



ASSOCIATION OF SOUTHEAST ASIAN NATION

2nd ASEAN Rice Trade Forum

Rice Trade and Self-Sufficiency in ASEAN

Convened by the
ASEAN Food Security Reserve Board (AFSRB)
4-5 June 2013 ♦ Yogyakarta, Indonesia

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NOTES

1. Limited printed copies of the draft working papers in the main sessions of the 2nd ASEAN Rice Trade Forum are available on request. The finalized working papers can be later accessed and downloaded at <http://www.scribd.com/ASEANRiceTradeForum> and <http://www.adb.org/publications>.
2. The ASEAN Integrated Food Security (AIFS) Framework and Strategic Plan of Action on Food Security in the ASEAN Region (SPA-FS) 2009–2013 can be downloaded at http://www.gafspfund.org/sites/gafspfund.org/files/Documents/Cambodia_11_of_16_REGIONAL_STRATEGY_ASEAN_Integrated_Food_Security_Framework.pdf.
3. The four working papers and brochure of the 1st ASEAN Rice Trade Forum in June 2012 can be accessed and downloaded at <http://www.scribd.com/ASEANRiceTradeForum> and <http://www.adb.org/publications>. A brief report of the 1st ASEAN Rice Trade Forum is also posted at <http://www.asean.org/communities/asean-economic-community/item/asean-rice-trade-forum> and <http://www.adb.org/news/events/asean-rice-trade-forum>.



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PROGRAM

DAY 1: 4 June 2013, Tuesday			
Venue: Mataram Room 1			
Time	Activity		
07:30–08:30	Registration		
08:30–09:30	Opening Ceremony <ul style="list-style-type: none"> ♦ Welcome remarks: Ngin Chhay <i>Chairperson, ASEAN Food Security Reserve Board (AFSRB)</i> ♦ Welcome remarks: Takako Ito <i>Minister-Counsellor of the Mission of Japan to ASEAN</i> ♦ Welcome remarks: Lourdes Adriano <i>Advisor/Practice Leader, Asian Development Bank (ADB)</i> ♦ Keynote speech: Tahlim Sudaryanto <i>Assistant Minister for International Cooperation, Ministry of Agriculture, Republic of Indonesia</i> 		
09:15–09:30	Objectives and Agenda of the ASEAN Rice Trade Forum <ul style="list-style-type: none"> ♦ <i>Siribhusaya Ungpakhorn, AFSRB Secretariat</i> 		
09:30–10:00	Group Photo, Poster Walk, and Coffee Break		
10:00–11:10 SESSION 1: Understanding Rice Self-Sufficiency			
Parallel Technical Session			
10:00–10:50	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> Rice-importing country <ul style="list-style-type: none"> ♦ Brunei Darussalam ♦ Indonesia ♦ Malaysia ♦ Philippines ♦ People's Republic of China </td> <td style="width: 50%; vertical-align: top;"> Rice-exporting country <ul style="list-style-type: none"> ♦ Cambodia ♦ Lao People's Democratic Republic ♦ Myanmar ♦ Thailand ♦ Vietnam </td> </tr> </table>	Rice-importing country <ul style="list-style-type: none"> ♦ Brunei Darussalam ♦ Indonesia ♦ Malaysia ♦ Philippines ♦ People's Republic of China 	Rice-exporting country <ul style="list-style-type: none"> ♦ Cambodia ♦ Lao People's Democratic Republic ♦ Myanmar ♦ Thailand ♦ Vietnam
Rice-importing country <ul style="list-style-type: none"> ♦ Brunei Darussalam ♦ Indonesia ♦ Malaysia ♦ Philippines ♦ People's Republic of China 	Rice-exporting country <ul style="list-style-type: none"> ♦ Cambodia ♦ Lao People's Democratic Republic ♦ Myanmar ♦ Thailand ♦ Vietnam 		
10:50–11:10	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> Open Forum Venue: Mataram Room 1 </td> <td style="width: 50%; vertical-align: top;"> Open Forum Venue: Mataram Room 2 </td> </tr> </table>	Open Forum Venue: Mataram Room 1	Open Forum Venue: Mataram Room 2
Open Forum Venue: Mataram Room 1	Open Forum Venue: Mataram Room 2		
11:10–14:20 SESSION 2: Rice Outlook, Scenarios, and Trade			
	Plenary session Facilitator: AFSRB Member		
11:10–11:40	ASEAN and the global rice market situation and outlook <ul style="list-style-type: none"> ♦ <i>Eric Wailes, Distinguished Professor, University of Arkansas</i> 		
11:40–12:00	Open Forum		
12:00–13:30	Lunch Break		
13:30–14:00	Rice self-sufficiency vs. trade: Options for food security in ASEAN <ul style="list-style-type: none"> ♦ <i>Ramon Clarete, Dean, University of the Philippines School of Economics</i> 		
14:00–14:20	Open Forum		

14:20–17:30		SESSION 3: Rice Self-Sufficiency and Policy Options
		Plenary session Facilitator: AFSRB Member
14:20–14:50		Rice self-sufficiency: Fixed and flexible approaches—The case of Indonesia ♦ <i>Ronnie Natawidjaja, Director, Center for Agrifood Policy and Agribusiness Studies, Padjadjaran University</i>
14:50–15:10		Open Forum
15:10–15:30		Coffee Break
15:30–16:00		Complementing regional rice reserves with novel domestic reserve mechanisms ♦ <i>Roehlano Briones, Senior Research Fellow, Philippine Institute for Development Studies</i>
16:00–16:20		Open Forum
16:20–16:30		Mechanics of breakout group discussions
16:30–17:30		Breakout group discussions: What are the issues and opportunities for self-sufficiency, and other options?
17:30		DAY 1 concludes / Dinner after

DAY 2: 5 June 2013, Wednesday
Venue: Mataram Room 1

09:00–10:00		Plenary meeting on breakout group discussions <i>The group leader of each of the breakout groups will report on the results of their group.</i> Facilitator: ADB
10:00–10:15		Coffee Break
10:15–11:55		SESSION 4: Options for Regional Cooperation and Supply Chain investment
		Plenary session Facilitator: AFSRB Member
10:15–10:45		Food, infrastructure and logistics chain: Case study of BIMP–EAGA ♦ <i>Samuel Daines, President, SRD Research Group</i>
10:45–11:05		Open Forum
11:05–11:35		ASEAN & SAARC regional rice trade: Status & opportunities for ensuring food security ♦ <i>Pramod K. Joshi, Director for South Asia, International Food Policy Research Institute (IFPRI)</i>
11:35–11:55		Open Forum
11:55–13:30		Lunch Break
13:30–17:15		SESSION 5: Investments and Trade—Building a Consensus
13:30–14:45		Breakout group discussions on investment and trade: (1) What are the challenges? (2) What are the opportunities? (3) What are the next steps? <i>Participants will break up into the same groups set up in Session 3 and will discuss a given theme following a set of guide questions.</i>
14:45–15:15		Coffee Break
15:15–16:15		Plenary presentation of breakout group discussions <i>The group leader of each of the breakout groups will report on the results and recommendations of their respective group.</i> Facilitators: AFSRB Chair and ADB
16:15–17:15		Plenary meeting on building a consensus of what to recommend to AFSRB Facilitators: AFSRB Chair and ADB
17:15–17:30		Closing Ceremony Closing remarks by the ASEAN Secretariat ♦ <i>Pham Quang Minh, ASEAN Economic Community Department</i>
17:30		DAY 2 concludes: Forum adjourns



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Overview of the 2nd ASEAN Rice Trade Forum Theme: Rice Trade and Self-Sufficiency in ASEAN

4–5 June 2013, Sheraton Mustika Hotel, Yogyakarta, Indonesia

Background

Despite the onrush of fast-foods and urbanization, a bowl of rice still defines much of the way of life across Southeast Asia. The tiny grain remains not only the main staple but also the primary crop that continues to influence the economic development and political agenda of Member States of the Association of Southeast Asian Nations (ASEAN). ASEAN includes the world's biggest rice producers and rice consumers as well as the biggest rice exporters and rice importers, with nearly half of global rice exports originating from the region. Yet food accessibility is highly uneven in the ASEAN Member States, with extreme poverty resulting in the undernourishment of an estimated 76 million of the regional population (FAO, WFP, and IFAD 2012).¹

The thinness of global rice trade is widely acknowledged, as only 7% percent of global production is internationally traded. The food price crisis of 2007–2008 was a manifestation of the weak information system and distrust in rice trade between exporters and importers, leading to the instability of the international rice market. At the regional level, ASEAN responded quickly to this crisis by adopting the ASEAN Integrated Food Security (AIFS) Framework and Strategic Plan of Actions for Food Security (SPA-FS) in 2009. ASEAN called on its member states to continuously monitor rice price volatility and to coordinate policy responses in the region to prevent similar crises.

At the national level, some Member States have adopted policies and programs to secure their domestic rice supply and to stabilise rice prices. Indonesia and the Philippines, two of the world's largest rice importers, have taken initiatives aiming for self-sufficiency in rice production by 2013–2014. Thailand and Viet Nam are the two biggest exporters of rice not only in the region but globally, while Cambodia, Lao PDR, and Myanmar are becoming important rice exporters as well.² They too have elaborate food security programs.

On 4–5 June 2013, the ASEAN Food Security Reserve Board (AFSRB) will conduct the 2nd ASEAN Rice Trade Forum in Yogyakarta, Indonesia. The Forum will be held back-to-back with the 33rd Annual Meeting of the AFSRB, which will evaluate the outcome of the Forum as basis for its recommendation to the Senior Officials Meeting of the ASEAN Ministers on Agriculture and Fisheries (SOM-AMAF).

¹ FAO, WFP and IFAD. 2012. The State of Food Insecurity in the World 2012; Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition. Rome: FAO.

² Wailes, Eric.J., and Eddie C. Chaves. 2012. *ASEAN and Global Rice Situation and Outlook*. ADB Sustainable Development Working Paper Series No. 22, August. Manila: ADB.

The ASEAN Rice Trade Forum

The concept of an ASEAN-wide rice trade forum was endorsed by the 32nd Special Senior Officials Meeting of the ASEAN Ministers on Agriculture and Forestry in August 2011. The first ASEAN Rice Trade Forum was held on 19–20 June 2012 in Siem Reap, Cambodia, with the theme “Managing the risks of extreme rice price volatility.”³ Following the successful implementation of the pilot ASEAN Rice Trade Forum, the SOM-AMAF in its 33rd meeting in August 2012 endorsed the continuation of the Forum.

The purpose of the ASEAN Rice Trade Forum is to serve as a platform for representatives of the ASEAN Member States and various stakeholder groups to collectively

- share, analyse and disseminate the rice market outlook and various scenarios;
- identify areas of cooperation and policy coordination to mitigate or avoid extreme rice price volatility;
- determine long-term and strategic policy reforms for the sustained development of regional rice trade; and
- identify immediate and long-term policy measures to attain food security.

Theme and Objectives of the 2nd Forum

The theme for the 2nd ASEAN Rice Trade Forum is “Rice Trade and Self-Sufficiency in ASEAN.” The specific objectives of the Forum are

- to understand the dynamics and feasibility of rice self-sufficiency as a policy option and policy action in ASEAN;
- to identify the costs, benefits, risks, and trade-offs of rice self-sufficiency and rice trade; and
- to determine the key challenges and opportunities with respect to rice trade and rice self-sufficiency strategies, within the evolving regional and global context.

Target Participants

The Forum will invite about 60 participants representing the following:

- ASEAN Food Security Reserve Board (AFSRB)
- Rice farmers’ groups, traders associations, and agribusinesses
- Nongovernmental organisations (NGOs)
- International partners and donors
- ASEAN Secretariat and AFSRB Secretariat
- Selected experts and resource persons

Organisation

The AFSRB Secretariat will organise the event in collaboration with the ASEAN Secretariat. Technical support is provided by the Asian Development Bank (ADB) through RDTA 7495:

³ A brief report of the 1st ASEAN Rice Trade Forum can be accessed at <http://www.asean.org/communities/asean-economic-community/item/asean-rice-trade-forum> and <http://www.adb.org/news/events/asean-rice-trade-forum>. The four working papers and brochure of the 1st ASEAN Rice Trade Forum can also be accessed and downloaded at <http://www.scribd.com/ASEANRiceTradeForum> and <http://www.adb.org/publications>.

Support for ASEAN Plus Three Integrated Food Security Framework, financed by the Japan Fund for Poverty Reduction.

Methodology and Agenda

The 2-day Forum will use a combination of plenary meetings, breakout group discussions, and poster exhibit. The Forum will include evidence-based policy analysis using tried and tested tools such as the Arkansas Global Rice Model, which is part of the University of Arkansas suite of rice models that includes Riceflow.

The Forum is organised around five topics, which each corresponds to one session:

- **SESSION 1:** Country policies and experiences regarding rice self-sufficiency
- **SESSION 2:** Outlook and scenarios for the rice market and rice trade
- **SESSION 3:** Policy options on food self-sufficiency
- **SESSION 4:** Other options for regional cooperation and supply chain investment
- **SESSION 5:** Summary report of the Forum and recommendations

SESSION 1 will be led by the representatives of the ASEAN Member States. The session will be conducted in parallel meetings, with rice-importing countries in one breakout group and rice-exporting countries in the second breakout group. For the rice-importing countries, the discussion will focus on the rationale, strategies, and outcomes of their respective food self-sufficiency programs. For the rice-exporting countries, the discussion will tackle the domestic implications of rice-importing countries' self-sufficiency programs (which are often invoked by these countries to rationalise their self-sufficiency targets) as well as their own policy stance toward export restrictions.

SESSION 2 will be led by the expert tandem of economists Eric Wailes and Ramon Clarete. The first presentation by Dr. Wailes will use the Arkansas Global Rice Model (AGRM) to depict baseline and alternative scenarios for the rice market. The baseline scenario is obtained from a deterministic run of the AGRM and constitutes a 10-year outlook for the global rice market. The focus is on regional rice trade as well as large rice consumers and rice producers in ASEAN.

The second presentation by Dean Clarete will project alternative scenarios related to food self-sufficiency based on stochastic runs of the AGRM, as follows:

- Variability of climate and other environmental factors cause supply shocks. Rice production programs to reach self-sufficiency targets may be based on "normal" conditions. The implications of these shocks on the feasibility of self-sufficiency targets will be presented and assessed. In particular, the costs and benefits of 100% self-sufficiency at all times, called *fixed self-sufficiency*, in key rice-importing countries will be evaluated in comparison with the baseline scenario.
- Supply shocks in rice-exporting countries may also provoke their governments to impose export restrictions. The implications of an export ban on a major rice-exporting country will be analysed as another alternative scenario.

SESSION 3 will be led by the expert tandem of economists Ronnie Natawidjaja and Roehlano Briones. The first presentation by Dr. Natawidjaja will evaluate policy options related to rice self-sufficiency, focusing on the case of Indonesia. The implications of fixed self-sufficiency for rice-importing countries that were presented earlier will be briefly reviewed. An alternative option of

flexible self-sufficiency will be introduced.

The second presentation by Dr. Briones continues the discussion on policy options. First, he generalizes the case of flexible self-sufficiency to one involving the following elements: production targets based on nutritional norms (rather than zero imports); allowing for episodes of zero to positive imports, depending on the vagaries of domestic production and global trade; and firm commitments from rice-supplying countries to avoid export bans. Second, he scrutinises the option of utilising rice reserves in response to possible extreme supply shocks or equivalently, export bans by a major rice-exporting country. The first line of defense is expanded domestic reserves with strategies to reduce the costs of expanding national reserves, such as outsourcing of storage to the private sector (which is already being done in Indonesia, Thailand, and the Philippines), and regulated private storage, such as in Singapore.

Breakout group discussions will follow, tackling the issues and opportunities for self-sufficiency and other options.

SESSION 4 will be led by the expert tandem of economists Pramod K. Joshi and Samuel Daines. It will study out-of-the-box options through two different but complementary approaches—regional cooperation and supply chain investment. The first presentation by Dr. Daines will introduce an integrated food value chain, infrastructure, and logistics system plan, using as a case study the Brunei Darussalam–Indonesia–Malaysia–Philippines East ASEAN Growth Area (BIMP–EAGA) economic trade routes linking the key mega urban centers and food-producing areas. Availability and timely delivery of food in the region will be facilitated through the development of strategic productivity- and connectivity-enhancing logistics that utilise water- and energy-efficient technologies and are adapted to increased agro-climatic variability.

The second presentation by Dr. Joshi will examine prospects for region-to-region cooperation between the two largest such organisations in Asia—the ASEAN and the South Asian Association for Regional Cooperation (SAARC). The member states of SAARC are Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. SAARC has spearheaded the South Asia Preferential Trading Agreement (SAPTA) as well as the SAARC Food Bank. Both the SAPTA and the SAARC Food Bank share commonalities and differences with their ASEAN counterparts—the ASEAN Free Trade Area (AFTA) and APTERR. Among SAARC countries, India has closest links with ASEAN, being a dialogue partner (along with nine other countries) and a member of the ASEAN–India Free Trade Area (AIFTA). Potential areas for food security cooperation between SAARC and ASEAN, focusing on food trade and food reserves, will be identified and assessed.

SESSION 5 will conclude the Forum with breakout group discussions followed by a plenary meeting to synthesise the discussions and to build a consensus on policy options, interregional cooperation, and investment options. A draft of the summary report and the recommendations of the Forum will be offered for plenary consideration and adoption. The recommendations will be endorsed to the AFSRB and submitted for consideration to the Senior Officials Meeting of the ASEAN Ministers on Agriculture and Forestry.

A detailed activity flow of the Forum is presented in the Program.



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SESSION 2.1

ASEAN and the Global Rice Market Situation and Outlook

Eric J. Wailes and Eddie C. Chavez

EXECUTIVE SUMMARY

Member states of the Association of Southeast Asian Nations (ASEAN) play a major role in the global rice market. Over the next decade, the ASEAN region is projected to account for 53% of net exports, 18% of net imports, 29% of harvested area, 25% of total rice production, and 22% of total rice consumption. Rice is the major food staple in ASEAN countries and thus plays a significant role in the food security concerns of the region. The rice price crisis that occurred in 2007–2008 has created a widespread sense of urgency among policy makers and other rice stakeholders to coordinate domestic policies and rice trade.

This paper documents the current and projected status until 2022 of the rice economies in ASEAN countries by assessing their potential supply and demand paths over the next decade.^{*} Other Asian nations that have a significant role in the behavior and performance of the global rice economy are also discussed—the People's Republic of China (PRC), Japan, the Republic of Korea, as well as India and Pakistan.

While the ASEAN and global rice economies are always subject to uncertainties in weather and policies, abundant rice supplies and slow growth in rice consumption have resulted in downward pressure on prices. Driven by the use of higher-yielding rice varieties and other improved production technologies, the outlook for the rice economies is expected to follow this trend. The focus on self-sufficiency by major rice-consuming countries is expected to restrain rice trade and dampen international rice prices over the next decade.

Domestic price policy supports, coupled with good weather, have resulted in strong rice harvests in Thailand and India and large stock inventories. Import demand growth in other ASEAN countries is limited for similar reasons. Much of the projected growth in rice trade is expected to come from other regions, particularly Africa. Despite the desire for self-sufficiency and a trend for production to grow faster than demand, major ASEAN rice importers—the Philippines and Indonesia—are expected to remain important importers. Expected expansion in rice exports from Cambodia and Myanmar will add to competitive price pressures that will result in lower international prices over time.

Results of stochastic analysis, based on uncertainties associated with production, show that international long grain reference prices are expected to range from \$368 per metric ton to as high as \$506 per metric ton, a gap of \$138. Volatility in prices as a result of uncertain weather and policies thus remains a persistent food security concern with the ASEAN and global rice economy.

^{*} This working paper was prepared for the 2nd ASEAN Rice Trade Forum on 4–5 June 2013 in Yogyakarta, Indonesia. Technical assistance was provided by the Asian Development Bank (ADB), with financing from the Japan Fund for Poverty Reduction. The lead author, Eric J. Wailes, holds the rank of Distinguished Professor at the Department of Agricultural Economics and Agribusiness at the University of Arkansas. Eddie C. Chavez is a member of Dr. Wailes's team, which developed and maintains the Arkansas Global Rice Model and Riceflow model. The views expressed in this paper are those of the authors and do not necessarily reflect the views and policies of ADB or the Board of Governors or the governments that they represent, or of the institutions at which the authors work.



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SESSION 2.2

Rice Self-Sufficiency vs. Trade: Options for Food Security in ASEAN Ramon Clarete

EXECUTIVE SUMMARY

The Association of Southeast Asian Nations (ASEAN) is important to the global rice market, particularly because the region includes the largest rice-exporting and rice-importing countries of the world.¹ Nearly half of the rice that is traded comes from the region. Indonesia and the Philippines are among the largest rice importers. Both actively pursue full self-sufficiency in rice, investing on expanding production and restricting imports to increase local prices to encourage production.

The dynamics of rice trading in ASEAN may explain to a great extent why rice trade in the world remains thin. Indonesia and the Philippines license rice imports to control their quantity. Because of this off-on market participation of the major rice-importing countries, the bulk of the region's rice exports go outside the region. Two factors influence the reluctance of the rice-importing ASEAN member states to rely on regional rice trade for their production shortfalls. Import restrictions and public spending to increase local rice outputs are used to secure the political support of the large sector of rice farmers. The other factor is that rice trade is risky for food security because of extreme climatic variations, the limited foreign exchange resources of rice-importing ASEAN member states, and possible unilateral restrictions on rice exports by rice-exporting member states such as in 2008.

Clarete, Adriano, and Esteban (2013)² provided empirical evidence that rice self-sufficiency programs are implemented as a virtual national self-insurance against the risk of excessive rice price volatility. They suggested a possible deal whereby rice-importing member states scale down their self-sufficiency program levels in return for commitments from rice-exporting member states to supply their rice import demands at agreed prices.

This paper assembles data on historical rice yields in the region's two largest rice-importing and rice-exporting countries, and calculates their probability distribution. Using the Arkansas Global Rice Model (AGRM),³ the paper simulates what may happen to the performance of the rice industries of these countries if these are subjected to random shocks that emulate the distribution of historical rice yields. The exercise is done to calculate the probability that Indonesia and the Philippines become fully self-sufficient in rice.

The simulation results indicate that Indonesia has apparently no likelihood of becoming self-sufficient in rice while the Philippines has only a 5% probability. Both countries are investing to increase rice yields. If these investments are sustained, there is a likelihood that these countries develop positive net exports given the continued high-price policy for rice due to import restrictions. These results,

¹ This working paper was prepared for the Second ASEAN Rice Trade Forum on 4–5 June 2013 in Yogyakarta, Indonesia. Technical assistance was provided by the Asian Development Bank (ADB), with financing from the Japan Fund for Poverty Reduction. The author is the Dean of the University of the Philippines School of Economics. The views expressed in this paper are those of the author and do not necessarily reflect the views and policies of ADB or the Board of Governors or the governments that they represent, or of the institutions at which the author works.

² Clarete, R., L. Adriano, and A. Esteban. Forthcoming. *Rice Trade and Price Volatility: Implications on ASEAN and Global Food Security*. Economics and Research Department, Asian Development Bank (ADB).

³ E. Wailes, who developed the Arkansas Global Rice Trade Model, conducted the stochastic simulations. Interpretation of the results are of the author.

however, do not suggest that these programs are worth pursuing.

The substantial amount of rice industry-specific public investments set aside in pursuit of self-sufficiency, combined with the economic cost to consumers of import controls, cast doubt on the economic desirability of self-sufficiency programs as the data in the Philippines indicate. The incremental rice produced would cost the country far less if that rice was imported. The added costs of the program are even higher due to the inefficiency associated with import restrictions.

That the self-sufficiency program is commendable on the ground that it comprises an income transfer from rice consumers to poor rice farmers is not particularly convincing. Only a third of the producer benefit from import restrictions accrue to the bottom 60% of the farmers. Moreover, their being consumers of rice greatly offsets the rents they receive from import controls. Worse, for the poorest 7% of rice farmers in the Philippines, the net benefit of import restrictions is negative.

The results of the simulations indicate that in 2013, there is zero probability that rice-exporting countries run out of rice to sell to the rest of the world. Projections over the next 10 years suggest that the marketable surplus of Thailand increases. In 2022, there is 80% chance that Thailand's net exports go up from a minimum of 10.3 million tons to as high as 12.4 million tons. In 2012, Thailand's rice exports reached 7.6 million tons. However, there is 80% chance that Viet Nam reduces its marketable surplus from a minimum of 4.6 million tons to 3.3 million tons in 2022 from its level of 7 million tons in 2012. At worst, the projected reduction of rice exports of Viet Nam is offset by the minimum forecasted gain of Thailand.

These export capacities have great potential for expanding with further investments in Thailand and Vietnam and with further rice productivity gains in Cambodia and Myanmar. The incentive for these investments requires minimizing unnecessary disruptions of trade flows by acting on a few reforms.

First, the risk of extreme rice price volatility can be minimized by gathering market-related data on rice and sharing information among member states and coordinating responses to any developing market tightness to prevent unproductive price speculation. With the regional rice reserve handled by the ASEAN Plus Three Emergency Rice Reserve (APTERR), the ASEAN Food Security Reserve Board (AFSRB) can be re-engineered to provide a platform to discuss untoward market situations.

Second, the major rice-importing countries and rice-exporting countries can agree to ensure a more predictable rice trade. Rice-importing countries may offer to reduce their rice self-sufficiency targets and import the scaled-down quantities in government-to-government forward rice markets. In return, rice-exporting countries guarantee delivery regardless of the export policies they may decide to take.

Third, transparent rules are needed on implementing Article 24 of the ASEAN Trade in Goods Agreement (ATIGA), which allows member states to temporarily waive their obligations in rice and sugar. The business process of implementing the trade remedies under the 1994 General Agreement on Tariffs and Trade may be a useful model in putting a predictable structure to Article 24.

The ASEAN Rice Trade Forum, which the AFSRB convenes under its mandate from the ASEAN Ministers on Agriculture and Forestry, provides a platform for the timely and action-based discussion of policy bottlenecks in rice trade. The forum may expand to include other key market players, such as India and Pakistan among the exporters, as well as Bangladesh and ASEAN's APTERR partners, the People's Republic of China, Japan, and the Republic of Korea.

The ASEAN Integrated Food Security framework has called for expanding rice trade, which requires nurturing confidence in rice trade. For the rice-importing countries, rice trade is increasingly seen as reliable sources for their rice deficit requirements. For the rice-exporting countries, stable and steadily growing trade is key to the further expansion of their marketable surpluses.



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SESSION 3.1

Rice Self-Sufficiency: Fixed and Flexible Approaches The Case of Indonesia

Ronnie S. Natawidjaja and Irlan A. Rum

EXECUTIVE SUMMARY

Rice occupies a most important position in Indonesia.^{*} Having enough rice to feed everyone is seen as a mark of national prosperity and sovereignty. The *lumbung*, the rice barn found in every island and among all ethnic groups, is extensively used as a nationally recognized cultural symbol of prosperity. Rice has historically epitomized food security as guaranteed to all citizens by the ruling power (king or sultan) in a locality. The tiny grain is not only the main staple but a powerful icon that has carried into modern-day Indonesia. It is difficult to argue how a country can survive or let alone aspire to greatness without having control of this basic commodity.

The argument has gained even stronger support from the Parliament and interest groups following the food price crisis in 2008. Along this trend, the Indonesian government has adopted a policy of food self-sufficiency. The policy implements at least 90% self-sufficiency and about 10% rice importation through the Bureau of Logistics (BULOG), which deals with food distribution and price control. However, there are no clear rules or standards on what determines the need for rice imports, how much rice imports are necessary, and when to import. The issue of rice importation is further complicated by the unclear basis of decision-making and multiple authorities. These problems have generated heated debates and greater uncertainty in the rice market, further increasing rice prices during critical times to the disadvantage of the poor. Still, the current rice policy has resulted in more stable although much higher rice prices than the international rice price levels in the last 5 years. Higher rice prices have benefited rice traders and rice millers more than the rice farmers. The policy has also been very costly to consumers who have had to pay higher prices, and especially harmful to the poor and small-scale farmers. As a result, the *Nilai Tukar Petani* index, which functions as a farmer's terms of trade index tracking price trends of expenditures relative to incomes for rural producer households, has continued to decline.

Given the current high, unabated conversion rate of rice lands to residential, commercial, and industrial uses, plus the problem of stagnant productivity, Indonesia will still continue to import rice in the beginning of each year, which is the period of the lowest harvest. This paper proposes a stronger pro-trade stance in relation to self-sufficiency by setting a fixed rice import quota before the end of each year. The National Food Authority is mandated by Food Law No. 18/2012 to decide on the amount of import quotas needed (no more than 10%) and to put in place transparent bids to avoid corruption. This way, Indonesia will still be able to maintain its self-sufficiency policy but with more efficient, less harmful results and consistent with international market price trends.

^{*} This working paper was prepared for the 2nd ASEAN Rice Trade Forum on 4-5 June 2013 in Yogyakarta, Indonesia. Technical assistance was provided by the Asian Development Bank (ADB), with financing from the Japan Fund for Poverty Reduction. The lead author is the director of the Center for Agrifood Policy and Agribusiness Studies (CAPAS) and a senior lecturer of the Faculty of Agriculture at Padjadjaran University, Bandung, Indonesia. The views expressed in this paper are those of the authors and do not necessarily reflect the views and policies of ADB or the Board of Governors or the governments that they represent, or of the institutions at which the authors work.



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SESSION 3.2

Complementing Regional Rice Reserves with Novel Domestic Reserve Mechanisms

Roehlano M. Briones

EXECUTIVE SUMMARY

The combination of domestic production, storage, and openness to trade are common instruments to achieve food security.^{*} When supported by interventions to increase food stocks and enhance production, these instruments offer resiliency against a typical range of environmental shocks. However, in a world beset by climate change, extreme production shocks are a tangible reality rather than a hypothetical prospect. Moreover, collateral export restrictions to contain domestic price instability are also a common response in rice-exporting countries.

Regional rice reserves offer some protection from both extreme shocks and export restrictions—to the extent that the forward contract scheme is a precommitment exempted in principle from changes in government policy. Ultimately, increased domestic rice reserves offer the best protection against extreme climate or policy shocks.

Given the high costs of sourcing and stockpiling rice reserves, a careful assessment must be made of the cost effectiveness of various options. The two activities of sourcing and storage entail the following combinations of public and private provisions:

- **Option 1:** Publicly-owned stocks in public storage
- **Option 2:** Publicly-owned stocks in private storage
- **Option 3:** Privately-owned stocks in public storage
- **Option 4:** Privately-owned stocks in private storage

Option 1 is the traditional scheme. It entails the largest fiscal outlay up front to build warehouses as well as running costs from the purchases of rice stocks from farmers, millers, or traders. Option 2 is an emerging scheme as the rice procurement of state trading agencies begins to exceed the capacities of government warehouses. One interesting variation is engaging the private sector in rice distribution as in the Asian Development Bank's Emergency Food Assistance Project in Cambodia.

Option 3 is rarely observed in practice. Option 4 is also not as common as either Options 1 or 2, although there are some practical examples in Southeast Asia, the most ideal of which is found in Singapore. The advantage of Option 4 is that it realizes cost efficiencies from private sector storage and avoids the fiscal burden of government procurement as well as the management burden of releasing and replenishing stocks. The disadvantage is that it requires a strong regulatory arm and a private sector that is well developed in terms of logistics and marketing. Nevertheless, with the increasing emphasis on private sector development and private–public partnership, Option 4 appears to be the most suitable way forward to address the problem of extreme shocks to food supplies and trade.

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SESSION 4.1

Food, infrastructure, and logistics chain: Case study of BIMP–EAGA Samuel R. Daines

EXECUTIVE SUMMARY

Food security for the vulnerable low-income segment of Asia's growing population faces the challenge of limited land, water, climate, and energy resources. New food supply-chain infrastructure, technologies, and approaches are needed to respond to this challenge. Food supply-chain infrastructure includes irrigation, processing, transport, and marketing facilities.

The SRD Research Group has collaborated with universities, regional banks, and private sector companies on design-build-operate-train-transfer projects for food supply-chain infrastructure in South America and Asia. These projects have developed in three stages: (1) a desk design of illustrative cutting-edge technology for food supply-chain infrastructure adapted to a selected production and market corridor; (2) field pilot proof-of-concept projects taking 2 crop years; and (3) full-scale build-lease-operate-train-transfer infrastructure development taking 8–10 years. The Asian Development Bank (ADB) has engaged individual consultants for a design-stage case study of food supply-chain infrastructure in the Brunei Darussalam–Indonesia–Malaysia–Philippines East ASEAN Growth Area (BIMP–EAGA). The case study for this corridor includes the production and processing of infrastructure design sites in Mindanao (Philippines) and Sumba islands (Indonesia), which supply food to mega-city, poor-income household markets in Metro Manila (Philippines) and Surabaya (Indonesia).

Secondary source data and field work by these individual consultants began with the support of their own institutions in 2011 for Sumba and Surabaya, and in 2012 for Mindanao and Metro Manila. The 3-month BIMP–EAGA case study design phase with ADB support began only in May 2013. Consequently, the illustrative designs presented at the 2nd ASEAN Rice Trade Forum use also the 2011–2012 site work by the consultants, which was supported by the SRD Research Group and Harvard University, and used with permission by ADB.

The infrastructure designs are based on adapting cutting-edge food supply-chain technologies appropriate for the Metro Manila to Surabaya corridor, which respond to five major transitions:

- **Climate:** transition to increased temperatures and variability in agro-climates and water supplies
- **Energy:** transition to renewable sources and fossil fuel-saving technologies
- **Scale:** transition from small-scale inefficient food-chain technologies to large-scale integrated systems
- **Urban:** accelerated population transition to cities and megacities
- **Nutrition:** increasing diversification of low-income diets to dairy, fruits, vegetables, and meats

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SESSION 4.2

ASEAN and SAARC Regional Rice Trade: Status and Opportunities for Ensuring Food Security

Pramod K. Joshi and Devesh Roy

EXECUTIVE SUMMARY

Rice is the most important staple food in Asia. The region produced around 460 million tons in 2011, exporting nearly 24 million tons of rice while importing about 14 million tons. South Asia and Southeast Asia are the core regions for global rice production and trade, accounting for about 60% of total output and almost 93% of total exports. The major rice-exporting countries are India and Pakistan from South Asia, and Thailand, Myanmar, and Vietnam, in that order, from Southeast Asia. On the other hand, the major rice-importing countries are Bangladesh, Nepal, and Sri Lanka from South Asia, and Indonesia, Malaysia, and the Philippines from Southeast Asia. There is little rice trade between South Asian and Southeast Asian countries due to the varying quality of rice and consumer preferences. However, as global food production and markets are more adversely impacted by climate change and price volatility, greater cooperation in rice trade may arise in the near future.

This paper examines the prospects for regional arrangements between the South Asian Association for Regional Cooperation (SAARC) and the Association of Southeast Asian Nations (ASEAN), highlighting the existing cooperation between and within these two regions and identifying potential areas for cooperation to address food security issues.

Both regions have existing agreements for promoting trade within their areas, such as the South Asian Free Trade Area (SAFTA) and the ASEAN Free Trade Area (AFTA). Trade flow has notably been very low within the South Asian region compared to the higher level of trade among ASEAN countries.

Unfortunately, there are no regional-level trade agreements at the moment between SAARC and ASEAN. However, some SAARC member countries such as India have bilateral trade agreements with ASEAN, which include the ASEAN-India Free Trade Area (AIFTA). As a result of this agreement, overall trade between India and ASEAN increased from \$30.7 billion in 2006-2007 to \$45.34 billion in 2008-2009, with \$70 billion projected for 2012. Also, there is an India-ASEAN Green Fund to promote the agriculture sector and research and development. There are also opportunities for Bangladesh to actively engage with ASEAN countries in trade.

Rising food prices and uncertainty are adversely affecting most of the poor food-importing countries in South Asia and Southeast Asia. On a country level, lessons may be learned from India, which was able to control the prices of food grains (especially rice and wheat) in 2008 and 2011 through its domestic and trade policies. On a regional level, ASEAN countries can draw lessons from the SAARC Food Bank with respect to meeting food demands under disaster conditions and other climate-driven uncertainties.

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PROFILE OF SPEAKERS AND FACILITATORS



LOURDES S. ADRIANO is the lead agriculture sector economist, and the Advisor and concurrently Practice Leader of the Agriculture, Rural Development and Food Security Unit, Regional and Sustainable Development Department, Asian Development Bank (ADB). Her technical and work experiences have been in the fields of food security; agricultural, rural, and regional development; agricultural trade; and poverty reduction. She obtained her graduate education and postgraduate training in development economics and agricultural economics at the University of Cambridge, University of Sussex, and University of the Philippines.

ROEHLANO BRIONES is a Senior Research Fellow at the Philippine Institute for Development Studies where he specializes in agricultural policy. He is the lead expert in the drafting of the rules and procedures for the ASEAN Plus Three Emergency Rice Reserve (APTERR). He has served as a consultant for ADB, the World Bank, and Food and Agriculture Organization (FAO), where he has also assisted government agencies in various Asian countries, especially Thailand, Indonesia, and Viet Nam. He received his Ph.D. degree in economics from the University of the Philippines and did postdoctoral research at the WorldFish Center in Penang, Malaysia.



NGIN CHHAY is the current Chairperson of the ASEAN Food Security Reserve Board. He is also the Director of the Department of Rice Crops under the Ministry of Agriculture, Forestry and Fisheries (MAFF) of the Royal Government of Cambodia since 2009. He also serves as Adviser to the MAFF Project Support Unit for the International Fund for Agricultural Development (IFAD) and Deputy Director of the National Integrated Pest Management Program. He received his MBA degree from the University of Queensland in Australia in 2000 and his bachelor's degree in agriculture from the Royal University of Agriculture in Phnom Penh in 1990, specializing in integrated pest management of rice crops.

RAMON CLARETE is the Dean of the School of Economics of the University of the Philippines (UP), where he has been a faculty member since 1989. Prior to this, he was Assistant Professor at the University of Western Ontario and Research Fellow at the East-West Center, Honolulu, Hawaii. His research interests are economics of agriculture, international economics, development economics, and public economics. He received his A.B. degree in economics from Xavier University, completed all requirements for his M.A. in Economics at UP School of Economics, and obtained his Ph.D. degree in economics from the University of Hawaii.





SAMUEL DAINES is the President of the SRD Research Group based in Massachusetts and a consultant in food supply-chain infrastructure and international trade. He has served as a visiting researcher at Harvard University, Massachusetts Institute of Technology, and as a Fellow at the Stanford Food Research Institute. Before founding the SRD Research group, he was a Senior Economist in USAID Washington and an Associate at the Ford Foundation. He has worked in over 70 countries with government agencies, the World Bank, regional and national development banks, and private sector companies. He received a Doctorate in Law from Harvard University, specializing in international trade law and economics.

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TAKAKO ITO assumed her current post as Minister-Counsellor of the Mission of Japan to ASEAN in May 2011. She joined the Ministry of Foreign Affairs of Japan in 1985. Her diplomatic postings include the Embassy of Japan in Canada (1988–1991), the Permanent Mission of Japan to the United Nations (1997–2001), and the Embassy of Japan in Malaysia (2001–2003) and in Indonesia (2010–2011). She graduated from Sophia University in 1985 with a B.A. degree in international legal studies and earned her M.A. for international affairs from the Norman Paterson School of International Affairs, Carleton University, Canada in 1988.

PRAMOD K. JOSHI is the Director for South Asia of the International Food Policy Research Institute (IFPRI). He was formerly director of the National Academy of Agricultural Research Management and the National Centre for Agricultural Economics and Policy Research in India. His areas of research include food policy, market and institutional economics, and climate change resilient agriculture. He was recently named a Fellow of the Indian Society of Agricultural Economics (2012) for his lifetime contributions in agricultural economics and rural development. He holds a master's degree and Ph.D. degree in agricultural economics from the G. B. Pant University of Agriculture and Technology in Pantnagar, India.



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RICE SELF-SUFFICIENCY: FIXED AND FLEXIBLE APPROACHES THE CASE OF INDONESIA¹

Ronnie S. Natawidjaja and Irlan A. Rum²

EXECUTIVE SUMMARY

Rice is not just a commodity, it occupies a most important position in Indonesian politics. Having enough rice to feed everyone is seen as a mark of national prosperity and sovereignty. The *lumbung*, the rice barn found in every island and among all ethnic groups, is extensively used as a nationally recognized cultural symbol of prosperity. Rice has historically epitomized food security as guaranteed to all citizens by the ruling power (king or sultan) in a locality. The tiny grain is not only the main staple but a powerful icon that has carried into modern-day Indonesia. It is difficult to argue how a country can survive or let alone aspire to greatness without having control of this basic commodity.

The argument has gained even stronger support from the Parliament and interest groups following the food price crisis in 2008. Along this trend, the Indonesian government has adopted a policy of food self-sufficiency. The policy implements at least 90% self-sufficiency and allows the Bureau of Logistics (BULOG), which deals with food distribution, price control, and to import about 10%. However, there are no clear rules or standards about what determines the need for rice imports, how much imports are necessary, and when to import. The issue of rice importation is further complicated by the unclear basis of decision-making and multiple authorities. These problems have generated heated debates and greater uncertainty in the rice market, further increasing rice prices during critical times to the disadvantage of the poor.

Controlling domestic market with restriction for import and export and isolating from the international market, the government have been able to control more stable price but price has not been returning to the seasonal price position and tend to increase higher from the previous year (in a real value). By the end of 2009, rice price in Indonesia was already higher than the international market and increasing. This is to demonstrate that a man made isolated stabilization mechanism is rigid and costly. High cost of food will hurt the poor and the area most vulnerable to chronic food insecurity.

However, there are better alternatives policies to achieve the objective of food security according to the New Food Law 18/2012. The Benefit Cost analysis shows that the best and more pro-trade approach is a flexible self-sufficiency policy with a tariff mechanism. The tariff was calculated to be appropriately set at 32 percent ad-valorem tax. The challenge is on a border control and high cost of monitoring for the tariff policy to be effective. The analysis also shows that a flexible self-sufficiency policy with a quota mechanism could be the second alternative. The policy gives almost the same Benefit Cost ratio with tariff policy. However, this policy is less preferred from the trade agreement perspective. The analysis demonstrates that the Fixed 100% Rice Self-Sufficiency policy is the most expensive and less effective policy to achieve the policy objective.

¹ This working paper was prepared for the Second ASEAN Rice Trade Forum on 4–5 June 2013 in Yogyakarta, Indonesia. Technical assistance was provided by the Asian Development Bank (ADB), with financing from the Japan Fund for Poverty Reduction.

² The lead author is the director and the second author is the research assistant of the Center for Agrifood Policy and Agribusiness Studies (CAPAS) Padjadjaran University, Bandung, Indonesia. The views expressed in this paper are those of the author and do not necessarily reflect the views and policies of ADB or the Board of Governors or the governments that they represent, or of the institutions at which the author works.