analysis used a set of poverty indicators such as the national poverty line generated by Central Bureau of Statistics (CBS) compared with common international poverty criteria of US\$ 1 and US\$ 2 per capita per day. Other poverty indicators such as the poverty gap index (P1), the poverty severity index (P2), the spatial disparity in poverty, and the food expenditure share by region and income groups, that identify the growth of community welfare were also used.

In 1990 the population living in poverty in Indonesia was 27.20 million or 15.08 per cent of the total population (Table 1). Between 1990 and 1995 the proportion fell by 5.01 per cent per year. Due to the economic crisis, poverty incidence increased from 17.47 per cent (1996) to 23.50 per cent in 1998. In 1999, after two years of economic crisis, the poverty levels decreased. However, during 1998–2007, there was a slow-down in poverty reduction in Indonesia: from 11.43 per cent per year (1998–2000) to 1.92 per cent (2000–2007).

The relative poverty reduction trends over the period 1999–2003, show a decrease from 23.4 per cent in 1999 to 17.4 per cent in 2003, which indicates that Indonesia is on track to achieve the first MDG target (7.5 per cent in 2015) (GOI and UN System, 2004). Between 1999 and 2003 the decline in the poverty level was 6.89 per cent per year, while in the last seven years, 2000–2007, there was a serious deceleration in the rate at which poverty declined, 1.92 per cent per year. A slow-down resulted from the reduction of the fuel subsidy in 2005 of more than 100 per cent. In consideration of the slowing 2000–2007 trend and the government efforts in overcoming the impact of fuel subsidy reduction in 2008, the poverty level is projected to decrease to about 14.22 per cent in 2015. Therefore, achievement of the poverty reduction target of 7.05 per cent by 2015 requires consistent commitment and greater effort.

The achievement of the first MDG target will be determined by the poverty line chosen. Using the average income of US\$ 1 per day, the total population living below the poverty line in Indonesia in 1990 reached 20.6 per cent (GOI and UN System, 2004). In line with this measure Indonesia is likely to reach its MDG-1 target by 2015, as indicated by the decline in the extent of poverty to 10.3 per cent in 1996, and a further decline in 2002, a few years after the economic crisis. However, a contrasting result would result from the use of the US\$ 2 per day criteria. Here, the levels of poverty only declined from 71 per cent in 1990 to 54 per cent in 2002, with an anticipated rate of 35.5 per cent in 2015. This analysis shows that this country could reduce extreme poverty but needs to make a greater effort to overcome moderate poverty.

During the years 1990 to 2004, the poverty gap index (P1) and poverty severity index (P2) fluctuated at average rates of 3.17 and 0.88, respectively. P1 increased from 2.71 to 2.89, and P2 increased from 0.72 to 0.78 (UN System, 2004; Swastika *et al.*, 2007). Thus there was no significant change in expenditure with respect to minimum primary needs (P1) and income disparity (P2) among the poor. Another important indicator is poverty spatial disparity. There is a high concentration of poverty in Java (57.5 per cent) and there has been no significant change during the period 2000–2005. Thus there is a need for an effective model for tackling poverty and continuing to give priority to the regions that have high density of poverty, such as Java, without ignoring Papua and other eastern parts of Indonesia which have high relative poverty and in which half of the population live under the poverty line.

Poverty reduction achievements will be determined by income distribution. Better income distribution among income groups could allow poorer groups to improve their capacity and access to employment opportunities and income sources. There has been no significant change in the national income distribution during the 15 years from 1990 to 2006. Income disparity was stagnant and in a normal position, at a Gini index of 0.33 (Table 2). The expenditure share of low-income households (40 per cent of total households) during 1990–2006 tends to be stagnant with a slowly decreasing rate from 21.31 per cent to 19.75 per cent. The average of expenditure share of high-income households (20 per cent of total households) was 42.31 per cent between 1990 and 2006, and the rate slightly increased from 41.94 per cent to 42.15 per cent.

**Table 1. Growth of the rural and urban poor population in Indonesia, 1990–2007**

Year	Total poor population (million)			Percentage of poor population		
	Urban	Rural	Indonesia	Urban	Rural	Indonesia
1990	9.40	17.80	27.20	16.75	14.33	15.08
1995	7.20	15.30	22.50	9.70	12.30	11.30
1996	9.42	24.60	34.00	13.39	19.78	17.47
1998	17.60	31.90	49.50	21.92	25.72	24.23
1999	15.64	32.30	47.90	19.41	26.03	23.43
2000	12.30	26.40	38.70	14.60	22.38	19.14
2001	8.60	29.30	37.90	9.76	24.84	18.41
2002	13.30	25.10	38.40	14.46	21.10	18.20
2003	12.20	25.10	37.30	13.57	20.23	17.42
2004	11.40	24.80	36.20	12.13	20.11	16.66
2005	12.40	22.70	35.10	11.70	20.00	15.97
2006	14.49	24.80	39.30	13.50	21.80	17.80
2007	13.56	23.61	37.17	12.50	20.40	16.60
<b>Growth Rate (% per year)</b>						
1990-1995	- 4.68	- 2.80	- 3.45	- 8.42	- 2.83	- 5.01
1995-1998	45.59	34.68	28.21	40.72	34.83	36.59
1998-2000	- 17.46	- 9.11	- 11.90	- 19.63	- 6.76	- 11.43
2000-2007	3.37	- 2.34	- 0.47	- 0.53	- 1.81	- 1.92

Source: Statistik Indonesia (Badan Pusat Statistik), Jakarta.

**Table 2. Distribution of expenditure according to income group and Gini index at national level in Indonesia, 1990–2006 (%)**

Year	Income group			Gini index
	Low	Moderate	High	
1990	21.31	36.75	41.94	0.32
1993	20.34	36.90	42.76	0.34
1996	20.25	35.05	44.70	0.36
1999	21.66	37.77	40.57	0.31
2002	20.92	36.89	42.19	0.33
2003	20.57	37.10	42.33	0.32
2004	20.80	37.13	42.07	0.32
2005	20.22	37.69	42.09	0.33
2006	19.75	38.10	42.15	0.33
Average	20.65	37.04	42.31	0.33

Source: National Socio-Economic Survey (SUSENAS), Statistik Indonesia, Jakarta.

### Hunger eradication

Based on data on the prevalence of underweight children the MDG target to eradicate the proportion of people who suffer from hunger (18.3 per cent by 2015), and based on the performance of government development programmes during 1989–2002, Indonesia is not likely to reach the first MDG target (GOI and UN System, 2004). In addition, the incidence of malnutrition (daily per capita energy intake of less than 2,100 kcal) is expected to decrease from 69.5 per cent in 1990 to 34.8 per cent in 2015. There was no substantial reduction of these incidences during 1990–2002, as indicated by the fluctuation of malnutrition prevalence with an average rate 70 per cent. The impact of fuel subsidy reductions in 2008, meant that achieving the hunger-reduction targets was likely to be difficult. The challenge of decreasing the prevalence of malnutrition and underweight among children under five is complex due to a wide disparity across regions (rural-urban) and gender.

The growth of nutritional status for children under five years of age during 1995–2005 is presented in Table 3. It describes an increase in the proportion of malnutrition from 13.1 per cent in 1995 to 16.6 per cent in 1999 and 28.2 per cent in 2003. The ratio stagnated at 28.0 per cent from 2003 to 2005. In 2003–2005, the prevalence of moderate and severe malnutrition among children in rural areas was persistently higher than in urban areas, and the proportion of children with normal and over-nutrition decreased (SUSENAS, BPS, Jakarta).

**Table 3. Nutritional status of children under five years of age in Indonesia, 1995–2005**

Year	Percentage of nutritional status		
	Normal	Moderate	Under-nutrition (severe malnutrition)
1995	63.9	23.0	13.1
1998	64.6	20.9	14.5
1999	61.1	21.2	16.6
	Over	Normal	Severe
2003	2.2	69.6	28.2
2005	3.5	68.5	28.0

Source: SUSENAS, Badan Pusat Statistik, Jakarta.

Table 4 describes the average calorie consumption in rural and urban areas from 1996 to 2006. There was no significant change in the average calorie consumption rate of 1,965 kcal per day. The economic crisis had an impact on calorie consumption, which decreased from 2,020 kcal in 1996 to 1,849 kcal per capita per day in 1999. However, the reduction of the fuel subsidy in 2005 did not influence food energy consumption in the rural and urban areas. The food energy consumption of urban communities is higher than rural, 1,998 kcal versus 1,921 kcal per capita per day, but this rate was under the national average per capita energy requirement, 2,000 kcal, as stated in the eighth national workshop for food and nutrition (Hardinsyah and Tambunan *et al.*, 2004). This illustrates that there has been a decrease in people's purchasing power over the last five years, as the national aggregate of calorie availability (3,149 kcal per capita per day) is greater than energy sufficiency rate, (Suryana, 2008).

**Table 4. Average calorie consumption in rural and urban areas of Indonesia, 1996–2006 (kcal/capita/day)**

Year	Urban	Rural	Total
1996	1 984	2 040	2 020
1999	1 802	1 880	1 849
2002	1 954	2 013	1 987
2003	1 950	2 019	1 990
2004	1 942	2 020	1 986
2005	1 922	2 061	1 997
2006	1 892	1 954	1 927
Average	1 921	1 998	1 965

Source: SUSENAS, Badan Pusat Statistik, Jakarta.

### Future Policy Directions

Policies and programmes on poverty and hunger eradication have a strong relationship with policy for food security and agricultural and rural development. Based on the current status of household income structure and the nature of agricultural development, poverty alleviation strategies should consider the structural transformation of the rural economy through better integration of rural and urban economies in order to speed up the convergence of agricultural and non-agricultural productivity. This section will elaborate on the policy direction of the related aspects of poverty and hunger alleviation. There are at least five major aspects of poverty alleviation policies: macroeconomic policy, the impact of globalization, mainstreaming informal employment and legal empowerment of the poor, improving the capacity of poor people and their access to the economy, and taking a strategic approach to poverty and hunger reduction.

#### Macroeconomic policy

There are four macroeconomic variables that can have a positive impact on poverty alleviation (Pasaribu *et al.*, 2008): gross domestic product (GDP); share of agricultural sector in the overall economy; and, impact of the financial sector, banking services and industrial sector. Additionally, increases in the agricultural development expenditure and

the budget for poverty alleviation programmes would have a positive impact. On the other hand, a one per cent increase in the population will raise the poverty rate by 0.28 per cent, *ceteris paribus*. Therefore, a focus on agricultural and rural development complemented with effective implementation of poverty alleviation programmes without neglecting the growth of non-agricultural sectors will speed-up poverty reduction.

### **Impact of globalization**

A short-run regional analysis found that there is no empirical data indicating a positive impact of globalization on poor people. In line with this, the Wilson Center (2006) recommended some policy options that could be considered to counter the potentially negative impact of globalization on rural economics and poverty. These options include: (a) to minimize the intermediate effect of unemployment and loss of income of the poor by improving education, infrastructure investment, agricultural research and extension services, as well as implementation of social safety net programmes; (b) to improve pro-poor trade policy in developing countries by reducing import tariffs and expanding South-South trade co-operation; (c) for developing countries in which there are constraints on agricultural trade and farmers' capability to realize marketable surplus, increase R&D investment by improving biotechnology (NHYV) to increase yield potential and agricultural productivity; and (d) to generate complementary measures to encourage a fair, open and rule-based trade system supported by capable human resources, and to include trade in the overall agenda for economic growth and poverty reduction.

### **Informal employment and legal empowerment of the poor**

In order to mainstream informal employment and to promote gender equality, policymakers need to consider the following (Chen *et al.*, 2004): (a) raising the voice of informal workers by strengthening their organizations and representation in the relevant policy-making institutions; (b) being sensitive to gender issues and the role of women workers in the informal sector who tend to have lower wages and weak social protection, and need policy support; (c) promoting opportunities for both self-employment and informal paid work by integrating micro-finance service provisions, training, improved technology and other business development services; (d) securing the rights of the self-employed, particularly securing their access to credit and other resources as well as creating equitable policies for formal and informal enterprises; and (e) protecting informal workers through extending existing insurance schemes and/or developing new ones.

Singh (2006) highlighted four key factors that are legally required to empower poor people, build capacity and to overcome poverty. These are: (a) to improve access to the formal justice system and rule of law; (b) to improve poor people's rights to protect their assets, to build trust, to

promote access to credit and markets, and to raise productivity; (c) to improve labour rights to encourage the poor to move to the formal labour system; and (d) to stimulate the entrepreneurial skill of the poor. Basically the poor have a strong capacity to engage in existing employment opportunities and they consistently survive although they face big challenges, with minimum facilities and support.

### **The capacity of the poor and their access to economic opportunities**

Improvement in education and health are the most important factors for enhancing the human resource capacity of the poor. A World Bank study in Indonesia found some indicators of human resource development that lag behind the world average (World Bank, 2006). These include: (a) investing in education with a focus on improving the affordability and access of the poor to secondary school and vocational training as well as improving primary school quality and effectiveness; (b) investing in health, improving the quality of primary health services (public and private) and access to higher-level health services; (c) improving efforts to control maternal health care, as Indonesia has a high maternal mortality rate; (d) improving access of the poor to clean water by using separate strategies in rural and urban areas; and (e) improving access of the poor to adequate sanitation.

The World Bank (2006) recommended a strategic policy for improving health care for the poor including: (a) improving the quality of service of the community health centres; (b) investing in paramedic training especially for those assigned to rural areas; and (c) improving access to health services for the poor by providing direct cash transfers, voucher systems, health card, etc. In this context, consistency among government and related parties in strengthening the capacity, interests, commitments and political will is needed to improve the poor's access to education and health services that will lead to expanded resource capacity.

Improvement in poor people's capacity in rural and urban areas should be complemented with policy instruments to enhance their access to economic opportunities. Potential options are investment in agriculture and agribusiness in rural areas, improvement of access to agricultural land, support for informal activities, migration and acceleration of labour market convergence. In addition, improving infrastructure, facilities, transportation, accommodation and communication systems as well as financial support are seen to be necessary for enhancing access to economic opportunities.

### **Approaches for poverty alleviation and hunger**

Based on the performance of government programmes and a slow-down of poverty reduction trends, a reorientation of approaches and strategies should be considered (Rusastra and Napitupulu, 2007). Potential reorientation includes:

(a) basing approaches and strategies on the complexity of characteristics and problems of the poor; (b) moving towards a holistic multisectoral approach of participative community empowerment and development; (c) strengthening rural development programmes and integrating rural and urban economies through pro-poor economic growth and development; (d) focus on agricultural revitalization, micro-small-medium enterprises, informal employment and gender equality; (e) replication of conditional direct cash transfer programmes, particularly in the region in which multisectoral community-based development programmes have been applied; and (f) acceleration of the structural transformation of the rural economy.

Recommendations for accelerating the structural transformation and inclusive growth of agricultural and rural development are as follows (Timmer, 2006; Henderson, 2007; IFPRI and ADB, 2007): (a) focus on agricultural and rural development without ignoring urban economic growth; (b) accelerate the integration of the agricultural labour market and non-agricultural activity in rural and urban areas with better financial market facilities; (c) improve the economic capacity and access of the poor by promoting rural investment and labour migration; (d) improve innovative supply chain technology; (e) investment in infrastructure and communication systems to reduce spatial disparity and to speed up rural-urban economic integration; (f) support to improve financial services and insurance intervention for the poor; and (g) support improved implementation of effective social safety net and nutritional programmes.

## Conclusion

Eradication of poverty and hunger by half in 2015 is a commitment of the Government of Indonesia. Using the one-dollar-a-day poverty line, the country is likely to achieve the target of decreasing extreme poverty, but if the poverty line is raised to two-dollars-a-day, the country has a long way to go and requires strong efforts to address moderate poverty. Based on CBS poverty indicators and the decrease in poverty level during 2000–2007 (1.92 per cent per year) the relative poverty in 2015 is estimated at 14.2 per cent. Due to the complexity of problems and challenges ahead, Indonesia will have difficulties in achieving the poverty reduction target of 7.2 per cent by 2015. Trends of other related indicators such as the poverty gap and severity indexes and the expenditure Gini index for the period of 1999–2006 are stagnant.

Two key indicators relating to hunger, the prevalence of underweight children and malnutrition in children under five, tend to fluctuate with no substantial progress. This indicates that Indonesia would have difficulties in achieving the respective targets of 18.3 per cent and 34.6 per cent in 2015. The nutrition status of the children under five from 1995 to 2005, is supported by respected evidence such as the

aggregate energy consumption rates that tend to be stagnant and below the sufficiency rate of 2,000 kcal/capita/day. The energy consumption of the first five groups of eight income groups was below the required energy sufficiency rate (ESR). The ESR decreased from 1996 to 2006. The energy consumption of the first three groups with food expenditure less than Rp 100,000 per capita per month was included in the food insecure category, the consumption rate of which is less than or equal to 80 per cent of ESR.

Recommended policies for accelerating the achievement of the first MDG target are as follows: (a) focus on agricultural and rural development complemented with effective implementation of poverty alleviation programmes; (b) eliminate the negative impact of trade liberalization by minimizing the transition impact, implementing pro-poor trade policy, investing in R&D, and considering a fair, open and rule-based trade system; (c) enhance the roles of the informal sector, gender mainstreaming and legal empowerment of poor people; (d) improve poor people's capacity by improving education and health sectors that are complemented by improved access to wide economic opportunities; and (e) accelerate structural transformation and inclusive growth of agricultural and rural development, with the ultimate goal being the convergence of agricultural and non-agricultural productivity. ■

(References available upon request).

## Round Table Discussion on Indonesian Food Security

The Government of Indonesia has set a national policy of rice self-sufficiency and launched the "National Rice Production Increase" or *Peningkatan Produksi Beras Nasional (P2BN)* Programme, which aims to increase the growth of national rice production by 5 per cent from 2007 to 2009. In response to the government effort, the Indonesian Center for Food Crops Research and Development (ICFORD) organized a round-table discussion on food security in Bogor on 29 May 2008. The objective of the discussion was to analyse and discuss the main issues relating to the achievement of national plans for food self-sufficiency including the potential impact of the use of food commodities for biofuels on food (rice) production, the impact of global climate change on the food crop production system, and important breakthroughs for increasing food production.

The discussion was attended by researchers, scientists, policymakers and actors involved in food security. Dr. I Wayan Rusastra, CAPSA's Programme Leader of R&D, presented a paper illustrating aspects of main food (rice, maize and soybean) supply and demand. Other presenters from prominent research institutions also presented papers.

The meeting concluded with policy recommendations that focus on the following:

- (i) Important actions that relate to the government's efforts to achieve rice self-sufficiency such as improving land productivity, rice technology research and development.
- (ii) A rice intensification programme using an integrated crop management (ICM) method to increase rice yields and improve location-specific farming practices.
- (iii) Technology innovation to sustain the food production and bioenergy integration system that will improve employment opportunities and farmers' welfare.
- (iv) Use of climate change information to improve agricultural productivity.
- (v) Food diversification to: promote local food as the staple food (for instance sago, cassava, sweet potato, corn, etc.); support local food-based agro-industries and partnerships between small-medium scale agro-industries with larger-scale agro-industries; and to minimize the dependency on rice-based commodities.
- (vi) Expansion of the rice production area through improving the scale of agribusiness and productivity.
- (vii) Improvement of agricultural production facilities, technology transfer systems and rural institutions; application of location-specific technology; and integration of the rural and urban economies.
- (viii) Use of existing comparative advantage and domestic markets as well as the use of appropriate economic instruments.

## Pre-2 Ninth National Workshop on Food and Nutrition (Pra-2 Widyakarya Nasional Pangan dan Gizi IX or Pra-2 WNPG IX)

CAPSA Programme Leader of R&D, Dr. I Wayan Rusastra, was involved in Indonesian National Workshop on Food and Nutrition on 3–4 June 2008. The aim of the forum was to bring together recommendations on important food and nutritional issues to be used as a guide for future national policy and programme formulation. The recommendations of the Forum are to be discussed at Indonesia's five-yearly National Workshop on Food and Nutrition (*Widyakarya Pangan dan Gizi*, WNPG), which will take place in August 2008 in Jakarta. Participants represented universities, ministries, provincial governments and non-government and community organizations involved in food security. The forum was divided into four sessions: food security policy for achieving the MDG-1 target; the food security situation; food availability; and strengthening household access to food. A summary of the papers presented is as follows:

- (i) Improving food availability and affordability (Director General, Indonesian Agency for Food Security, Ministry of Agriculture).
- (ii) Accelerating the process of food diversification (Director General, Processing and Marketing for Agricultural Product, Ministry of Agriculture).
- (iii) The government's efforts in achieving MDG-1, the performance of national poverty programmes and strategic policy/programmes for accelerating the achievement of national target for 2015 (Deputy of Poverty, Manpower and Small-medium Enterprises, BAPPENAS; and Programme Leader of R&D of CAPSA).
- (iv) The strategies and programmes of local government for achieving food sufficiency (Dr. Siswono Yudhohusodo, former Head of Indonesian Farmers' Association).
- (v) Population control to strengthen food security (Deputy of Human Resource and Culture of BAPPENAS).
- (vi) Land reform: policy and implementation (National Land Agency).
- (vii) Improving household access to food (Prof. Haryono Suyono, Head of Damandiri Foundation).
- (viii) Local agro-industry to drive the community economy and food diversification (Bogor Agricultural University).

The output of the Forum will be fed into the National Workshop on Food and Nutrition, WNPG IX, which aims to discuss the country's food and nutritional issues.

## Research on the “Rural Community Empowerment Model: Analysing Food Security and Desa Mandiri Pangan Programme”

The Indonesian Agency for Food Security (IAFS) in co-operation with CAPSA, have initiated a study called “Rural Community Empowerment Model: Analysing Food Security and Desa Mandiri Pangan Programmes”. The project scope, methodology, implementation and budget were discussed at a preparatory meeting in May 2008 and the first research team meeting took place in Bogor in July 2008. The research team consists of senior researchers from the Indonesian Center for Agricultural Socio-Economic and Policy Study (ICASEPS) and is led by the Programme Leader of R&D, CAPSA.

The motivation for this study lies in the observation that many Indonesian poverty reduction programmes have not adequately improved the lives of the poor. The need for a better understanding of the pre-conditions for rural development, a reorientation to a community empowerment approach, the strengthening of food security programmes and their linkage with poverty alleviation programmes, were also key considerations in planning this study.

The study will analyse three main food security programmes: Participatory Integrated Development in Rainfed Areas (PIDRA), the Special Programme for Food Security (SPFS), and *Desa Mandiri Pangan/Desa Mapan* (Village Food Security Programme). The analysis will look at the implementation and benefits of the programmes, and their impact on rural community welfare. Research sites were chosen on the basis of several dimensions such as a variety of existing programmes, homogeneity of population, and location. The two study sites are: (i) Banjar and Ciamis in West Java; and (ii) Central East Timor district in East Nusa Tenggara. The project output will be a study report that will provide recommendations for future policy formulation.

## Impact Analysis of Expanding Biomass Energy Use to Rural Poverty in Tropical Asia (BIOMASS)

Until recently, the main achievements of the BIOMASS project were: (i) an analysis of inputs use, costs and returns of cassava production under the partnership between farmers and companies that produce fuel ethanol; and (ii) an analysis of the possibility of implementing a biofuel development action plan in Indonesia. Since May 2008, the project has been reviewing articles in relation to another two important aspects of the project: (i) the eligibility of bioethanol projects under the Clean Development Mechanism (CDM); and (ii) the impacts of bioethanol development, particularly on rural poverty.

From the review of ethanol-related articles, it can be concluded that biofuel projects are in principle eligible under the CDM. To be included in CDM projects, however, biofuel projects have several barriers: (a) the establishment of approved baseline and monitoring methodologies which is a necessary requirement for validation; (b) certified emission reduction (CER) revenues will in most cases only cover part of the additional cost of biofuels compared to conventional fuels; and (c) CO<sub>2</sub> abatement costs of biofuels are in general higher than current CER prices. Nevertheless, biofuel projects may be an opportunity to develop projects with strong sustainable development components, and therefore contribute strongly to the twin objective of the CDM: sustainable development in developing countries and achievement of part of the Kyoto target in developed countries.

## Certification Project (CERT)

A short visit by Dr. Ronnie S. Natawidjaja (a consultant to CAPSA) to a vegetable-growing area in North Sumatra as part of the Certification Project (CERT), has revealed an interesting institutional innovation: an arrangement between a Singapore-based company and farmers to have vegetable products shipped to Singapore's market directly. Some of the technologies and financial support are provided by the company to ensure the produce is of a quality required by the market, and to ensure the price premium received by farmers. The complete findings together with findings from other parts of the country will be presented at a workshop to be attended by farmers, local policymakers, researchers and other stakeholders.

## Blood Disease Project

The Blood Disease Project in South Kalimantan – an effort to recover the devastating annihilation of banana farming in the area – is now at the stage of propagating plantlets and establishing a farmers' association. It is expected that the introduction of this budless, blood disease-resistant banana will begin to revive the banana sector in Kalimantan, Indonesia. Setting up acclimatization and nursery facilities is crucial to the success of the project, so Dr. Ivan Buddenhagen, the discoverer of the budless banana, will visit the field early in September this year.

## Palawija News

CAPSA's research newsletter is published three times a year and is distributed free of charge to interested individuals. To have Palawija News delivered by email please contact [library@uncapsa.org](mailto:library@uncapsa.org), or to download, please visit [www.uncapsa.org](http://www.uncapsa.org).

Authors are invited to contribute articles on socio-economic aspects of recent good practice in research and development related to secondary crops, food security, rural poverty alleviation and the agricultural sector in Asia and the Pacific.

The word limit for articles is 2500. Contributors are asked to first submit a concise summary of their article by email to [library@uncapsa.org](mailto:library@uncapsa.org).

Palawija – derived from Sanskrit, this is the common term for secondary crops in Indonesian and traditional Malay languages.

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## CAPSA

The Centre for Alleviation of Poverty through Secondary Crops' Development in Asia and the Pacific (CAPSA) is a subsidiary body of UNESCAP. It was established as the Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia and the Pacific (CGPRT Centre) in 1981 and was renamed CAPSA in 2004.

## Objective

CAPSA promotes a supportive policy environment in member countries to enhance the living conditions of rural poor populations in disadvantaged areas, particularly those who rely on secondary crop agriculture for their livelihood, and to promote research and development related to agriculture to alleviate poverty in the Asia and Pacific region.

**By Airmail**