A Background Paper for the Strategic Plan of Action on ASEAN Cooperation in Food and Agriculture (2005 – 2010)

REPSF Project No. 03/004

Authors:
International Trade Strategies Pty Ltd
Center for Food and Agribusiness, University of Asia and the Pacific

Final Report
July 2004

ABSTRACT

The report discusses the dominant trends in food and agriculture at both the global and regional levels for the period 2005-2010 and identifies the key issues for ASEAN as a result of such trends. It reviews the current strategic plan of action on ASEAN cooperation in food and agriculture that was developed for the period 1999 – 2004 and evaluates the relevance of its strategic direction with the emerging global and regional trends and developments. The report concludes with recommendations for the next plan of action in view of the global and regional trends likely to affect the food and agriculture sectors in ASEAN and also taking into consideration the achievements and relevance of the past plan.

CONTENTS

LIST OF TABLES

LIST OF BOXES

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
AEM	ASEAN Economic Ministers
AFMA	The Philippines Agriculture and Fisheries Modernization Act
AFSIS	ASEAN Food Security Information System
AFTA	ASEAN Free Trade Area
AMAF	ASEAN Ministers on Agriculture and Forestry
ASEAN +3	ASEAN Plus People's Republic of China, Japan and Republic of Korea
APEC	Asia Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
Bali Concord	Bali Concord II
BFAD	The Philippines Bureau of Food and Drugs
BIMP-EAGA	Brunei-Indonesia-Malaysia-The Philippines East ASEAN Growth Area
BULOG	Badan Urusan Logistik Nasional (Indonesian National Food Logistics Body)
CEPT	Common Effective Preferential Tariff Scheme under AFTA
CFA	Center for Food and Agribusiness
CLMV	Cambodia, Lao PDR, Myanmar and Viet Nam
DA	The Philippines Department of Agriculture
DFAT	Department of Foreign Affairs and Trade, Australia
EAERR	East Asian Emergency Rice Reserve
EU	European Union
FAO	United Nations Food and Agriculture Organization
FMD	Foot and Mouth Disease
FTA	Free Trade Agreement
GBHN	Indonesian Guidelines for National Development
GDP	Gross Domestic Product
GM	Genetically Modified
GMOs	Genetically Modified Organisms
HPA	Hanoi Plan of Action
HRD	Human Resource Development
IFPRI	International Food Policy Research Institute
IMT	Indonesia-Malaysia-Thailand growth triangle
IPM	Integrated Pest Management
ITS	International Trade Strategies
Kcal	Kilocalories
Kg	Kilograms
LDCs	Least Developed Countries
MFN	Most Favoured Nation Treatment
MOU	Memorandum of Understanding
MRLs	Maximum Residue Limits
MTPDP	Medium Term Philippines Development Plan
NAP	Malaysia National Agriculture Policy
NFA	The Philippines National Food Authority
OECD	Organization for Economic Cooperation and Development
PDD	Singapore Primary Product Department
QASAF	Quality Assurance System for Fresh and Minimally Processed ASEAN Fruits
R&D	Research and Development
SEAFDEC	Southeast Asian Fisheries Development Centre
SIJORI	Singapore-Johor-Riau Growth Area
SOM	Senior Officials Meeting
SOM AMAF	Senior Officials Meeting of the ASEAN Ministers on Agriculture and Forestry

SPA	Strategic Plan of Action on ASEAN Cooperation in Food, Agriculture, and Forestry 1999 – 2004
SPS	Sanitary and Phytosanitary
TBD	Singapore Trade and Development Board
UHT	Ultra Heat Treated
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
US	United States
VAP	Vientiane Action Programme
WHO	World Health Organization
WTO	World Trade Organization

METHODOLOGY AND USE OF DATA

The report was undertaken jointly by International Trade Strategies Pty Ltd (ITS) and the Center for Food and Agribusiness at the University of Asia and the Pacific (CFA) according to a jointly developed project outline, methodology and framework.

1. RESEARCH

Research work was based on available resources and was primarily conducted through desk research. Due to timing and funds available for the project, only limited fieldwork was possible. Interviews were conducted with relevant officials and representatives in Indonesia, The Philippines, Malaysia, Singapore and Lao PDR as the fieldwork for the project. The interviews served mainly as a source of opinion of officials and representatives on current and important issues facing the ASEAN food and agriculture sectors and also to inform consultant data and information.

Desk research was conducted by ITS and the CFA from Australia and the Philippines. Research was based on both quantitative and qualitative sources and analyzed by consultants. Again, due to the size and timing of the project, collation of primary data was not possible. Data was drawn from a variety of secondary sources, primarily from data based on official statistics collated by international organizations such as the United Nations Food and Agriculture Organization (FAO), the Organization for Economic Cooperation and Development (OECD) and the World Trade Organization (WTO). Where data from these sources was unavailable, data from reputable national organizations such as the United States Department of Agriculture was used.

The consultants note at the outset that whilst every effort was made throughout the report to provide consistent, up-to-date and relevant data, for some countries and subjects information was limited or simply not available.

A more detailed list of data sources used is noted in the reference section of the report.

a) Data on production

Information on agricultural production was drawn from three key sources: the FAO, the OECD and the WTO. Other centralized sources included the International Food Policy Research Institute (IFPRI), and the United States Department of Agriculture (USDA) Economic Research Service.

We note that data on production in the report is presented in terms of the *volume* of goods produced, usually in metric tons. Data in value terms is limited and is not generally available. The consultants are not aware of a single global source that provides general information on values of agricultural goods produced. Whilst this can make it difficult to analyze production, since volumes are not comparable across product groupings, it is the most up to date and consistent data on production available.

The FAO databases with information related to food and agricultural production and trade (that were reached through its website, www.fao.org) were utilized by consultants for this purpose. Quantitative production data from the FAO however is not uniform across all countries, products or regions. Furthermore, FAO data cannot be searched by the general public across all categories. For example, one product ("wheat") cannot be measured across all countries. This limited the capacity to obtain overall production data for one country from the FAO source.

Other sources were used to supplement the FAO data which included that from the Organization OECD, the WTO and the International Food Policy Research Institute (IFPRI). Data on global production from the United States Department of Agriculture (USDA) Economic Research Service was also used. Where the FAO or other international organizations could not deliver an official or particular statistic then national government resources were used.

Qualitative data on agricultural production was also used to supplement quantitative data and was accessed from a wide range of sources, depending on the product involved. Some products were reported on in detail by national governments, multilateral bodies and industry bodies. Sources of qualitative information on production included the United States Department of Agriculture (USDA) Foreign Agricultural Service (FAS) *Attaché Reports*. IFPRI reports on issues that delivered reliable qualitative information on agricultural production were also used by consultants.

b) Data on trade flows

Quantitative data on trade was more easily available and available in more detail than data on production. Generally speaking both volumes and values were used in the report, although values were used where available, in US$ terms.

The key centralized sources for both quantitative and qualitative data used were similar to those for production data, the FAO, the OECD and the WTO, as for the sources for qualitative data: the United States Department of Agriculture (USDA)'s Foreign Agricultural Service (FAS). The key FAO database accessed was "Agricultural Production and Trade". Other sources included The United Nations/Comtrade database; national statistical offices; and national economic and agricultural research centres

Qualitative data on trade was sourced from a variety of sources including FAS *Attaché Reports* and from other international organizations.

c) Data on consumption

Consumption data used in the report was based on FAO food balance sheets and on national apparent food consumption rather than food consumption per se. This was due to the fact that FAO figures for food consumption are based on FAO data and not on food consumption surveys. It should be noted that food balance sheets are a measure of food and nutrient supply rather than consumption. Apparent consumption is often used as a proxy for consumption. Whilst it may overestimate data to a certain extent, and is not as accurate as food consumption surveys, within the scope and size of the project it provides the most consistent and relevant methods for comparing food consumption across all ASEAN Countries.

2. ANALYSIS

Research was analyzed and put together by ITS and CFA research consultants and then reviewed by senior consultants for consistency and accuracy.

From the research base, consultants were able to draw out trends and developments and apply these for the requirements of the project.

3. RECOMMENDATIONS

The research and analyses of trends and developments formed the basis from which to review and assess the current Strategic Plan of Action and to formulate recommendations for the future strategic direction of ASEAN food and agriculture.

This was undertaken by senior consultants, in light of the research findings.

EXECUTIVE SUMMARY

1. GLOBAL TRENDS AND DEVELOPMENTS

a) Drivers of trends and developments

During the period under review, trends and developments in international food and agriculture will be driven by global growth in food demand and trends in food consumption, changes in food systems due to globalization and changes in the global regulatory environment. Trends in technical standards governing trade, commodity prices and the impact of technology will also drive the sector.

Global growth in food demand is an important driver of changes and terms affecting global food and agriculture. International agencies anticipate that increasing population and increasing GDP in the future will lead to increasing global demand for food. The International Food Policy Research Institute (IFPRI) predicts that demand for cereals will expand, but more slowly than in the past. It anticipates that developing countries will not be able to meet their own demand for cereal and this should increase demand for imports of cereals. It also finds that demand for meat will increase significantly, 40 percent of which will be for poultry.

Trends in food consumption are also important. Changing income patterns are expected to affect consumption, particularly in developing countries, notably as incomes rise. The share of staples (cereals, roots, tubers) in consumption is declining, whilst *per capita* consumption of meat products is rising. It is predicted that *per capita* consumption of meats, dairy and fish products will continue to rise in developing countries up to the year 2030.

Globalization and food systems will also drive trends in the food and agriculture sectors up to 2010. Global food demand is primarily driven by demand from developing countries because of faster population growth and a bigger share of incomes spent on food than in developed countries. There is an observed global trend that as income levels rise, consumption of protein shifts to meats rather than cereals, and there is a subsequent shift towards greater consumption of processed products. At low income levels, cereals and basic packaged foods tend to be consumed most. At high income levels, fresh and healthy products and foods processed for convenience are favored.

ASEAN food consumption patterns broadly reflect global trends. Bread and cereals' share of food expenditure falls, while meat and dairy products' shares rise. The biggest rise occurs in beverages and tobacco, reflecting the increasing demand for higher-value processed products.

Markets in ASEAN can be disaggregated as follows: sophisticated processed and fresh, health products markets: Singapore, Brunei Darussalam; basic packaged food and frozen products: Thailand, Malaysia; unbranded products, and basic packaged products with some frozen products: Indonesia, The Philippines, Viet Nam; and the remainder mainly consume unbranded products, and some basic packaged foods.

Traditional distribution systems are being supplanted to varying degrees in ASEAN Countries. This has created competitive pressure on traditional distributors and forced domestic retailers and supply chains more broadly to improve efficiency. Food system competitiveness as a whole can benefit from such processes. Foreign retailers have played a major role in this development.

Changes in the global regulatory environment will also drive the food and agriculture sectors. World trade in agriculture is heavily regulated. This constrains opportunities for exporters in ASEAN economies. Market access is generally restricted and subsidies depress global prices for several products.

Global markets are unlikely to be significantly less restrained in the period 2005 to 2010. The World Trade Organization (WTO) is unlikely to secure significant reductions in global protection of agricultural trade by 2010. Changes in the instruments of protection in the

European Union (EU) may reduce protection in some products, but the benefit overall is likely to be negated by an increasing inclination to raise trade barriers to food on safety and environmental grounds. Some new access for ASEAN economies may be secured through regional or bilateral trade agreements. Overall, however, no significant reduction in global trade barriers to trade in agriculture should be anticipated. Some ASEAN economies of least-developed economy status may secure increased access to markets of industrialized economies from increased preferential access. In the recent past there has been a marked trend for increased regulation of trade in agriculture to enhance the safety of food and to support environmental goals. This has had an impact on the trade of ASEAN economies. In the period under review, this trend is likely to increase. New restrictions on ASEAN agricultural trade are likely.

Trends in commodity prices are also important. Prices for major agricultural commodities were generally on an upward trend to 1995-1996. From 1997 onwards, prices were sliding and/or fluctuating. The interplay of supply and demand factors affected price movements for these commodities in the world market. Commodity prices, specifically ASEAN agriculture exports, recorded long-term declines in prices in the past decade. This included coffee, coconut oil, palm oil, rice, shrimps, sugar and rubber. The fall in prices benefited net importers like Indonesia, Malaysia, the Philippines and Singapore. Commodity prices have fallen faster than the manufactures unit value index[1] which only averaged 1.7 percent per year compared to higher levels in current prices for the said commodities.

The impact of technology will be felt up to 2010. Biotechnology is now starting to create products that differentiate markets. This is most evident with products which contain genetically modified material. New products with new characteristics are being developed – higher productivity, higher nutritional value, greater resistance to disease and insects and greater ease of use. Genetically modified (GM) technology potentially will radically alter the economics of many markets. Producers which do not keep abreast of developments risk being sidelined. The products are controversial in some markets. Demand for some GM-free products is growing, but the shaping of markets for such products are being created by regulators rather than consumers.

b) Issues for ASEAN

ASEAN needs to be well placed to manage these trends and developments. ASEAN food producers will be placed to meet additional demand for rice. Some of that demand will be from other ASEAN economies unless they are able to reorganize rice production to become exporters themselves. If ASEAN Countries are to become globally-competitive suppliers of the anticipated increase in demand for meat, governments will need to ensure regulatory arrangements foster globally-competitive production.

Food production systems in ASEAN will need to accommodate changing demands from consumers, both in domestic markets and internationally. Facilities and systems to enable efficient production, handling, processing and distribution will need to develop to keep up with demand for higher value-added and processed products from an increasingly affluent population which will also increasingly value convenience and food safety.

Future trends are also likely to see intensifying competition that can help keep prices low and maximize consumer choice. Additionally trade in processed foods should grow faster than trade in agricultural commodities as consumer tastes widen. Internationalization of food systems will continue, predominantly in the retail end of the chain with foreign direct investment. Market systems will be more vertically integrated through contracts, alliances and joint ventures; a dualistic system – modern and traditional – will continue to operate in most countries. A sector with numerous, small scale, family-owned enterprises will coexist alongside a large-scale, modern technological-intensive sector. Traditional local brands may become national ones and compete with global brands of multinational companies.

[1] Refers to the "unit value index in US dollar terms of manufactures exported from the G-5 countries (France, Germany, Japan, UK and the US) weighted proportionally to the countries' exports to the developing countries".

Exports of food will continue to play a key role in the development paths of ASEAN Countries. As incomes and costs rise, competitiveness of processed foods in individual economies will change, potentially resulting in relocation of processing capacity within or outside of ASEAN.

Given the global changes in the regulatory environment, it remains in the interests of ASEAN Countries to continue to work for global liberalization of agricultural trade through the WTO. The WTO processes give support to domestic programs to make markets more efficient and to open markets for exports from ASEAN farm sectors. ASEAN members should however not peg regulatory reform of farm production in ASEAN to the pace of change in the WTO. Globalization and changes in consumption patterns are driving change at a faster pace.

ASEAN producers and governments will also need to monitor increased technical standards governing trade. It is likely to alter the international market for ASEAN exports, in many cases by increasing trade restrictions, and in others by generating demand for products which meet these new tougher standards. ASEAN Countries need to be prepared both to contest these new trade regulations where that might be effective, anticipate their impact on production and trade and where markets for new products emerge, and ensure regulatory standards facilitate development of products for new markets.

For commodity prices, in the long-term (2005-2015), the World Bank projects recoveries in real prices for most commodities. This augurs well for the improvement in ASEAN agrifood exports.

The impact of technology should also not be discounted. There is a significant chance that GM technology will have a significant impact on some agricultural industries in the period under review. For ASEAN to keep abreast of these developments, it is vital that research and development of products of concern to ASEAN be monitored closely; consumer demand for and attitudes to GM products in industrialized markets be researched thoroughly; and systems of regulation for appraisal and release of GMOs for adoption by ASEAN economies be developed.

2. REGIONAL TRENDS AND DEVELOPMENTS

a) Key changes and trends

Key changes and trends in ASEAN food and agriculture sectors relate to the importance of food and agriculture in ASEAN economies as a whole and levels of trade and protection in individual economies. Drivers of changes and developments relate to trade liberalization at global and regional level, consumer demand and consumption trends, key agriculture policies and concerns about food security.

The food and agriculture sectors comprise an important part of most ASEAN economies in terms of employment and contribution to gross domestic product (GDP). Whilst the relative importance of the agricultural sector varies across ASEAN members, it remains particularly significant for the lesser-developed ASEAN members (Cambodia, Lao PDR, Myanmar and Viet Nam - CLMV countries) and also for Indonesia, Thailand and the Philippines. In most countries, the relative importance of agriculture as a share of GDP has been declining, with the exception of some CLMV countries for which the importance of agriculture has increased as production and exports have developed. By and large ASEAN remains a major producer of agricultural products, specifically in rice, copra, palm oil, natural rubber, fruits and vegetables and coffee.

Trade in agriculture and food products is important to ASEAN economies. ASEAN is a net exporter of food and agricultural commodities. Its trade balance in 2001 was US$ 53.8 billion. In 2001, the share of agriculture exports in total ASEAN exports was about 7 percent. Agricultural imports comprised about 5.6 percent of total imports. ASEAN's agricultural trade balance was US$16.5 billion. The most important food and agricultural exports from ASEAN economies are natural rubber, rice, fish and crustaceans, and vegetables. For various

economies coffee, sugar, palm oil and fruits are also important. The most important exports common to ASEAN economies are crustaceans, rubber and rice.

Levels of tariff protection on these products vary across ASEAN Countries. At the global level there are virtually no tariffs on key agriculture and food products in markets where agriculture is of less importance, namely Singapore and Brunei Darussalam. Highest barriers exist in lesser-developed ASEAN members who are less integrated into the global economy, namely, Lao PDR, Viet Nam, Myanmar and Cambodia. Amongst the other ASEAN member economies, Thailand maintains relatively high levels of tariff protection of key-traded products. Tariff levels in Malaysia and Indonesia on most key-traded products are lower, although peaks remain for certain products such as rice, tobacco, some edible products and fish.

Under ASEAN Free Trade Area (AFTA) tariff barriers are lower. It is not necessarily the case that this reflects greater liberalization as not all traded products are listed and therefore not subject to commitments. Where listed they tend to be products for which trade is low. Furthermore, some commitments are yet to be fully realized, particularly for the CLMV countries.

Non-tariff barriers remain in almost all ASEAN economies and for some products appear more important than tariff barriers. Almost all countries maintain non-tariff barriers on exports and imports of key products such as rice.

Consumer demand and consumption patterns in ASEAN member economies are consistent with global trends. The population of ASEAN Countries was 521 million in 2000 and is growing at the annual rate of 1.7 percent. The growth rate of GDP has also been high reaching 7 percent over the 1990-1997 year period. Although it declined with the financial crisis, ASEAN has since been experiencing a modest recovery. Food demand has diversified and expanded as incomes have risen. Rapid economic growth, rising consumer incomes and urbanization have underpinned changes in the structure of food demand and diets in some countries. In the more affluent economies demand generally shifts from basic staples such as rice to meats, fish and breads, whilst lesser developed economies tend to increase their demand for staples. This pattern appears to apply to ASEAN economies such as Malaysia and Thailand on the one hand and Viet Nam, Cambodia and Myanmar on the other.

Consumption trends across ASEAN economies are broadly consistent with global trends. For ASEAN economies, rice is the most important food crop. Fish and seafood was the largest consumed item. In Malaysia, Indonesia and the Philippines there has been growth in the consumption of oil seeds. Consumption of fruits, vegetables and sugar has remained relatively stable in the latter three economies and also in Thailand. Consumption of livestock products is dominated by poultry, particularly in Thailand. Several countries however experienced increased levels of consumption of both poultry and pig meat over the period analyzed. For the lesser developed CLMV countries, rice, fruits, vegetables and sugar remain the major consumption items. Whilst livestock products are consumed at much lower levels, most countries recorded increases in consumption levels in 2001 compared with 1996.

ASEAN liberalization and integration is an important issue for ASEAN food and agriculture. AFTA seeks to enhance ASEAN economic integration through trade liberalization. The scope for doing so is dependent on the extent to which ASEAN economies trade with each other and the level of commitments to remove barriers to agricultural trade. Only about 22 percent of agricultural trade of ASEAN economies is with other ASEAN's and commitments to liberalize trade in agriculture in AFTA are limited. The capacity of AFTA to promote integration in a way which will enhance economic welfare is limited.

For the majority of ASEAN economies, the major focus of domestic agriculture policies remains on self sufficiency and food security, as well as poverty alleviation and reduction. Improved competitiveness and greater liberalization is a feature of most of the more developed ASEAN economies, although this is mainly focused on improving global competitiveness through reductions in tariff barriers under the WTO and AFTA. Little

emphasis is given to enhancing competitiveness through reductions in non-tariff and domestic trade barriers. Other policies focus on improving technology transfer and investment in research and development in the agriculture sector. For the CLMV countries, agriculture policies have as their main priorities food security and poverty alleviation through agriculture development, and adjustment for more liberalized and open economies in the case of Viet Nam, Cambodia and Laos.

Food security remains a very important issue for most ASEAN economies. There is generally a positive relationship between international trade and food security. This has been borne out by global trends, evidenced though the importance of trade in meeting food consumption needs in developing countries over the past decade. ASEAN has been self sufficient in food since the early 1970s and has achieved large increases in food production. At the same time however, a declining proportion of its products is derived from the agriculture sector. Although its importance in overall trade has declined, it remains the most important sector for ASEAN in terms of employment and livelihood and is a major concern for ASEAN economies.

ASEAN has pursued strategies to address food security concerns by enhancing economic recovery since the late 1990s and by encouraging economic growth, as well as developing a rural based agro-industry. It has also undertaken several cooperation activities at the ASEAN wide level to address food security concerns consistent with the SPA. Primarily policies have been targeted at rice, for which all countries, except for Thailand and Viet Nam, remain net importers.

b) Issues for ASEAN

Each driver presents particular challenges and issues for agriculture and food sectors of individual ASEAN economies and for the region as a whole.

Strategies for the food and agriculture sector need to recognize and address the continued importance of agriculture and the differences in the degree of importance of the agriculture and food sectors in ASEAN Member Countries, specifically as agriculture plays a more dominant role in less developed ASEAN members.

At the same time, ASEAN faces the challenge of meeting changes and trends in consumption and demand as incomes rise with population growth and greater economic growth. The challenge will be to accommodate shifts toward livestock and processed products in more affluent economies whilst continuing to meet rising demand for staples such as rice in the lesser developed CLMV countries.

Agricultural policies must continue to address the needs and issues of each country in their respective agriculture sectors and be developed and updated as challenges arise in both a global, regional and country specific context. This means striving to ensure domestic policies adequately reflect the concerns of each country. For the more advanced ASEAN economies, the focus is on improved competitiveness, productivity and technology transfer in the agriculture sector, whilst for the lesser developed economies, rural development and poverty alleviation are a major priority as ASEAN members seek to further integrate into the global economy and reap its associated benefits. Food security and self sufficiency remain an overarching and important policy goal for all ASEAN Countries.

There is general consensus among the ASEAN economies that addressing food security in ASEAN requires attention to macroeconomic issues: growth, the resilience of markets, the impact of debt repayments and the physical and institutional infrastructure for distribution, as well as to microeconomic issues, such as farm productivity, the level of diversification and specialization in production and the depth of household food budgets among the rural poor. The greatest problems of food security among ASEAN Countries are found in the poorest countries, Laos, Cambodia and Myanmar. Brunei Darussalam and Singapore enjoy relative affluence and, while they do not have agrarian economies, do not face serious food insecurity. As fast growing economies in the process of trade and economic reform, Malaysia, the Philippines and Indonesia are more likely to suffer from problems of general

macroeconomic stability than specifically those of food security in the broadest sense. Viet Nam and Thailand, meanwhile, have become net food exporters, and thus have shifted towards diversification of trade in food and agricultural products

Levels of protection on key-traded food and agriculture products remain relatively high, more so in the lesser-developed ASEAN economies. Strategies to maximize the benefits of trade liberalization should focus on further integrating CLMV countries into the global economy and further reducing protection on key-traded products, particularly by addressing non-tariff barriers.

Removal of trade barriers to intra-ASEAN trade in agricultural products would improve the competitiveness of agricultural production in ASEAN and foster economic integration. As demonstrated above, this is a sensitive issue and the pace of change is unlikely to be fast. Because the share of total agricultural trade is small, the effect would also be reduced. Adjustment of domestic agricultural policies to improve competitiveness and efficiency of production is likely to have a more significant impact than the processes of reform required under AFTA. In the case of the CLMV countries, greater access to other ASEAN economies for agricultural exports would support growth in agriculture, but direct assistance to improve infrastructure and technology in agriculture is probably of equal importance.

3. REVIEW OF THE STRATEGIC PLAN OF ACTION

The current Strategic Plan of Action on ASEAN Cooperation in Food, Agriculture and Forestry (SPA) was developed to provide for cooperation activities and initiatives in the agriculture, food and forestry sectors in line with the ASEAN Vision 2020 and the Hanoi Plan of Action (HPA). Its strategic emphasis was on strengthening food security arrangements in the region, enhancing the international competitiveness of food and agriculture products, and strengthening ASEAN's position in international fora.

The SPA was developed to "formulate and implement regional cooperation activities to enhance the international competitiveness of ASEAN's food, agricultural and forestry products as well as further strengthen the region's food security arrangements and joint positions in international fora". More generally, its purpose was to "further strengthen collaborative efforts not only in trade promotion of ASEAN's agriculture (and forest) products, but also in all aspects of agricultural and forestry development". It consolidated existing cooperation initiatives and set out various action programs to achieve its strategic objectives for the period 1999 – 2004. It was envisaged by ASEAN members at this time that major changes would occur in both regional and global agriculture and food which would necessitate adjustments in cooperation areas in the future.

Accordingly, in light of the Bali Concord of 2003 (and the Vientiane Action Programme due to be developed for its implementation in 2004) and new developments in food and agriculture sectors, a new Strategic Plan of Action for the agriculture and food sector will be formulated for the period 2004 – 2010 in order to ensure that cooperation in these sectors is beneficial for, and consistent with, specific goals for the sector and the overall goals of the ASEAN Vision 2020.

Overall ASEAN has made considerable progress to date with cooperation activities in accordance with its stated strategic objectives. Several of these activities have been highly successful and many are continuing.

ASEAN has undertaken various activities to enhance cooperation and integration in the food and agriculture sectors. Activities have focused on strengthening ASEAN food security mechanisms, promoting the competitiveness of and ASEAN trade in agriculture products and enhancing trade of goods in transit. Other activities have focused on harmonization of standards and practices in the agricultural sector, including in pesticide maximum residue levels (MRLs), livestock and fisheries as well as customs procedures and SPS measures under Protocol 8. ASEAN has also acknowledged the importance of agricultural biotechnology and put in place procedures for member economies to address this new issue.

Despite these achievements, there seem to be some problems and issues with cooperation activities due to both internal and external factors. They are procedural as well as substantive. There seems to be some overlap of activities between ASEAN bodies and also with sub regional groupings like the Brunei-Indonesia-Malaysia-The Philippines East Asia Growth Area (BIMP-EAGA) and the Indonesia-Malaysia-Thailand growth triangle (IMT). Moreover, there is no official linkage among these bodies. Funding is a constraint as are processes for approval and implementation. The fieldwork undertaken for the project suggests that activities have not actively engaged the private sector enough and have not been effective in furthering liberalization efforts under AFTA. A further important consideration is that activities have also not adequately provided for the differing levels of development between ASEAN Member Countries so as to substantially benefit the CLMV countries.

Overall the current strategic thrusts of the SPA appear to be consistent with and compatible with trends and issues for the period 2005 – 2010, both at the global and regional level. In addition these also correlate closely with the strategic issues identified by the fieldwork for the project.

Although the strategic direction of the current SPA appears to fit with future trends and developments for 2005 – 2010, there also appears to be several new issues and developments which now fall within its purview.

A common response as part of the fieldwork was that although the strategic direction of the SPA remains relevant, it would benefit from a sharper focus on results oriented activities. There was a perceived need to include in its strategic goals, common policy approaches for dealing with the differing levels of development of the CLMV countries and for furthering difficult areas of trade liberalization.

4. RECOMMENDATIONS FOR ASEAN FOOD AND AGRICULTURE 2005 – 2010

The review concludes that many important activities have been undertaken and are continuing despite some problems and issues with current activities. The strategic thrusts are still relevant in light of trends and developments and consistent with the priorities raised by fieldwork for the project.

In light of this, it is suggested that ASEAN retain its current strategic thrusts and continue with activities that are successful, and at the same time place greater emphasis on several issues of importance (such as the differing level of development among CLMV countries and the pace of trade and investment liberalization). Furthermore, specific activities to support the SPA could be undertaken in a number of areas and are noted in the report. They include engaging the sub-regional groupings and enhancing inter-country private sector cooperation in market access. ASEAN may also wish to revisit the structure of the ASEAN Secretariat in accordance with the renewed strategic direction.

I. GLOBAL TRENDS AND DEVELOPMENTS IN FOOD AND AGRICULTURE

1. GLOBAL GROWTH IN FOOD DEMAND

a) Summary

International agencies anticipate that increasing population and increasing gross domestic product (GDP) in the future will lead to increasing global demand for food. International Food Policy Research Institute predicts that demand for cereals will expand, but more slowly than in the past. It anticipates that developing countries will not be able to meet their own demand for cereals and this should increase demand for imports of cereals. It also finds that demand for meat will increase significantly, 40 percent of which will be for poultry.

b) Global trends in food demand

World growth and growth in demand for food products will influence the food and agriculture sectors in ASEAN Countries, primarily through changing global demand.

The United Nations medium variant projection estimates for world population predict an average annual expansion of 1.3 percent between 1998-2000 and 2010. The World Bank predicts annual average increases in world gross domestic product (GDP) of 1.7 percent in *per capita* terms, compared with 0.9 percent in the previous decade.[2] Average growth rates vary most markedly between developed, developing and least developed countries (LDCs). The Organization for Economic Cooperation and Development (OECD) predicts average annual GDP growth over 2006-09 of 2.7 percent[3] among its members.

The United Nations Conference on Trade and Development (UNCTAD) finds growth in developing countries annually at an average of 3 percent in the period 1980-1990 and 3.8 percent in the period 1990-1998.[4] Medium-term projections from UNCTAD for developing countries are not available. UNCTAD has examined growth among the 49 LDCs[5] in the 1990s and made growth projections based on these trends. $900 is considered the level of *per capita* GDP below which countries are automatically counted as LDCs (regardless of other relevant indicators). In 2000 UNCTAD reported that based on historic growth trends nine LDCs were either already at the $900 *per capita* level or would reach it within 25 years; another ten would reach the $900 mark between 25 and 100 years, and another ten only outside 100 years. 17 were experiencing stagnant or negative growth.

c) Demand for food – cereals

IFPRI, using data from the United Nations Food and Agriculture Organization (FAO), finds growth in demand for cereals globally in the period 1997-2020 will be 1.3 percent per year on average, down one 1 percent from the period 1974 to 1997. In 2020, the developed world will consume 822 million metric tons of cereals, whilst the developing world will consume 1,675 million metric tons out of a total of 2,497 million metric tons.

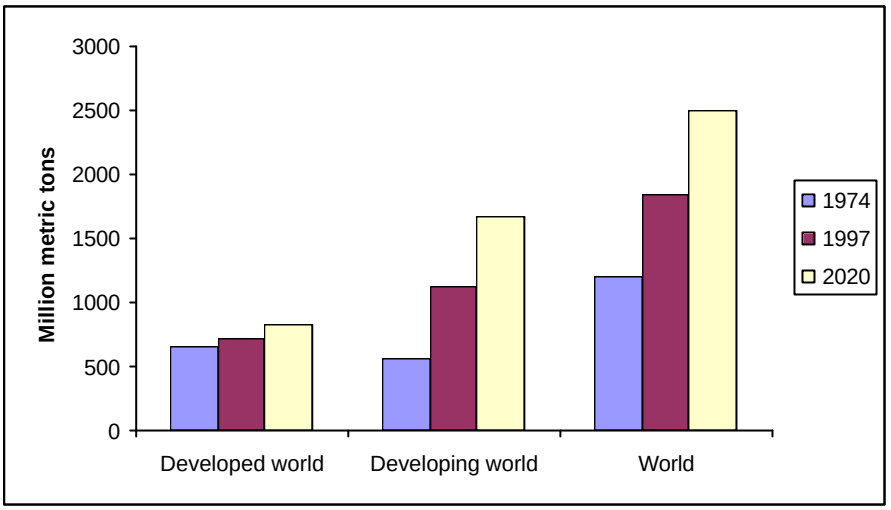
[2] United Nations, World Bank, IMF. See Committee on Commodity Problems, Sixty-fourth Session, Rome, 18 - 21 March 2003, Medium-Term Projections for Agricultural Commodities.

[3] Organisation for Economic Cooperation and Development (OECD)

[4] UNCTAD (2000) "Economic Growth and Social Trends" in *The Least Developed Countries Report 2000*, available at www.unctad.org/en/docs/ldc00_part1.en.pdf

[5] Defined by the UN on the basis of income: currently set at annual gross domestic product (GDP) below $900 *per capita*; quality of life: including life expectancy at birth, *per capita* calorie intake, primary and secondary school enrolment rates and adult literacy, and economic diversification: based on the share of manufacturing in GDP, share of the labour force in industry, annual *per capita* commercial energy consumption and merchandise export concentration as indexed by the United Nations Conference on Trade and Development (UNCTAD).

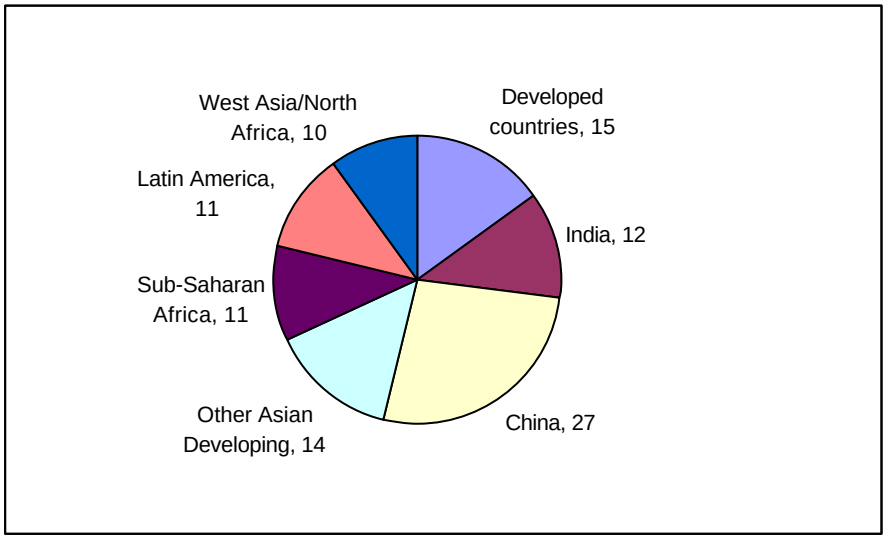
Figure 1.1 - World demand for cereals 1974, 1997, 2020



ITS Chart
Source: IFPRI Global Food Outlook Trends 2001

Developing countries in Asia will account for half this demand (total of 2,497 million metric tons), with China accounting for one quarter.

Figure 1.2 - Regional shares of increased cereal demand 1998 – 2020



ITS Chart
Source: IFPRI Global Food Outlook Trends 2001

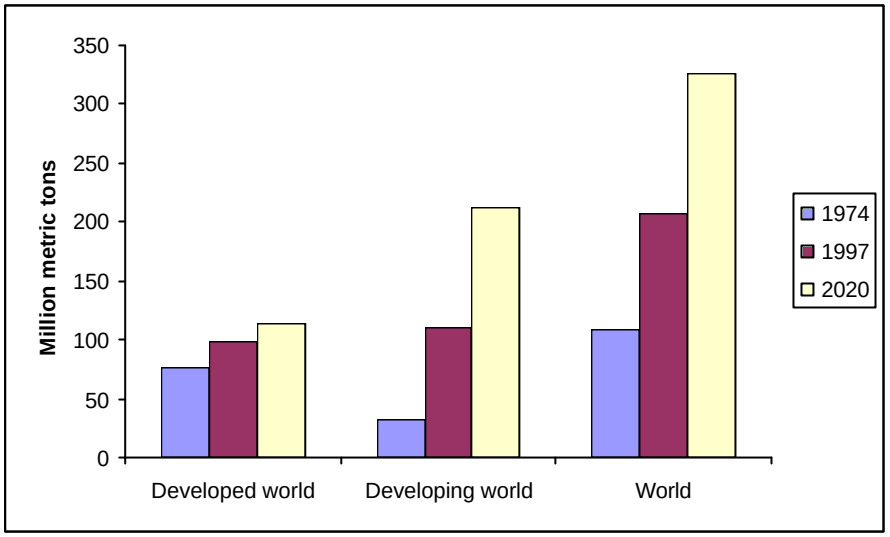
IFPRI finds that although growth in cereal demand is slowing, farmers in developing countries will not be able to keep pace. In most of the developing world, expansion of crop area will be severely limited. By 2020 developing countries are predicted to be unable to meet their own cereal demands. International trade will play a large role in providing food to many regions.

d) Demand for food – meats

IFPRI finds that the world's appetite for meat will jump substantially, by more than 55 percent, between 1997 and 2020[6]. In 2020 the developed world will demand 114 million metric tons of meat, and the developing world 218 million metric tons out of total world demand of 327 million metric tons.

[6] The Food and Agriculture Organization Committee on Commodity Problems, at its 67th Session in March 2003, used similar data but came up with markedly lower projections for demand for food. These projections were based on assumptions of declining population levels.

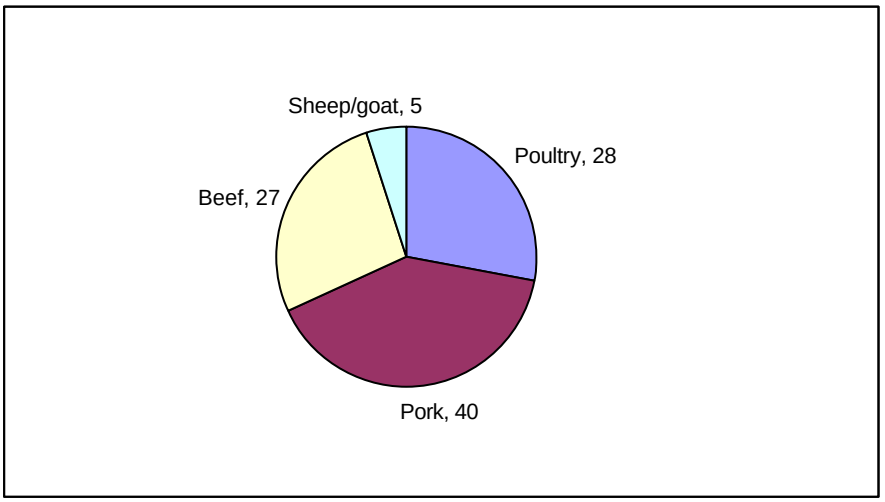
Figure 1.3 - World demand for meat 1974, 1997 and 2020



ITS Chart
Source: IFPRI Global Food Outlook Trends 2001

Meat demanded in 1997 was 208 million metric tons, of which pork made up the greatest portion.

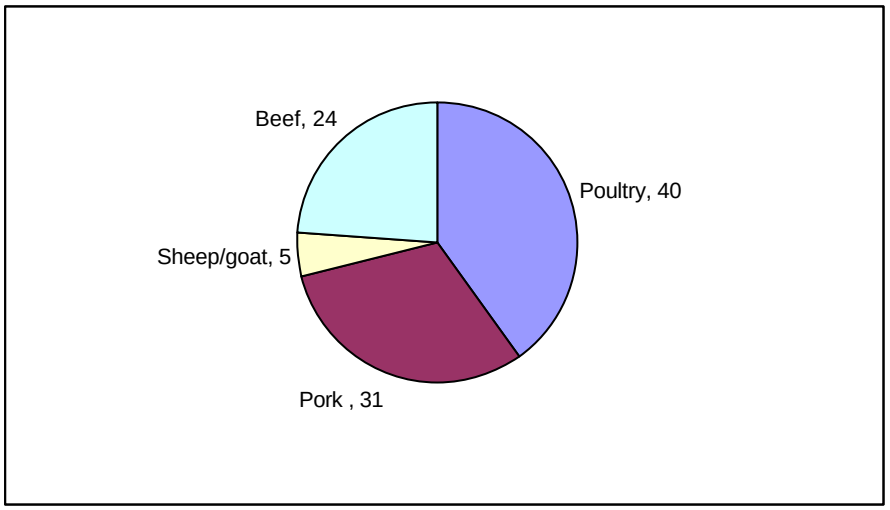
Figure 1.4 – Types of meat demand globally, 1997



ITS Chart
Source: IFPRI Global Food Outlook Trends 2001

The increase in meat demand by 2020 is equal to 119 million metric tons, of which poultry will make up 40 percent.

Figure 1.5 – Increase in meat demand, by meat 1997-2020



ITS Chart
Source: IFPRI Global Food Outlook Trends 2001

e) Issues for ASEAN

ASEAN food producers will be placed to meet additional demand for rice. Some of that demand will be from other ASEAN economies unless they are able to reorganize rice production to become exporters themselves. If ASEAN Countries are to become globally-competitive suppliers of the anticipated increase in demand for meat, governments will need to ensure regulatory arrangements foster globally-competitive production.

2. GLOBAL TRENDS IN FOOD CONSUMPTION

a) Summary

Changing income patterns are expected to affect consumption, particularly in developing countries, notably as incomes rise. The share of staples (cereals, roots, tubers) in consumption is declining, whilst *per capita* consumption of meat products is rising. It is predicted that *per capita* consumption of meats, dairy and fish products will continue to rise in developing countries up to the year 2030.

b) Recent global consumption trends

Between 1964-66 and 1997-99 *per capita* meat consumption and consumption of milk and dairy products in developing countries rose and is expected to rise further by 2030, particularly in the livestock sector. Similarly, by 2030 annual fish consumption is also likely to rise and aquaculture is expected to grow rapidly. Further *per capita* consumption of oil crops is expected to rise more rapidly, predicted to account for 45 percent of extra kilocalories (kcal) added to average diets in developing countries between now and 2030[7]. Whilst projections to 2030 are beyond the scale of interest for the purposes of this project, they are noted here as indicative of relevant trends affecting the time period up to 2010.

Trends in consumption patterns worldwide can be examined in further detail by considering the availability and changes in dietary energy, changes in consumption of animal products, changes in average consumption of fish products and the supply of vegetables.

Availability of dietary energy

Food consumption expressed in kilocalories *per capita* is one variable used for measuring and evaluating the evolution of global and regional food situations[8]. Data shows that dietary energy measured in kcals *per capita* per day has been steadily increasing on a worldwide basis. The World Health Organization (WHO) has noted that based on FAO analysis, dietary

[7] Report of A Joint WHO/FAO Export Consultation , World Health Organization, Food and Agriculture Organisation of the United Nations, WHO Technical Series 916
[8] It is more appropriate to call this "national apparent food consumption" as it is based on FAO data and not on food consumption surveys.

energy measured in kcals *per capita* per day has been increasing on a worldwide basis: the availability of calories *per capita* from the mid 1960s to the late 1990s increased globally by 450 kcal *per capita* per day and by over 600 kcal *per capita* per day in developing countries[9]. This change however, has not been equal across regions. *Per capita* supply of energy has risen dramatically in East Asia, mainly in China, but has remained almost stagnant in Sub-Saharan Africa.

See Table 1.1 below which supports the finding that there has been significant progress in raising food consumption per person and has been an increase in world average consumption.

Table 1.1 – Global and regional per capita food consumption (kcal per capita per day)

Region	1964-1966	1974-1976	1984-1986	1997-1999	2015	2030
World	2358	2435	2655	2803	2940	3050
Developing Countries	2054	2152	2450	2681	2850	2980
Sub-Saharan Africa	2058	2079	2057	2195	2360	2540
Latin America and the Caribbean	2393	2546	2689	2824	2980	3140
East Asia	1957	2105	2559	2921	3060	3190
South Asia	2017	1986	2205	2403	2700	2900
Industrialized Countries	2947	3065	3206	3380	3440	3500

WHO/FAO Table
Source: WHO Technical Series 916

The growth in food consumption has been accompanied by significant structural changes and shifts away from staples such as roots and tubers towards more livestock products and vegetables. Data suggest[10] that *per capita* energy supply has declined from both animal and vegetable sources in countries in economic transition, while it has increased in developing and industrialized countries. See Table 1.2 below.

Table 1.2 – Vegetable and animal sources of energy in the diet (kcal per capita per day) (T – total kcal, V - kcal of vegetable origin, A - kcal of animal origin)

Region	1967-1969			1977-1979			1987-1989			1997-1999		
	T	V	A	T	V	A	T	V	A	T	V	A
Developing countries	2059	1898	161	2254	2070	184	2490	2248	242	2681	2344	337
Transition countries	3287	2507	780	3400	2507	893	3396	2455	941	2906	2235	671
Industrialized countries	3003	2132	871	3112	2206	906	3283	2333	950	3380	2437	943

WHO/FAO Table
Source: WHO Technical Series 916

The WHO has also noted that similar trends are observable for protein availability, which has also increased in industrialized and developing economies. The *per capita* supply of

[9] Report of A Joint WHO/FAO Export Consultation , World Health Organization, Food and Agriculture Organisation of the United Nations, WHO Technical Series 916

[10] Report of A Joint WHO/FAO Export Consultation , World Health Organization, Food and Agriculture Organisation of the United Nations, WHO Technical Series 916

vegetable protein is slightly higher in developing countries, while the supply of animal protein is three times higher in industrialized countries than developing countries[11].

Globally the share of dietary energy supplied by cereals appears to have remained stable, however a closer analysis reveals that there has been a decrease in developing countries, attributable to cereals such as wheat and rice becoming less preferred foods in middle-income countries such as Brazil and China.

Consumption of animal products

The FAO predicts that annual meat production is projected to increase from 218 million tons in 97-98 to 376 million tons by 2030. There is a positive relationship between the level of income and the consumption of animal protein, and with the consumption of meat, milk and eggs increasing at the expense of staple foods.

Most of the increase in consumption is expected to take place in developing countries. Between 1964-66 and 1997-99 *per capita* meat consumption in developing countries rose by 150 percent and that of milk and dairy products by 60 percent. By 2030, *per capita* consumption of livestock products could rise by a further 44 percent. Poultry consumption is expected to grow the fastest. Developing countries are currently attaining levels of higher meat consumption at lower levels of GDP than industrialized countries did 30 years ago, mainly due to falls in prices. Urbanization is also a driving influence for global demand for livestock products.

Table 1.3 below notes there has been a remarkable increase in the consumption of animal products in countries such as China and Brazil, although the levels are still well below those of industrialized countries.

Table 1.3 - Per capita consumption of livestock products

Region	Meat (kg per year)			Milk (kg per year)		
	1964-1966	1997-1999	2030	1964-1966	1997-1999	2030
World	24.2	36.4	45.3	73.9	78.1	89.5
Developing countries	10.2	25.5	36.7	28.0	44.6	65.8
Sub-Saharan Africa	9.9	9.4	13.4	28.5	29.1	33.8
Latin America and the Caribbean	31.7	53.8	76.6	80.1	110.2	139.8
East Asia	8.7	37.7	58.5	3.6	10.0	17.8
South Asia	3.9	5.3	11.7	37.0	67.5	106.9
Industrialized countries	61.5	88.2	100.1	185.5	212.2	221.0
Transition countries	42.5	46.2	60.7	156.6	159.1	178.7

WHO/FAO Table
Source: WHO Technical Series 916

Consumption of fish products

Fisheries, including aquaculture, have traditionally been, and remain, an important source of food, employment and revenue in many countries[12]. The total food fish supply and hence consumption, has been growing at a rate of 3.6 percent per year since 1961, while the world's population has been expanding at 1.8 percent per year. The average apparent *per capita* consumption increased from about 9 kilograms (kg) per years in the early 1960s to 16kg in 1997[13]. The *per capita* availability of fish and fishery products has therefore nearly doubled in 40 years, outpacing population growth. By 2030 annual fish consumption is likely to rise some 150-160 million tons, or between 19-20 kg per person.

[11] *Ibid*
[12] *Ibid*
[13] *Ibid*

Consumption of fruits and vegetables

Global trends in the production and supply of vegetables indicate that current consumption varies widely across regions. In 2000, the global average *per capita* vegetable supply was 102 kg, with the highest level in Asia (116 kg) and the lowest levels in South America (48 kg) and Africa (52 kg).

See Table 1.4 below.

Table 1.4 - Supply of vegetables per capita by region 1979 and 2000 (kg per capita per year)

Region	1979	2000
World	**66.1**	**101.9**
Developed countries	**107.4**	**112.8**
Developing countries	**51.1**	**98.8**
Africa	**45.4**	**52.1**
North and Central America	**88.7**	**98.3**
South America	**43.2**	**47.8**
Asia	**56.6**	**116.2**
Europe	**110.9**	**112.5**
Oceania	**71.8**	**98.7**

WHO/FAO Table
Source: WHO Technical Series 916

Changes in consumption of dietary fats

There has been a remarkable increase in the intake of dietary fats over the past three decades which has taken place worldwide, with the exception of Africa. The *per capita* supply of fat from animal foods has increased in both the developing and industrialized economies[14]. In the developing world, this has generally been attributed to rising incomes.

The types of fats consumed in developing countries are also changing with the use of hardened margarines that do not need to be refrigerated. Palm oil is becoming increasingly important edible oil in diets of South East Asia and is likely to continue to be a major source in coming years[15]. It should be noted that country specific food availability and cultural dietary preferences and norms to some extent determine these patterns.

c) Issues for ASEAN

Food production systems in ASEAN will need to accommodate changing demands from consumers, both in domestic markets and internationally. Facilities and systems to enable efficient production, handling, processing, and distribution will need to develop to keep up with demand for higher value added and processed products, from an increasingly affluent population which will also increasingly value convenience and food safety.

3. GLOBALIZATION AND FOOD SYSTEMS

a) Summary

Global food demand is primarily driven by demand from developing countries because of faster population growth and a bigger share of incomes spent on food than in developed countries.

There is an observed global trend that as income levels rise, consumption of protein shifts to meats rather than cereals, and there is a subsequent shift towards greater consumption of processed products. At low income levels, cereals and basic packaged foods tend to be

[14] *Ibid*
[15] *Ibid*

consumed most. At high income levels, fresh and healthy products and foods processed for convenience are favored.

ASEAN food consumption patterns broadly reflect global trends. Bread and cereals' share of food expenditure falls, while meat and dairy products' shares rise. The biggest rise occurs in beverages and tobacco, reflecting the increasing demand for higher value processed products.

Markets in ASEAN can be disaggregated as follows: sophisticated processed and fresh, health products markets: Singapore, Brunei Darussalam; basic packaged food and frozen products: Thailand, Malaysia; unbranded products, and basic packaged products with some frozen products: Indonesia, The Philippines, Viet Nam; and the reminder mainly consume unbranded products, and some basic packaged foods.

Traditional distribution systems are being supplanted to varying degrees in ASEAN Countries. This has created competitive pressure on traditional distributors and forced domestic retailers and supply chains more broadly to improve efficiency. Food system competitiveness as a whole can benefit from such processes. Foreign retailers have played a major role in this development.

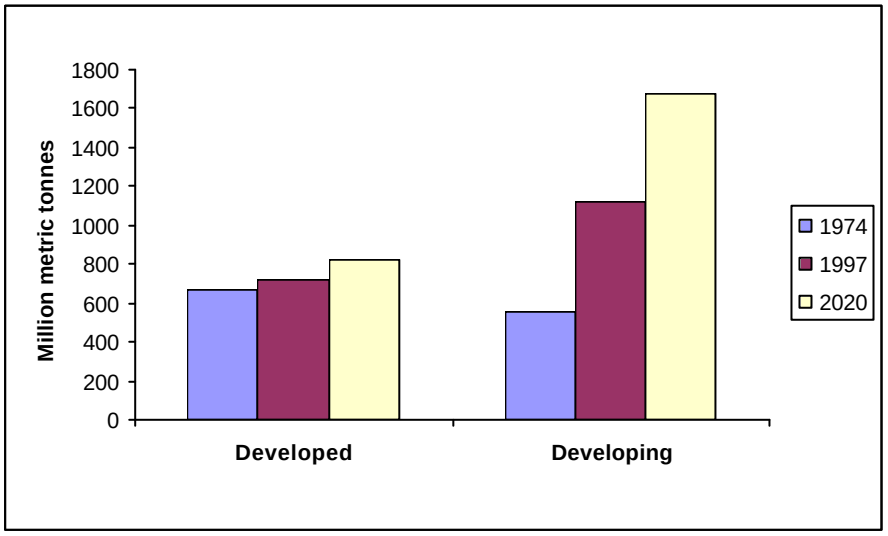
b) Global food demand

Global food demand is primarily driven by demand from developing countries. This is because population growth is faster in developing countries and the population in those countries spends a bigger share of their incomes on food than in developed countries.

Global cereals demand

Demand for cereals by developing countries overtook developed countries' demand by the end of the 1990s and will substantially outstrip their demand over the next two decades. See figure 1.6 below:

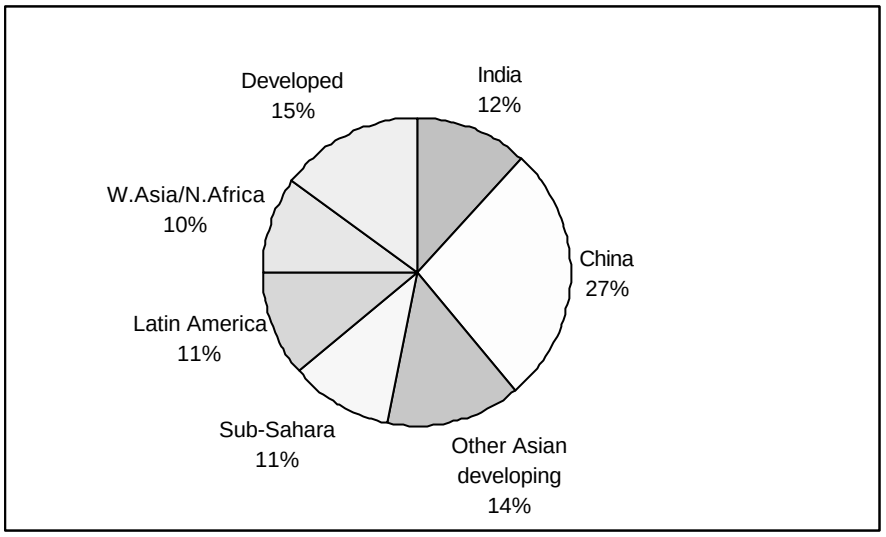
Figure 1.6 – World demand for cereals



SG HeilbronChart
Source: IFPRI Global Food Outlook Trends 2001

Total world demand for cereals is forecast to rise 11.4 percent over the period from 1997-2020. In 2020, the developed world is projected to demand 822 million metric tons, whilst the developing world 1,675 million metric tons. Asian developing countries other than India and China will account for 14 percent of the increased demand for cereals over that period. Total world demand in 2020 is expected to be 2,947 million metric tons, up from 1843 in 1997 and 1208 in 1974.

Figure 1.7 – Regional shares of increased cereal demand percentage 1997-2020



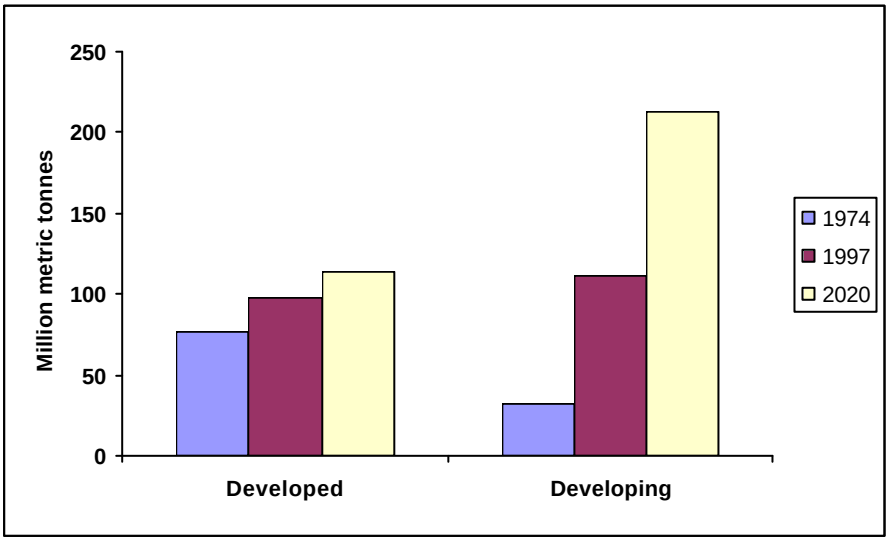
SG Heilbron Chart
Source: IFPRI Global Food Outlook Trends 2001

Increases in million metric tons for the above chart are as follows: India 78.48, China 176.58, Other Asian developing 91.56, Sub-Saharan Africa 71.94, Latin America 71.94, West-Asia ad North Africa 65.4 and developed countries 98.1. World wide this represents an increase of 654 million metric tons.

Global meat demand

The demand for meat will rise very substantially. Total meat consumption will rise by over 57 percent from 1997-2020, or from 208 million metric tons to 327 million metric tons.

Figure 1.8 – World demand for meat



SG Heilbron Chart
Source: IFPRI Global Food Outlook Trends 2001

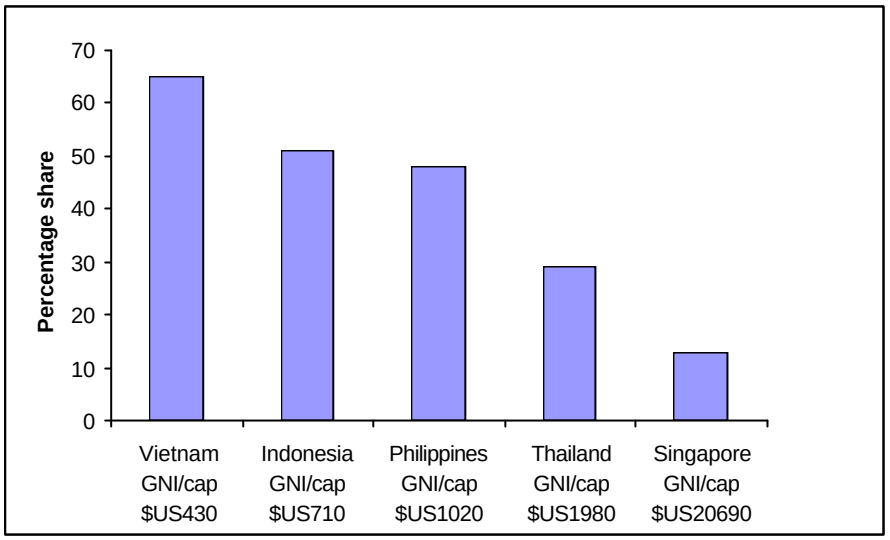
Developed countries' demand will shift from 98 million tons to 114 million between 1997 and 2020. Developing countries' demand will shift from 111 million metric tons to 213 million over the same period. Around 8 percent of the total increase in meat demand will be from South East Asia. The stronger rise in meat than cereal demand points to the shift that takes place in the type of food consumed as economic development takes place and incomes rise.

c) Composition of food demand

Firstly overall as incomes rise a smaller proportion of total income is spent on food. This is illustrated with respect to the ASEAN Countries below. Food expenditure as a percentage of

total expenditure for Viet Nam is 65 percent, for Indonesia 51 percent, for The Philippines 48 percent, for Thailand 29 percent and Singapore 13 percent.

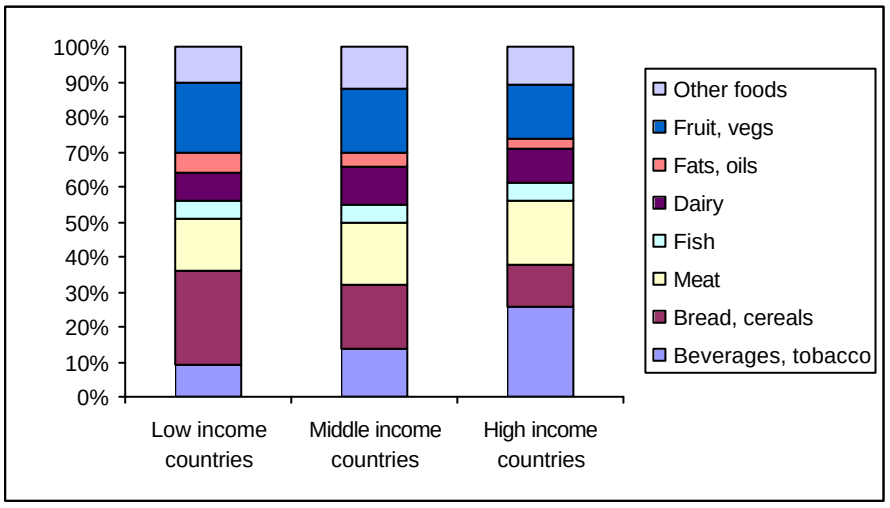
Figure 1.9 – Food expenditure as a percentage of total expenditure



SG Heilbron Chart
Source: Economic Research Service 2002, United States Department of Agriculture, World Bank Development Indicators 2002

As mentioned above there are shifts in the composition of food demanded as incomes rise. Figure 1.10 below illustrates how bread and cereals' share falls as does fruit and vegetables, while meat and dairy products' shares rise. The biggest rise occurs in beverages and tobacco, reflecting the increasing demand for higher value processed products.

Figure 1.10 – Composition of food expenditure as a percentage of total expenditure

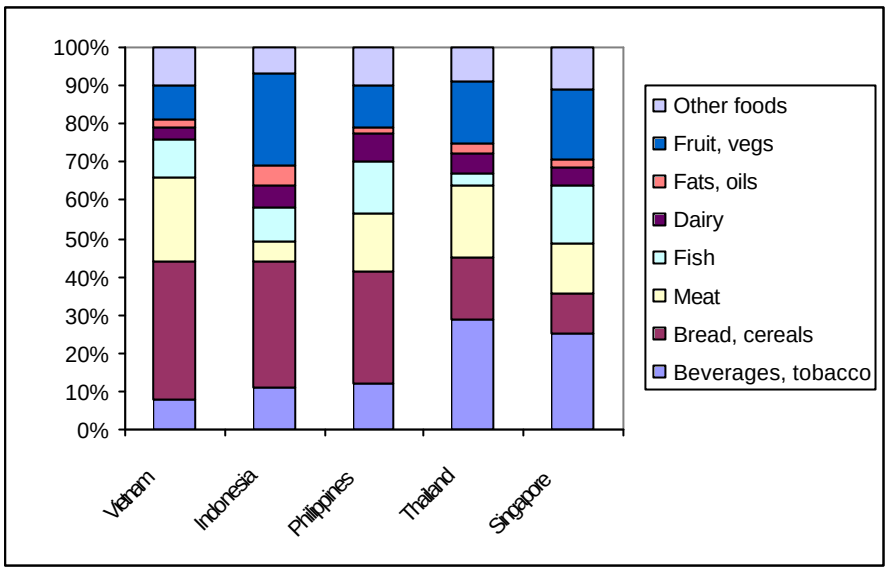


SG Heilbron Chart
Source: Source: Economic Research Service 2002, United States Department of Agriculture, World Bank Development Indicators 2002, FAOSTAT 2002

For low income countries breads and cereals comprised 27 percent of total food expenditure, fruits and vegetables 20 percent, meat 15 percent and dairy 8 percent. In high income countries breads and cereals comprised 12 percent, fruits and vegetables 15 percent, meat 18 percent and dairy 10 percent.

Food expenditure in ASEAN Countries reflect broader patterns described above. However consumption of meat appears to be very high in Viet Nam and fruit/vegetables is high in Indonesia.

Figure 1.11 – Composition of food expenditure as a percentage of total expenditure in five countries



SG Heilbron Chart
Source: Economic Research Service 2002, United States Department of Agriculture, World Bank Development Indicators 2002, FAOSTAT 2002

d) Changing patterns of food consumption

These analyses also point to the changing form of the food consumed, that is, as incomes rise food tends to be consumed more in processed form or a form that adds value in another manner (for example, through being partly or pre-prepared).

This trend is illustrated by the "trigger points" developed by *The Economist* to describe evolving food consumption patterns as illustrated below.

Figure 1.12 – Trigger points for food consumption patterns per capita GDP $US

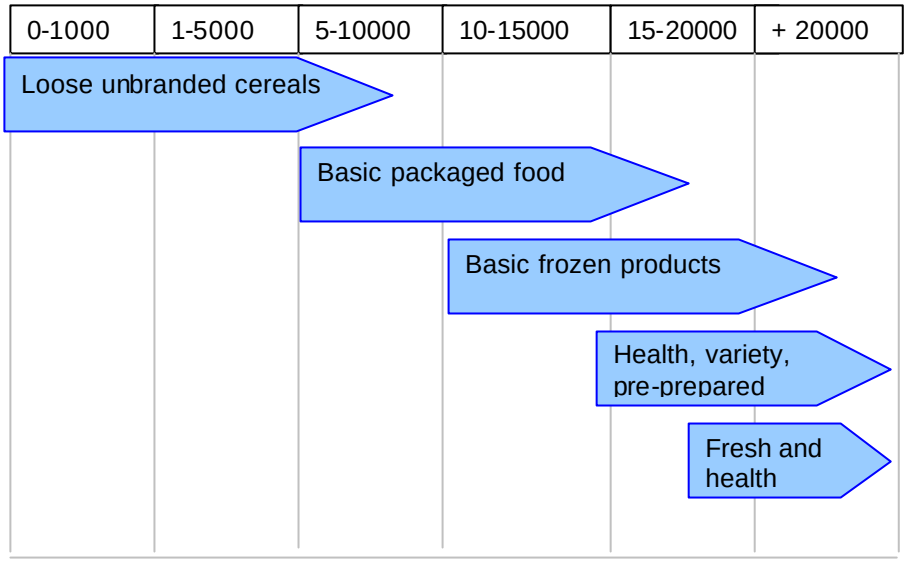


Chart: SG Heilbron, Source: The Economist, December 4, 1993

e) ASEAN consumer demand and consumption groupings

Derived from the above analysis, one would place the ASEAN Countries in the following food market system groupings:

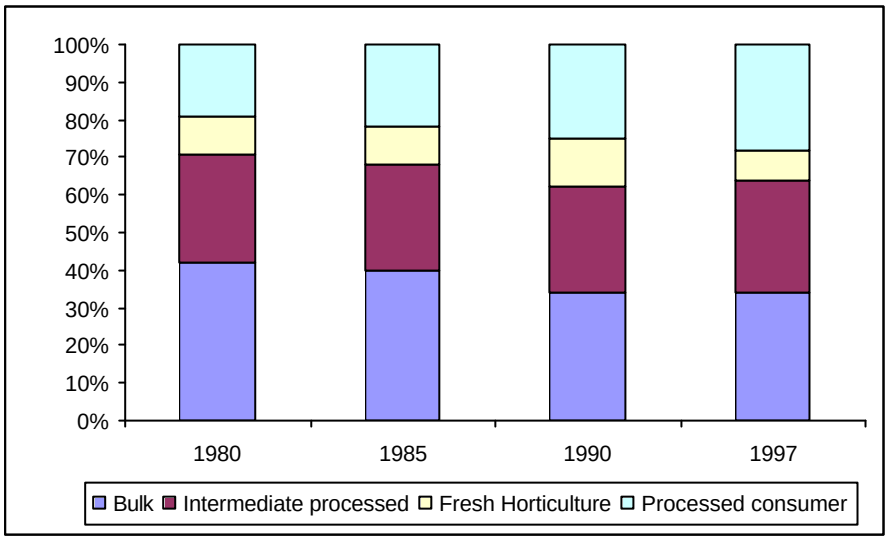
- Group A markets (sophisticated processed and fresh, health products): Singapore, Brunei Darussalam
- Group B markets (basic packaged food and frozen products): Thailand, Malaysia

- Group C markets (unbranded products, and basic packaged products with some frozen products): Indonesia, The Philippines, Viet Nam
- Group D markets (Unbranded products, and some basic packaged foods): Cambodia, Laos, Myanmar

f) Consumption patterns and trade

The shift towards consumption of more processed food is also reflected in global trading patterns. The share of world agricultural and food trade accounted for by processed food has risen and the share of bulk agricultural commodities has fallen.

Figure 1.13 – Composition of world agro-food trade



SG Heilbron Chart
Source: United States Department of Agriculture data 1980-1997

As income growth occurs and food consumption patterns change, so too do the food systems which deliver food to meet the changing demand. In 1980, bulk commodities made up 42 percent f world agro food trade, intermediate commodities 29 percent, fresh horticultural 10 percent and processed consumer foods 19 percent. By 1997, bulk commodities accounted for only 34 percent, intermediate for 30 percent, fresh horticultural for 8 percent and processed consumer goods, 28 percent.

It is convenient to broadly distinguish between developed-country food systems and developing-country systems. However the features of developed-country food systems will be prevalent to a lesser or greater extent in developed countries, depending on their level of development.

g) Food market systems

There are differences in the food market systems that meet consumer demand in developed and developing countries. These are described with reference to a value chain format as below:

Box 1.1 – Value Chain Format

FARMING ? FOOD PROCESSING ? DISTRIBUTION

Source: SG Heilbron

Relevant features of developed and developing country food systems in terms of agriculture, processing, distribution and across –chain features are noted in the following pages.

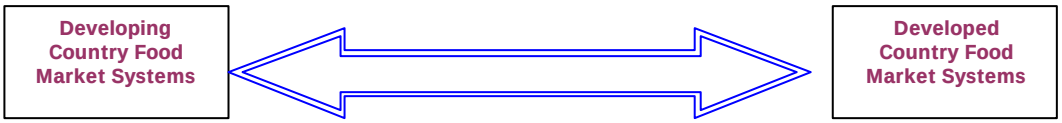
Table 1.5 – Features of developed and developing country food systems

Feature	Developed Country Food Systems	Developing Country Food Systems
Agriculture	• Large scale, capital intensive, high technology units and small scale (often part-time) farms, with declining role for medium-size farms • High yield, high input, labour and land costs • Extensive use of forward contracts and futures for marketing of products, especially by larger farmers, and declining auction markets	• Small scale, labour intensive units, subsistence units at one extreme and large scale, plantation operations at the other • Extensive use of informal contracts with agents or state controlled marketing agencies, spot markets, multiple intermediaries • Low external inputs of physical and financial resources
Processing	• Highly efficient processing and marketing through large scale plant • High degree of competition and pressures fo rationalization of processing • Vertical integration or forward contracting of farming and processing • Closer integration of supply chains driven by direct JIT delivery into outlets • Pressure on proprietary brands by home-brands – contract manufacturing • Competitive pressure leading to pressures for access to competitive raw materials from global sources – minimize costs, including costs of tariffs and other trade barriers	• Highly efficient processing and marketing through large scale plant • Very high degree of competition • Pressures for rationalization of processing • Vertical integration or forward contracting of farming and processing • Closer integration of supply chains with direct just-in-time (JIT) delivery into retail outlets • Pressure on proprietary brands by home-brands – contract manufacturing
Distribution	• Dominance of hypermarkets and large supermarkets; declining share for Mom & Pop stores • High volume/low margin • Direct supply into retailer warehouses from manufacturers • Diverse diets, consumer preferences • Competitive pressure to meet specific consumer demands • Focus on new product development • Increased presence of retailers' home brands or generic products	• Fast growing demand • Fragmented retail market, multiple, small scale outlets • Major shares of sales for wet markets, Mom & Pop, with increasing role for cash & carry and supermarkets for high-income areas • Basic staple diets, limited consumer preferences • Limited pressure for product development • Unbranded bulk products sold in retail wet markets • Fragmented, informal delivery system for processed products to retailers via multiple steps of wholesalers and handlers
Across-Chain Features	• Information technology - increasing role of information technology in input supply, production, marketing and distribution to enable logistics efficiencies • Food safety standards critical for customer assurance – requiring trace back • Disintermediation – elimination of intermediaries such as agents between farmers and processors, wholesalers between processors and retailers • Concentration increasing at every level of the chain – fewer and larger farmers, processors, retailers • Food consumed increasingly away from home – fast food and other restaurants • International focus - trade and investment activities to access faster growing markets in developing countries	• Information technology – low levels of use • Multiple intermediaries between all stages of the supply chain • Low levels of concentration • Food consumed at home or at informal vendor markets • Domestic focus - attempt to meet competition from foreign products and outlets as they penetrate the market (mainly for high-end consumers).

Source: SG Heilbron

The key elements can be summarized as noted below in Figure 1.14.

Figure 1.14 – Summary of key elements of food market systems



Market features:

- Wet markets/Mom & Pop outlets
- Small scale processing
- Subsistence farming
- Little integration between value chain stages
- Informal supply chains with little formal coordination of information/logistics/ Food safety

Market features:

- Hypermarkets
- Large scale processing
- Commercial farming
- Vertical/contractual integration of stages
- Supply chain management of information/logistics/ food safety

Source: SG Heilbron

h) The role of changing agri-food distribution in Asian food systems

A likely future trend which has been underway since the 1970s is the modernization of food distribution in Asia. The traditional distribution system which relies on multiple levels of small-scale distributors supplying a fragmented retail system has been subject to major challenges. These have been brought about by the emergence of modern food service outlets, giant shopping malls, and large scale food retailers.

Foreign retail investors such as Carrefour, Ahold and Walmart have played a major role in this process, seeking to duplicate the distribution methods they successfully developed in developed market economies. They have been emulated in these initiatives by domestic retail chains. These developments have promoted changes in the supply chain all the way to farming, streamlining the flow of primary produce, requiring standardized products in large quantities delivered to exacting timelines. These initiatives have in turn put pressure on traditional distributors to compete, with a flow-on effect more broadly through the food system.

These trends have been thoroughly documented, including by the Australian Department of Foreign Affairs and Trade (DFAT) ("Subsistence to Supermarket" series). The extent of this development varies significantly from country to country, with more developed countries in ASEAN exhibiting larger degrees of change in distribution than lesser developed ones. However the trend itself, and the extent of flow-on impacts back through the supply chain, are evident throughout ASEAN.

Clearly such developments are also more evident in countries where foreign retailers are not inhibited by regulatory restrictions on their activities. Such restrictions have generally been applied because of concerns about the impact of retail consolidation on employment in the distribution sector, which provides a substantial number of opportunities for unskilled, family labour in many developing economies. However this can also have the impact of restricting the benefits in terms of competitiveness for the broader food system that can flow from modern distribution and supply chain methods.

The key features of ASEAN Food systems to 2010 are summarized in Box 1.2 below.

Box 1.2 – Key features of ASEAN food systems to 2010

Key features of the ASEAN food systems to 2010 are likely to be:

- **Intensifying competition will help keep prices low and maximize consumer choice**. Poorer countries in particular with high levels of *per capita* expenditure of food will be keen to maintain low food prices, while the more developed countries will wish to ensure that consumer preferences for more variety in food and health-promoting attributes are met. Encouraging competition can help achieve both of these aims.
- **Trade in processed foods will continue to grow faster than trade in agricultural commodities, as consumer tastes widen**. However, food processing will continue to be done mainly domestically – it will continue to take place predominantly closer to the point of consumption.
- **Internationalization of food systems will continue, predominantly in the retail end of the chain**. There will be increased investments in retail outlets and food service, especially in countries with rising incomes and well-developed transport, information and refrigeration infrastructure with demand for high quality, dependability and convenience in food supply.
- **Foreign direct investment will supplement local capital**. Investment will focus on sourcing raw materials in competitive suppliers for processing in or close to final consumer markets. This process of intra-regional integration will require level playing fields in markets and transparency of regulatory regimes.
- **Market systems will be more vertically integrated**. New supply chain relationships will enhance coordination of supply and demand, save costs and expedite delivery. Contracts, alliances, and joint ventures will be features of these developments.
- **A dualistic system – modern and traditional – will continue to operate in most countries**. A sector with numerous, small scale, family owned enterprises will coexist alongside a large-scale, modern technological-intensive sector. Traditional local brands may become national ones and compete with global brands of multinational companies.
- **Exports of foods will continue to play a key role in the development paths of ASEAN Countries**. As incomes and costs rise, the competitiveness of processed foods will change in individual economies, potentially resulting in relocation of processing capacity within or outside of ASEAN.

Source: SG Heilbron

i) Issues for ASEAN

Future trends are likely to include intensifying competition that can help keep prices low and maximize consumer choice. Additionally trade in processed foods should grow faster than trade in agricultural commodities as consumer tastes widen. Internationalization of food systems will continue, predominantly in the retail end of the chain with foreign direct investment. Market systems will be more vertically integrated through contracts, alliances and joint ventures. A dualistic system – modern and traditional – will continue to operate in most countries. A sector with numerous, small scale, family owned enterprises will coexist alongside a large-scale, modern technological-intensive sector. Traditional local brands may become national ones and compete with global brands of multinational companies.

Exports of foods will continue to play a key role in the development paths of ASEAN Countries. As incomes and costs rise, competitiveness of processed foods in individual economies will change, potentially resulting in relocation of processing capacity within or outside of ASEAN.

4. THE GLOBAL REGULATORY ENVIRONMENT

a) Summary

World trade in agriculture is heavily regulated. This constrains opportunities for exporters in ASEAN economies. Market access is generally restricted and subsidies depress global prices for several products.

Global markets are unlikely to be significantly less restrained in the period 2005 to 2010. The WTO is unlikely to secure significant reductions in global protection of agricultural trade by 2010. Changes in the instruments of protection in the EU may reduce protection in some products, but the benefit overall is likely to be negated by an increasing inclination to raise

trade barriers to food on safety and environmental grounds. Some new access for ASEAN economies may be secured through regional or bilateral trade agreements. Overall, however, no significant reduction in global trade barriers to trade in agriculture should be anticipated. Some ASEAN economies of least-developed economy status may secure increased access to markets of industrialized economies from increased preferential access.

b) Recent trends in global trade

Annual growth in trade over the decade of the 90s averaged nearly 6 percent maintaining the pattern of the open world economy of trade growth each year growing at over twice the rate of growth of output (2.2 percent) over the decade.

Unusually the volume of trade in 2001 fell (-1.5 percent) from a bullish 12 percent in 2000. This reflected a slowdown in the global economy. Growth in trade recovered to 2.5 percent in 2002 and is expected to record growth of 4 percent in 2003. The OECD is predicting that growth in trade in 2004 and 2005 will be 7.8 and 9.1 percent.

c) Agriculture's share of world trade

It is a long-term trend that the share of world trade of trade in agricultural products is declining. It has fallen from 20 percent in 1970 to 9 percent in 2000. The share of agriculture of exports of the United States (US) and the EU is similarly falling. In the US, the share of agriculture of total exports fell from 22.7 percent in 1980 to 9.1 percent in 2000. The share of agriculture of total exports from the EU over the same period fell from 12.7 percent to 9.5 percent. For France the fall was 18.4 percent to 12.2 percent, and for the UK it was 8.2 to 5.9 percent[16].

The share of agriculture of imports is falling as well. For the same period (1980 to 2000), agriculture's share of imports into the US fell from 10.7 to 5.3 percent. For the EU it fell from 16.4 to 10.2 percent.

In absolute terms the value of agricultural trade has increased. It has simply expanded more slowly than trade in other sectors. For example, the share of manufactures of world trade over the same period has risen from 62 percent to 74 percent. In national economies in the industrialized world, the services sector has become the most important source of growth and for creation of jobs.

Two implications for global efforts to reduce protection of trade in agriculture can be drawn from this, seemingly at odds with each other. As agriculture's share of world trade declines, so too does the relative importance to global trade of distortions in agricultural trade. The case for urgency in global reform of world trade in agriculture rested on the proposition that the cost of distortions from protection of agriculture was significant. That reform of agricultural trade is relatively less important in the major industrialized economies may be a basic reason why the Doha Round is dragging.

Conversely it could be argued that if the economic cost of protection in industrialized economies is now relatively lower, reform should be easier, because it also means the political interest which the protection defends is relatively less powerful. There are limits to how far this analysis can be taken. In advanced economies with highly protected agricultural sectors, such as the EU, the farming population is larger than it should be and typically exercises concentrated political influence. On the other hand, because the economic contribution of the agriculture sector to the EU is smaller, the political influence of farmers is less. This would seem to explain why the EU is considering reform, albeit limited.

d) Prospects for early progress in the WTO

The agricultural trade reform program encapsulated in the WTO Agreement on Agriculture which was adopted in the Uruguay Round was designed to serve as the beginning of a long-term program of reform. Starting in 1994, it laid down just a six-year program of limited change. In recognition that it would only have limited effect, the WTO Agreement formally mandated a continuation of negotiations when the six-year term was up (ie, 1999).

[16] WTO Trade Statistics 2002, Alan Oxley

The limited impact of the provisions of the WTO Agreement was underlined by assessments by the OECD of their impact on global protection at the end of the six-year program. Despite elaborate formulae for reductions and the legal language of the commitments, global agriculture was on balance no less protected than before. What the Agreement achieved was the substantial removal of non-tariff barriers, a binding of a substantial part of the tariff of agricultural-trading nations, some constraints on how subsidies were to be used, increased access in some markets that had effectively been closed, and political acceptance that reform of agriculture was now a leading and legitimate activity for the WTO. The task of reducing protection lay with the WTO Doha Round of negotiations.

It is a matter of public record that the negotiations stalled at the mid-term review of the Doha Round in September, 2003 at Cancun. Ministers directed officials to return to Geneva to resolve the issues that had defeated them. The formal position is that members of the WTO are striving to reach agreement on how the agriculture negotiations are to be advanced. Whether or not they achieve this by the end of 2004, it is difficult to see how any substantive agreement on reducing global agricultural trade can be made before 2006 at the earliest. [17]

Progress depends fundamentally on the preparedness both among members of the EU and the US Administration to commit to long-term programs to reduce protection of agriculture. This will require major changes to existing domestic policy. A new European Commission is to elected and a new Administration will be elected in Washington at the end of 2004. It would be reasonable to assume that it would take each Administration about a year to set up for the sort of long-term domestic reform which would be necessary if they were to agree to a substantial global program to reduce protection of agriculture.

Japan is also an important market for agricultural exports which is heavily protected. The pattern of Japanese participation in the WTO is that it leaves the leadership to the EU and the US and comes in behind whatever programs of reform they are prepared to support.

In the event both agree to a program of reform, it is likely to be long term. The Uruguay Agriculture Agreement was a six year program. Ten years is also a common reform period in the WTO. Any program is also likely to achieve partial reform, not complete liberalization. That would be too ambitious a goal for the WTO. So if a process of partial liberalization began in 2007, the reductions likely to be achieved between then and 2010, the period of review, are likely to be small.

Such liberalization might create some valuable opportunities for some ASEAN economies in some products, but it should be borne in mind that the highest levels of protection for most agricultural products in the EU, the US and Japan are for agricultural products produced in temperate zones. Most agricultural products produced in ASEAN Countries are tropical climate products.

It is a distinct possibility that any overall benefits available from global liberalization in the WTO will be negated by increases in new trade barriers imposed on the grounds of improved food safety and to protect the environment. This is discussed in section 5 of this chapter.

e) Will bilateral and regional agreements create new market opportunities?

The remarkable upsurge in bilateral and regional trade agreements over the last decade has generated debate about the durability of the WTO system. It is too soon to form a judgment that it is a risk. It is unlikely that proliferation of bilateral and regional agreements will undermine the WTO, even if there were no further comprehensive rounds of trade

[17] The Doha Round is due to end in 2005. A decision to extend the Round will need to be taken by members of the WTO. An extension will be needed to be for two or three years. The factors likely to determine progress will be those which shape domestic policy making on agricultural policy in the EU and the US and to a lesser extent, Japan. The most important driver is likely to be the commitment adopted by EU Heads of Government to finalize by 2013, the terms of the treatment of the new 10 members of the EU. These terms were not settled in the accession negotiations. Another target date is 2008, the date until which EU Heads of Government determined that no major reviews of the funding of agriculture programs in the EU were to be taken before. The EU Commission has however made changes to the direction of the funding of some programs which will result in some reduction of the trade distorting effect of the payment of subsidies for some products. These reforms were announced in 2003, but it will be some time before the precise impact of them is known. In the overall terms of the CAP program, they will be small.

negotiations. Around 85 percent of world trade is now conducted at tariffs of 5 percent or less and these tariffs are secured at these levels by legally binding commitments under WTO rules. This generality of course does not apply to agriculture. It is one of the largest sectors in the remaining 15 percent of trade which is highly protected. And as well as high tariffs, restraints on subsidization of agriculture are light.

There is scope to increase market access in agricultural products in bilateral or regional agreements. The value of that increased access depends on the importance of the market and the increase in access secured. However countries which have the highest level of protection are unlikely to significantly increase access in bilateral or regional agreements if they are unlikely to do so in the WTO. Opposition from farm groups will be just as strong.

f) Issues for ASEAN

It is in the interests of ASEAN Countries to continue to work for global liberalization of agricultural trade through the WTO. The WTO processes give support to domestic programs to make markets more efficient and open markets for exports from ASEAN farm sectors. ASEAN members should however not peg regulatory reform of farm production in ASEAN to the pace of change in the WTO. Globalization and changes in consumption patterns are driving change at a faster pace.

5. TRENDS IN TECHNICAL STANDARDS GOVERNING TRADE

a) Summary

In the recent past there has been a marked trend for increased regulation of trade in agriculture to enhance the safety of food and to support environmental goals. This has had an impact on the trade of ASEAN economies. In the period under review, this trend is likely to increase. New restrictions on ASEAN agricultural trade are likely.

b) New regulation of trade

There have always been rights to restrict trade to protect human health and safety and animal and plant health. These are the basis for quarantine rules. Environmental pressures have given renewed focus to these regulations, and generally have resulted in pressure for new rules to restrict trade. Environment regulations are being strengthened, particularly in the EU, and this is leading to pressure from the EU for new trade restrictions. There is a separate, but related concern about increasing the safety of food. Outbreaks of disease, particularly where viruses appear to be crossing over from animal to human species, are heightening this concern.

c) The rise of environmental regulation

A major push to regulate trade to serve environmental policies is underway. The EU is the driver. It is formal EU policy that "sustainability" should be a goal of all public policy. Several specific policies are the tools being utilized to meet this goal.

It is EU policy to apply "the precautionary principle" in regulation; to regulate to require recycling; to establish "stewardship" programs (where producers are responsible for the environmental impacts of their products); and to base environmental assessments on "life cycle analysis" (which seeks to assess the environmental impact of a product throughout its entire life- from the time it is produced and processed through to its final disposal). The EU is also setting residue levels for hazardous products and chemicals that go beyond what appears reasonably defensible on health and safety grounds.

These philosophies behind the policies described above are being progressively enacted in environmental directives in the EU and in national policies of EU member states, particularly Germany, the Netherlands and Austria. Recent research [18] reveals that nearly 40 new barriers to trade to promote environmental policy have been introduced over the last decade, mostly by the EU. The measures are principally national environmental regulations which restrict imports unless they comply. Another twenty regulations are in the EU policy "pipeline".

[18] By the Australian APEC Study Centre at Monash University and the National Foreign Trade Council in Washington

Such regulations are permissible under WTO rules if they are to protect health and safety (including quarantine requirements) provided they are based on science and risk assessments. Many appear to conflict with WTO policies but there does not appear to be a disposition in the EU to regulate in a way that respects WTO principles.

Environmental agencies in EU member states also seem to support strongly policies proposed by Greenpeace and the World Wide Fund for Nature (WWF) to use coercive or discriminatory trade measures in environmental agreements to support environmental goals, for example to use trade restrictions to restrict trade in GMOs.

The conflicts between WTO provisions and the environmental policies which the EU members have been adopting have led the EU to make certain proposals to resolve the conflict. All would effectively curtail the application of the rules of the WTO. It proposed several years ago that the WTO be amended to legitimize the trade measures in environmental agreements. The EU wants its interpretation of the precautionary principle recognized. The effect would be to legalize a 'no risk' approach to international regulation of the environment. The EU wants imported products to be restricted according to how they are made (to legitimize restrictions on products that don't meet EU environmental standards).

The EU approach has been strongly opposed in the WTO by most developing countries and the US and Australia. The EU conceded at the WTO Ministerial conference in Cancun that it was isolated with these policies in the WTO. It announced in December that it would cease proposing that the WTO be amended to legitimize the trade measures in the environmental agreements. But it has stated that it would pursue these by 'political' means. It has otherwise made clear it will pursue its environmental policies in bilateral and regional trade agreements. It should be expected that the EU will invite countries to adopt its preferred environmental policies in return for preferential access to its markets.

The US has a similar policy framework in place for trade with African economies. It is also seeking to include environmental provisions in regional and bilateral free trade agreements. The policy impact of the provisions in bilateral trade agreements is weak under current US trade law. But if a Democrat Administration is elected in the period under review, the provisions are likely to be strengthened. Democrats traditionally have taken stronger positions on these issues than Republicans.

d) Public health and safety questions

Among the various new environmental trade barriers imposed over the last decade, measures to restrict imports of food unless they meet very rigorous standards for levels of toxic substances or pesticides feature strongly. The new standards being demanded do not appear to be reasonable nor satisfy the traditional requirement in WTO provisions that they be scientifically based. EU standards on levels of aflatoxins in shrimp are a case in point.

Concern about public health safety of foodstuffs (mad cow disease, avarian flu, SARS and other viruses crossing from animal species) is heightening public apprehension and creating a political climate where philosophies such as "precaution" appeal to regulators.

The inclination by the EU to reduce tolerance levels of toxicity in residues and pesticides is not currently supported by US Administrations. They are likely to challenge these EU actions under WTO trade law where US trade is affected.

e) A new division in global regulation of food

The EU is therefore introducing new environmental restrictions into international trade by unilaterally imposing them through environmental standards, including discriminatory trade measures in environmental agreements and has positioned itself to require countries to accept them in bilateral agreements in return for access to EU markets.

As a result, the EU is dividing global processes used to regulate food. Whereas there was previously a general consensus that the philosophy of regulation of food through international food standards was to protect health and safety and be based on science and risk assessment, the EU is now proposing that such standards should also serve general

environmental goals. It has been insisting for example that the "precautionary principle" (as it interprets it) should be reflected in all food standards.

The EU is increasingly imposing traceability requirements (which require products to be "traced" throughout the food chain from the time of production, to the consumer and through to disposal[19]) scientifically unjustifiable standards for health and safety and now geographic indicators to restrict trade in food. A broad division is emerging in global regulation of food between its philosophy, which is typically implemented through "command and control" type regulation, and that in the US where the preference is to use market instruments and restrict regulation for the protection of health and safety based on sound science. Approaches to regulation in Australia and Canada are closer to the US philosophy.

This has already caused friction in international trade. There have been disputes with other countries over regulations banning meat enhanced with natural hormones, moratoriums on imports of GMO products and use of geographical indicators.

The EU seems set on this direction. It creates new public policy challenges and creates new markets for which producers may need to attune products. It is a new backdrop against which the prospective benefits of proposals in the WTO to open markets in food increasingly need to be measured.

f) Issues for ASEAN

ASEAN producers and governments need to monitor this environment closely. It is likely to alter the international market for ASEAN exports, in many cases by increasing trade restrictions, and in others by generating demand for products which meet these new tougher standards. ASEAN Countries need to be prepared both to contest these new trade regulations where that might be effective, anticipate their impact on production and trade and where markets for new products emerge and ensure regulatory standards facilitate development of products for new markets.

6. TRENDS IN COMMODITY PRICES

a) Summary

Prices for major agricultural commodities were generally on an uptrend up to 1995-1996. From 1997 onwards, prices were sliding and/or fluctuating. The interplay of supply and demand factors affected price movements for these commodities in the world market.

Commodity prices, specifically ASEAN agriculture exports, recorded long-term declines in prices in the past decade. This included coffee, coconut oil, palm oil, rice, shrimps, sugar and rubber. The fall in prices benefited net importers like Indonesia, Malaysia, the Philippines and Singapore.

Commodity prices have fallen faster than the manufactures unit value index[20] which only averaged 1.7 percent per year compared to higher levels in current prices for the said commodities.

b) Trends by major commodity

The analysis covered the world reference prices for nine agricultural commodities, namely, coffee, coconut oil, palm oil, maize, rice, shrimp, sugar, rubber and urea, for the period 1992-2002.

---

19 Traceability is a demanding practice by an importing country that traces the supply chain of agri-food products. This has become more and more stringent for food exporters. It is a standard established by an importing country like the EU which wants to determine in detail how the product is grown (including the fertilizers and chemicals used), processed, packaged, handled and shipped to country destinations. This process requires the certification from an internationally accredited agency and therefore entails time and expense to the producer/exporter. Among the requirements are: the residue level of substances such chemicals, toxins, and antibiotics on the final products. The stringent requirements can impose a huge cost burden and may not be complied with by small producers. Labor standards in producing countries have also entered the picture. Traceability can be a major concern for large corporations. It is going to be a more challenging task for small and medium farmers who have less capacity to acquire certification. In the process, outsourcing from small farmers could be discouraged.

20 refers to the "unit value index in US dollar terms of manufactures exported from the G-5 countries (France, Germany, Japan, UK and the US) weighted proportionally to the countries' exports to the developing countries" (World Bank).

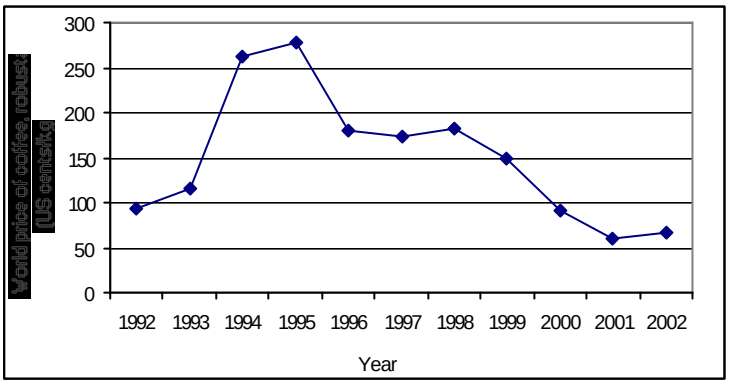
Coffee

Viet Nam and Indonesia are the world's largest exporters of Robusta coffee. World Robusta prices[21] declined by 7.9 percent[22] per year from US cents 94/kg in 1992 to US cents 66.2/kg in 2002. Prices have been on a downtrend after peaking in 1995 at 277.1 US cents/kg. In real terms, prices fell by 6.4 percent per year during the period. The drop is attributed mainly to oversupply in the world market.

The production of Brazil, the world's largest producer (primarily Arabica) has improved tremendously in the past 10 years as a result of productivity enhancing innovations including the cultivation of less frost-prone areas, better mechanized harvesting, and increased irrigation[23]. Likewise, massive expansion from cost-efficient producers like Viet Nam contributed to the drop in prices.

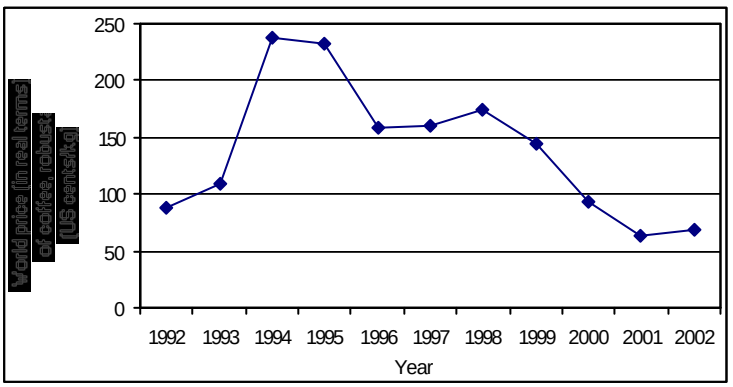
The World Bank projects recovery in real prices in the long-term from 68.6 US cents/kg in 2002 to US cents 94.6 /kg in 2005, US cents 102.4 /kg in 2010 and US cents 116.9/kg in 2015.

Figure 1.15 – Trends in world prices of coffee, 1992-2002



CFA Chart
Source: The World Bank-Development Prospects Group (DPG)

Figure 1.16 – Trends in real world prices of coffee (1990=100), 1992-2002



CFA Chart
Source: The World Bank-DPG

[21] ICO, International Coffee Organization indicator price, Robusta, average New York and Le Havre/Marseilles markets, ex-dock
[22] Growth rate was calculated using the mathematical formula $Y = e^{bt}$, where the base of the natural logarithm e is approximately equal to 2.71828, y is the price of the product, t is year and b is the estimated growth rate. The equation was specified as ln (Y) = k + bT. The same procedure was used for all the other commodities.
[23] Friedenberg, S.G. et al, 2004

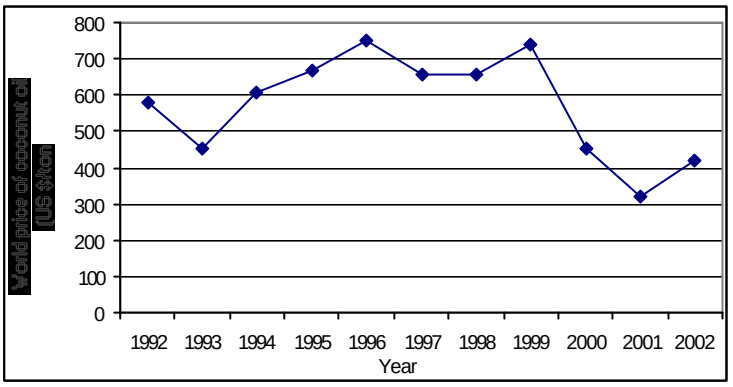
Coconut oil

The Philippines is the world leader in coconut oil exports although Indonesia is also a major exporter. Global coconut oil prices[24] were upbeat from 1993 to 1996 but posted successive declines from 1997 to 2001 except for an uptake in 1999.

There was supply shortage in 1999 as a result of the spill over effects of the El Niño phenomenon in 1997-1998 which adversely affected coconut production in the Philippines. Prices dropped to an all-time low of US$318/ton in 2001 following recoveries in production. Overall, prices dipped at an average rate of 3.5 percent per annum from $578/ton in 1992 to US$421/ton in 2002. In real terms, prices contracted by 2 percent per year.

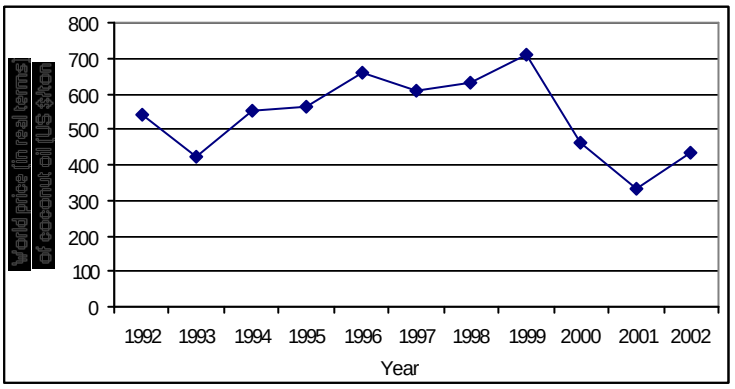
Based on the World Bank's projections, slight recoveries in real prices are expected in the next several years. Specifically, real prices are expected to increase from US$436/ton in 2002 to US$480/ton in 2005, US$489/ton in 2010 and US$496/ton in 2015.

Figure 1.17 – Trends in world prices of coconut oil, 1992- 2002



CFA Chart
Source: The World Bank-DPG

Figure 1.18 – Trends in real world prices of coconut oil (1990=100), 1992-2002



CFA Chart
Source: The World Bank-DPG

Palm oil

Palm oil is the leading vegetable oil export in the world market. Supply comes mainly from Southeast Asia, particularly Malaysia and Indonesia. In 2002, combined exports of these two countries accounted for about 90 percent of total world exports[25].

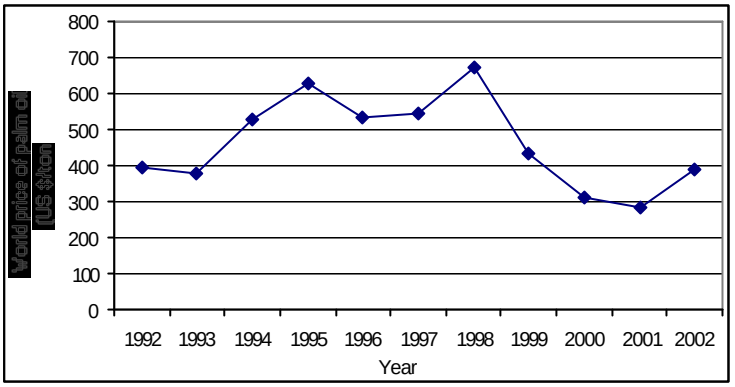
Prices[26] of palm oil in the world market were volatile from 1992 to 2002. Prices peaked in 1998 at US$671/ton following contractions in exports of the two countries. Meanwhile, prices reached their lowest in 2001 at US$286/ton. Overall, prices exhibited a declining trend during

[24] Philippines/Indonesian, bulk, c.i.f. Rotterdam
[25] FAO Stat, 2004
[26] Malaysian, c.i.f. Rotterdam

the period, with contractions averaging 3 percent per year. In real terms, global prices dropped by 1.4 percent per annum.

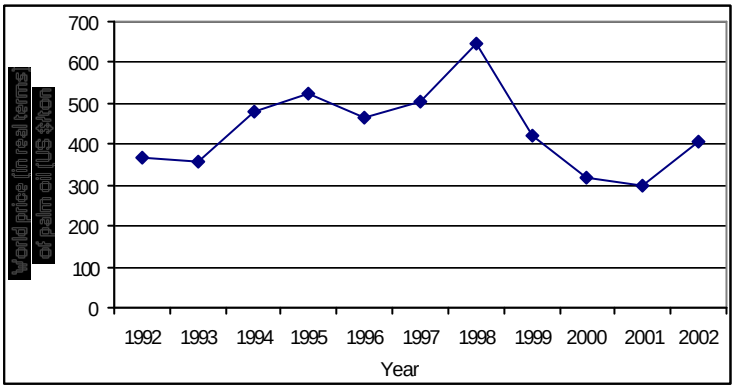
According to the World Bank, real world prices are projected to improve from US$405/ton in 2002 to US$424/ton in 2005. Prices may be helped by the likely stagnation in Malaysian production[27]. Price forecasts for 2010 and 2015 are at US$411/ton and US$416/ton, respectively.

Figure 1.19 – Trends in world prices of palm oil, 1992-2002



CFA Chart
Source: The World Bank-DPG

Figure 1.20 – Trends in real world prices of palm oil (1990=100), 1992-2002



CFA Chart
Source: The World Bank-DPG

Maize

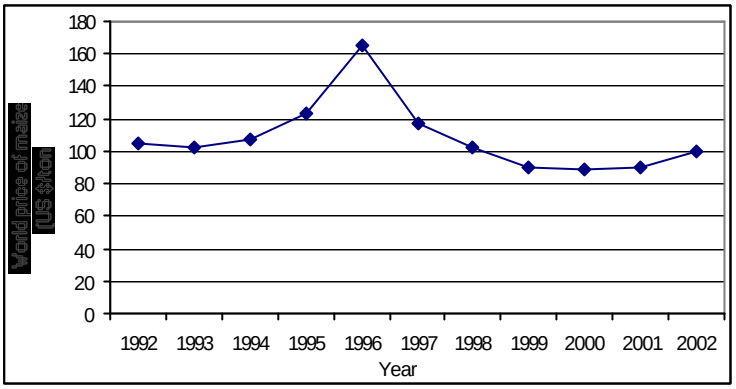
The US is the world's biggest exporter of maize, accounting for over half of the total global exports in 2002[28]. The second leading exporter is China, with export share of about 14 percent. Maize is an important input in the livestock and poultry industries in ASEAN. Indonesia, Malaysia, the Philippines are net importers.

From US$104/ton in 2002, world prices[29] of maize decreased to US$ 102/ton in 1993 but continued to increase thereafter, peaking in 1996 at US$166/ton. The high prices may be attributed to an almost 15 percent drop in exports of the US during the year. Meanwhile, prices slumped in 1997 up to 2000, with recoveries starting 2001. In 2002, prices stood at US$99/ton. On the average, prices slid by 2.2 percent per year from 1992-2002. Adjusting for inflation, prices dropped by 0.7 percent per annum during the period.

The World Bank forecasts real prices to slide from US$103/ton in 2002 to US$97/ton in 2005, with some improvements in 2005 and 2010 to US$103/ton and US$105/ton, respectively.

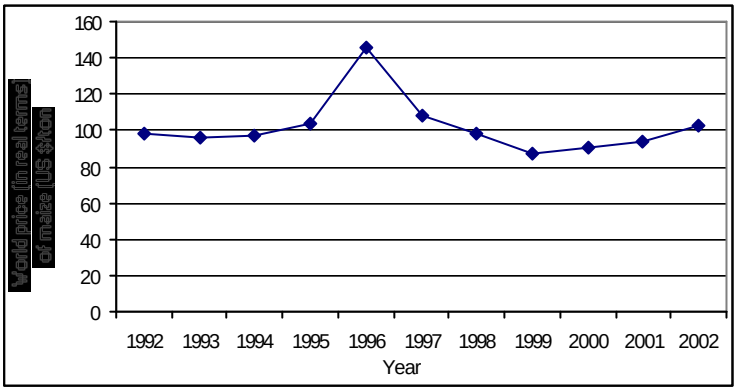
[27] Oil World, March 12, 2004
[28] FAO Stat, 2004
[29] US, no.2, yellow, f.o.b. US Gulf ports

Figure 1.21 – Trends in world prices of maize, 1992-2002



CFA Chart
Source: The World Bank-DPG

Figure 1.22 – Trends in real world prices of maize (1990=100), 1992-2002



CFA Chart
Source: The World Bank-DPG

Rice

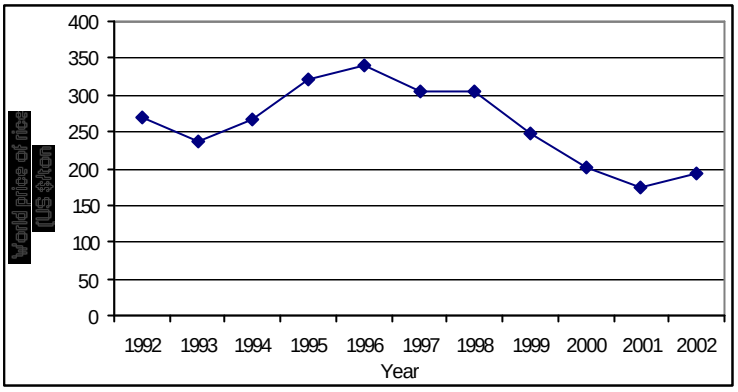
The export market for rice is dominated by five countries, namely, Thailand, India, the US, Viet Nam and China. The biggest exporter, Thailand, accounted for about a fourth of global rice exports in 2002 while India contributed close to a fifth. Collectively, these five countries accounted for over 75percent of global rice exports in 2002[30]. By contrast, Indonesia, Malaysia and the Philippines are net importers.

World prices[31] of rice averaged US$268.2/ton in 1992, down by 4 percent per year from to US$191.9/ton in 2002. In real terms, prices contracted by 2.5 percent per year during the period. Prices were generally on a downtrend after hitting a high of US$338.9/ton in 1996. A sharp drop to US303.5/ton was experienced in 1997 when Thailand devalued its currency.

Based on data from the World Bank, rice prices (in real terms) will increase from US$199/ton in 2002 to US210/ton in 2005 and stagnate at US$215/ton in 2010 and 2015.

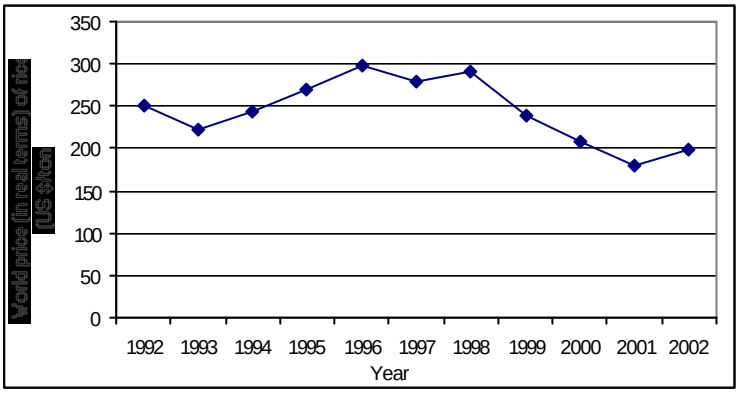
[30] FAO Stat, 2004
[31] Thai, 5 percent broken, WR milled, indicative price based on weekly surveys of export transactions (indicative survey price), government standard, f.o.b. Bangkok

Figure 1.23 – Trends in world prices of rice, 1992-2002



CFA Chart
Source: The World Bank -DPG

Figure 1.24 – Trends in real world prices of rice (1990=100), 1992-2002



CFA Chart
Source: The World Bank-DPG

Shrimp

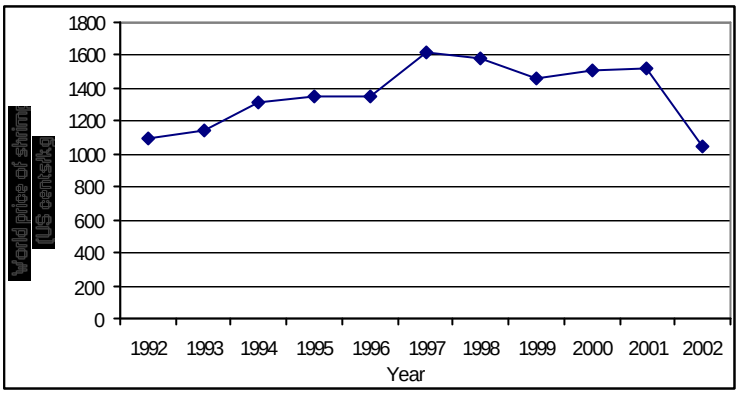
Global shrimp/prawn production is dominated by China, followed by India, Indonesia, Thailand, and to some extent, Viet Nam[32]. They are also major exporters. The Philippines and Malaysia are also net exporters. Outside of Asia, the leading global suppliers include Mexico and Ecuador.

From 1992-2002, prices[33] of shrimps in the world market grew by 1.5 percent per year, averaging US cents 1362 /kg per year. In real terms, prices improved by 3 percent per year. Similar to the other commodities, shrimp prices were generally on the rise up to 1997 but suffered contractions in 1998 to 1999. Some improvements were posted in 2000 to 2001, possibly buoyed by recoveries from the Asian financial crisis and the strong US economy which boosted demand.

Shrimps are expected to enjoy relatively better prices in the coming years. For instance, real prices are seen to increase from US cents 1090/kg to US cents 1379 in 2005, 1515 US cents in 2010 and 1543 US cents in 2015, according to World Bank projections.

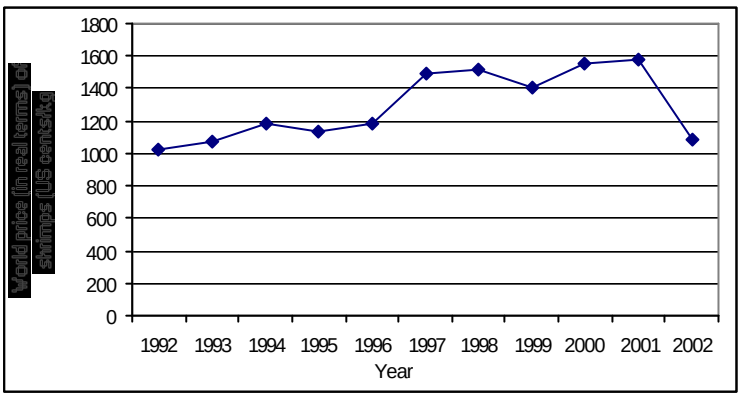
[32] FAO Stat, 2004
[33] Mexican, frozen, white, No.1, shell-on headless, 26 to 30 count per pound, wholesale price at New York

Figure 1.25 - Trends in world prices of shrimps, 1992-2002



CFA Chart
Source: The World Bank -DPG

Figure 1.26 - Trends in real world prices of shrimps (1990=100), 1992-2002



CFA Chart
Source: The World Bank-DPG

Sugar

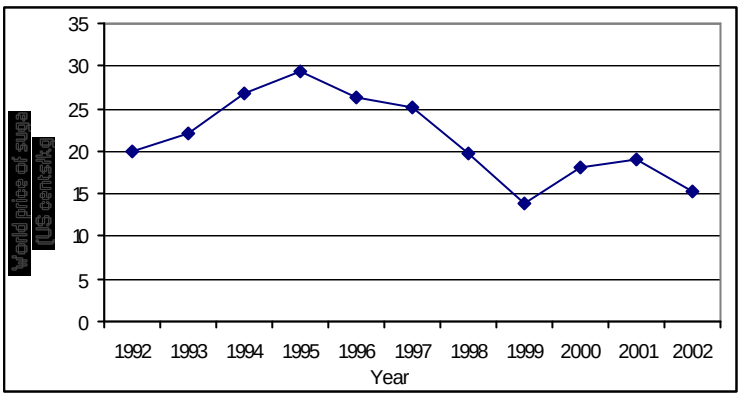
World exports of sugar are dominated by Brazil. In 2002, it accounted for about a third of the volume of global exports[34]. Other leading exporters are Thailand, France, Cuba and India. In ASEAN, Indonesia, Malaysia, the Philippines and Singapore are net importers.

The world market for sugar is often referred to as a "dumping market[35]." Sugar prices[36] in the world market posted successive increases from 1992 to 1995. Prices started to decline in 1996 and reached a record low of US cents 13.8 /kg in 1999. While there were slight recoveries in 2000 to 2001, they were not sustained in 2002. On the whole, prices dipped by 4.5percent per annum during the 11-year period, with average of US cents 21.4/kg per year. In real terms, prices declined by 3percent per year. The drop in prices could be attributed to the growing global output in recent years, particularly in Brazil, the world's leading producer, as well as in India, China, Thailand and Australia.

Significant recovery in prices is not likely in the coming years as the market remains saturated. According to World Bank projections, real prices will fall from US cents 15.7/kg in 2002 to US cents 15.3/kg in 2005 but will improve to US cents 18.6/kg in 2010 and US cents 19.6 /kg in 2015.

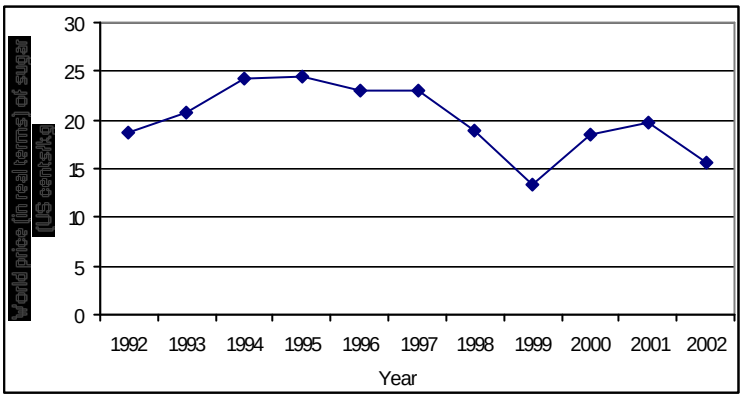
[34] FAO Stat, 2004
[35] Schmitz, 2003
[36] World, International Sugar Agreement (ISA) daily price, raw, f.o.b. and stowed at greater Caribbean ports

Figure 1.27 - Trends in world prices of sugar, 1992-2002



CFA Chart
Source: The World Bank-DPG

Figure 1.28 - Trends in real world prices of sugar (1990=100), 1992-2002



CFA Chart
Source: The World Bank-DPG

Rubber

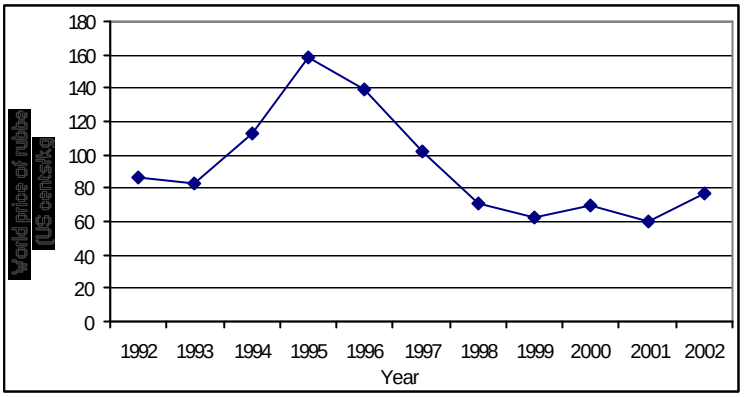
Southeast Asia, particularly Thailand, Indonesia and Malaysia, are the leading producers and exporters of rubber. In 2002, these three countries collectively accounted for about 80 percent of global exports[37]. Malaysia was the dominant producer but has been supplanted by Thailand and Indonesia as plantings shifted to oil palm due to higher returns and lower labor intensity[38]. Cambodia, the Philippines and Viet Nam are also net exporters.

After hitting a high of 158 US cents/kg in 1995, world rubber prices[39] posted successive declines up to 1999 and fluctuated thereafter. The lowest price was registered in 2001 at 60 US cents/kg. The drop in prices may be attributed to dramatic strides in production posted by Thailand and Indonesia. In general, prices dropped by 5.3 percent in nominal terms and 3.8 percent in real terms from 1992-2002.

Prices are unlikely to improve much in the next several years. While the World Bank estimates prices (in real terms) to increase from US cents 79.9 in 2002 to US cents 96.9 in 2005, declines are expected in 2010 and 2015 to US cents 86.2/kg and US cents 84.6/kg, respectively.

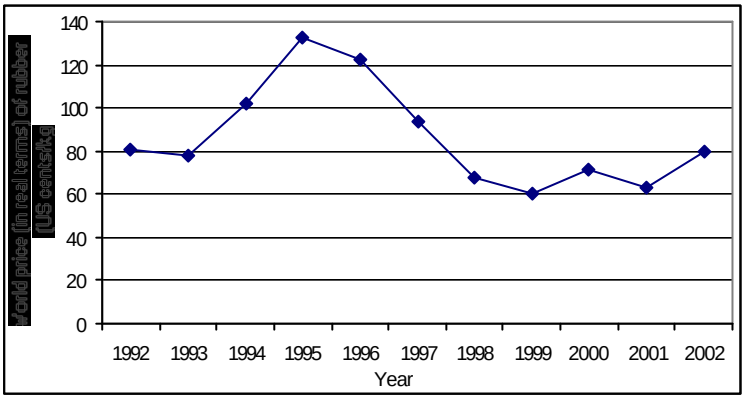
[37] FAO Stat, 2004
[38] Dy, 2003
[39] Malaysian, RSS no.1, in bales, Malaysian Rubber Exchange & Licensing Board, midday buyers' asking price for prompt or 30 days delivery

Figure 1.29 - Trends in world prices of rubber, 1992-2002



CFA Chart, Source: The World Bank -DPG

Figure 1.30 - Trends in real world prices of rubber (1990=100), 1992-2002



CFA Chart
Source: The World Bank-DPG

Urea

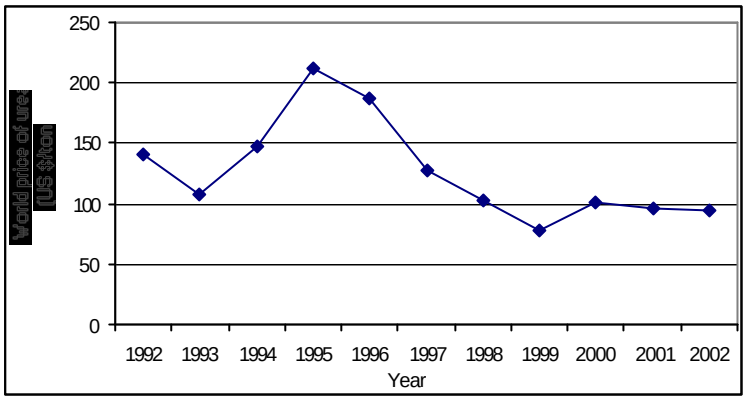
The dominant suppliers in the world market for urea are the Russian Federation, Ukraine and Saudi Arabia. Meanwhile, in Asia, the key exporters are China, Indonesia and Malaysia. The rest of the ASEAN are net importers.

The world prices[40] of urea fluctuated from a high of US211.5/ton in 1995 to a low of US$77.8/ton in 1999. Overall, however, prices exhibited a declining trend from1992-2002, with contractions averaging 5.6 percent per year. In real terms, prices declined by 4.1 percent per annum. One of the reasons for the decline in world prices was the availability of cheap fertilizer from former Soviet nations[41].

Real world prices are expected to decline in the long-term. While the World Bank forecasts real prices to improve from US$98/ton in 2002 to US$130/ton in 2005, prices are seen to drop to US$122/ton in 2010 and 2015.

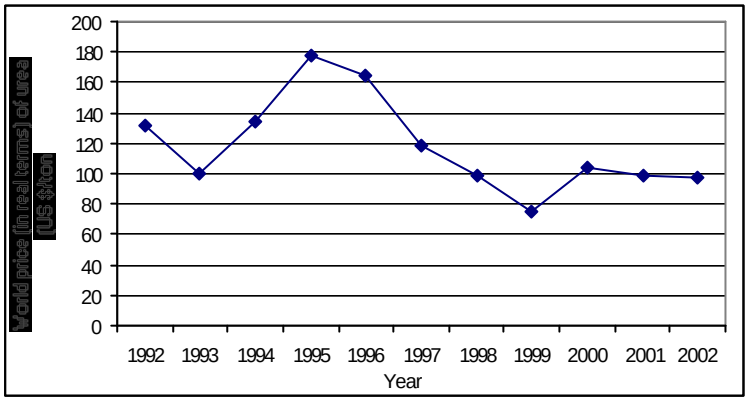
[40] Varying origins, bulk, spot, f.o.b. Eastern Europe
[41] www.asiabiotech.com

Figure 1.31 - Trends in world prices of urea, 1992-2002



CFA Chart
Source: The World Bank-DPG

Figure 1.32 - Trends in real world prices of urea (1990=100), 1992-2002



CFA chart
Source: The World Bank-DPG

c) Issues for ASEAN

In the long-term (2005-2015), the World Bank projects recoveries in real prices for most commodities. This augurs well for the improvement in ASEAN agri-food exports.

7. THE IMPACT OF TECHNOLOGY

a) Summary

Biotechnology is now starting to create products that differentiate markets. This is most evident with products which contain genetically modified (GM) material. New products with new characteristics are being developed – higher productivity, higher nutritional value, greater resistance to disease and insects and greater ease of use.

GM technology potentially will radically alter the economics of many markets. Producers which do not keep abreast of developments risk being sidelined. The products are controversial in some markets. Demand for some GMO free products is growing, but the shaping of markets for such products are being created by regulators rather than consumers.

b) Drivers of food technology and research

Consumer demands and government regulatory requirements are the key drivers of food technology development. For example the ageing of the population in developed countries makes them more vulnerable to disease. Food safety thus becomes a paramount issue, and food technology is evolving to accommodate this. It is leading to research on improved methodologies for testing and detecting food-borne pathogens.

Moreover, consumer concerns about weight-gain are encouraging development of new food processing methods that reduce fat and carbohydrates without affecting taste. Food marketers in developed markets perceive that consumers want foods that are convenient, less-processed or fresh and natural with as few preservatives as possible, as well as healthy[42].

Furthermore the perception is that consumers want foods that not only cause no harm but also positively promote health (i.e. so-called 'nutraceuticals') or physical or mental performance. These include foods which are fortified with enzymes, vitamins or some other additive. Most of these products are processed using traditional technologies.

At the farm production level, technologies have predominantly been aimed at so-called "input traits," that is, aspects of the inputs to farm production. GMOs have played an important role in this (for example, through reduced use of herbicide input via GMO seed varieties). These GMO technologies have yet to evolve to directly enhancing product traits to consumers. However, it could be argued that consumer demands for products which use less pesticides and herbicides have been also accommodated by GMO technology by reflecting a preference by consumers for reduced environmental impacts in farming.

Overall consumers buy foods on the basis of value and taste, rather than processing technology. Unlike some industries that change rapidly, food science evolves slowly. Most technologies used for current food production are adaptations of traditional methods (for example baking, pasteurizing, canning). However, non-traditional technologies are increasingly the subject of research. These include microwave and radio frequency technology, light-based technologies and biologically and genetically–engineered technologies. Government regulation is a key factor affecting food technology given food safety issues and the activities of interest-groups.

c) Production of GM agriculture

Few GMO products are traded. The leading products are oilseed, cotton and maize. Many products are being researched in virtually every area of agricultural production. Products in which most radical changes are likely and where GMO technology is likely to produce the greatest gains are broad scale commodities.

Within the period under review, it should be anticipated that several new varieties of products developed from GMO technology should be on the point of commercialization. It should be assumed that these will include products which are major agricultural products of ASEAN.

d) Regulation of GM technology

The critical area of regulation of GMO technology is that for approving release of GMO products. In economies where GMO technology is advanced, procedures for evaluating and approving GMO products have been developed and regulatory systems banning or restricting use until products have been evaluated have been introduced.

The only international regulations governing GMOs are found in the Cartagena Protocol to the Convention on Biological Diversity. It creates rights to restrict imports of certain GMO products (living modified organisms) and fosters establishment of an international system of notification of approval of release of GMOs. It does not set standards to govern processes for appraisal and release of GMOs.

Controversially, the Convention focuses on the use of trade instruments to regulate GMOs and it can diminish the right of parties to the WTO to require trade restrictions to comply with WTO rules.

e) Markets for GMO free food

In some countries, consumers are demanding GMO-free products. This has focused attention on the importance of creating products to meet market demand. Research to date suggests that demand is being driven by regulators or wholesalers and retailers in certain countries (i.e. Great Britain) rather than consumers. The evidence of widespread consumer

[42] D. Zink, Nestle, Emerging Infectious Diseases, Vol. 3, No. 4, October-December 1997

interest in industrialized economies for GMO free foods is weak. Producers will need to be alert to the possibility that such markets will develop.

f) Issues for ASEAN

There is a significant chance that GMO technology will have a significant impact on some agricultural industries in the period under review. For ASEAN to keep abreast of these developments, it is vital that:

- Research and development of products of concern to ASEAN be monitored closely;
- Consumer demand for and attitudes to GMO products in industrialized markets be researched thoroughly
- Systems of regulation for appraisal and release of GMOs for adoption by ASEAN economies be developed.

II. KEY CHANGES AND TRENDS IN ASEAN FOOD AND AGRICULTURE 2005-2009

1. THE IMPORTANCE OF FOOD AND AGRICULTURE IN ASEAN MEMBER ECONOMIES

a) Summary

Food and agriculture sectors comprise an important part of most ASEAN economies in terms of employment and contribution to GDP. Whilst the relative importance of the agricultural sector varies across ASEAN members, it remains particularly significant for the CLMV countries and also for Indonesia, Thailand and the Philippines. In most countries, the relative importance of agriculture as a share of GDP has been declining, with the exception of some CLMV countries for which the importance of agriculture has increased as production and exports have developed. By and large ASEAN remains a major producer of agricultural products, specifically in rice, copra, palm oil, natural rubber, fruits and vegetables and coffee.

b) Overview of the importance of agriculture

In 2001/2002 agriculture played a dominant role in employment in almost all ASEAN economies except for Singapore and Brunei Darussalam. It employed between 60 percent and 75 percent of the workforce in Viet Nam, Cambodia, Myanmar and Laos and over 40 percent of the labour force in Indonesia, Thailand and the Philippines. It was slightly less important for employment in Malaysia and relatively insignificant in Singapore and Brunei Darussalam.

The agriculture sector also plays an important role in terms of contribution to the GDP of ASEAN economies. In 2000, agriculture in the ASEAN region accounted for 32 percent of total GDP and employed 54 percent of the ASEAN labor force[43]. Its largest contribution is in the lesser-developed ASEAN members, particularly Myanmar and Laos where it accounted for over 50 percent of GDP. It makes a significant contribution in Indonesia and the Philippines, and contributes slightly less than 10 percent to GDP in Malaysia and Thailand. Given the small size of the agriculture sectors in Singapore and Brunei Darussalam, the contribution of agriculture to GDP is relatively insignificant (at 0.1 percent and 2 percent respectively).

ASEAN remains a large producer of many agricultural products including rice, palm oil, coconut oil, natural rubber, sugar, poultry, fruits and vegetables, coffee, shrimp, and canned tuna. The higher value-added products such as palm oil and poultry are mainly produced by the more developed ASEAN members including Thailand, Malaysia and Indonesia.

In the past 20 years, ASEAN has witnessed a remarkable increase in food production. During 1985 – 2000, cereal production rose at an annual rate of over 2 percent compared with population growth of 1.6 percent.[44] The largest share of increase in food crop production is attributed to higher yields, although this was not the case ASEAN wide.

In recent years, meat production has also been increasing rapidly, growing from 6.1 million tons in 1990 to 9.3 million tones in 2000, representing an output growth of 5 percent annually form 1990 to 2000. Fish production has also increased to 15 million metric tons in 1999 from 10.5 million metric tones in 1989. This represented a growth rate of 4 percent, or 2.5 times the population growth. Overall the ASEAN region accounts for 12 percent of world production of fisheries and aquaculture and close to 20 percent of the world's exports in fishery commodities[45].

The agri-industry sector has also been expanding. For Indonesia, Malaysia, the Philippines and Singapore combined the growth in value added of food products and beverages during the period 1985 to 1995 were 10 percent and 13 percent respectively. Several ASEAN Countries have also been improving their shares of agro industry in total agro-industrial output[46].

[43] DRAFT Regional Strategy for Agriculture Development and Food Security in the Countries of ASEAN(2002)
[44] *Ibid*
[45] *Ibid*
[46] *Ibid*

A summary of the importance of agriculture to ASEAN economies in terms of share of GDP and employment, and major commodities produced, is noted below.

Table 2.1 - The importance of agriculture to ASEAN economies (for year 2002 unless stated)

Country	Ag as % of GDP	% of workforce employed in agriculture	Growth of agriculture in 2002 in %	Main commodities produced
Indonesia	17.5	40	1.9	Rice, maize, palm oil, rubber, copra, coconut oil, coffee sugarcane
Malaysia	9.1	15.3	0.3	Rubber, palm oil, cocoa, rice, vegetables, chicken meat
The Philippines	14.7	40	3.3	Rice, sugar, coconuts, bananas, corn, pig meat and chicken, fish, seaweeds
Thailand	9.1	47.9		Rice, rubber, cassava, sugar, fruits, pig meat, chicken meat, shrimp, canned fish
Singapore	0.1	2	1	Vegetables, ornamental plants
Brunei Darussalam	2	2.5	2.3 (2000)	Poultry, vegetables, chicken eggs, dry beans, fresh fruits
Viet Nam	23	62	4.1	Rice, sugar cane, coffee, rubber, fruits and vegetables, maize, pig meat
Laos	50.4	76	5	Rice, vegetables, coffee, tobacco leaves
Myanmar	57.2	64	11 (2000)	Rice, maize, groundnuts, sugar cane, soybean
Cambodia	35.6	72	-2.7	Rice, maize, sugar cane, cassava, rubber, soybean

ITS Chart
Source: See Annex 2

The above table is described in further detail at Annex 2.

c) Issues for ASEAN

ASEAN needs to recognize and develop strategies for the food and agriculture sector which address the continued importance of agriculture given its role in employment and contribution to GDP; and differences in the degree of importance of the agriculture and food sectors in ASEAN Member Countries, specifically as the agriculture sector plays a more dominant role in less developed ASEAN members.

2. TRADE AND LEVELS OF PROTECTION IN FOOD AND AGRICULTURE IN ASEAN MEMBER ECONOMIES

a) Summary

ASEAN is a net exporter of food and agricultural commodities. Its overall trade balance in 2001 was US$ 53.8 billion (US$ 37 billion for extra ASEAN trade and US$ 16.8 billion for intra ASEAN trade)[47]. In 2001, the share of agriculture exports in total ASEAN exports was about 7 percent. Agricultural imports comprised about 5.6 percent of total imports[48]. ASEAN's agricultural trade balance was US$16.5 billion.

The most important food and agricultural exports from ASEAN economies are natural rubber, palm oil, rice, fish and crustaceans. For various economies coffee, sugar, coconut oil and fruits are also important. The most important exports common to ASEAN economies are crustaceans, rubber and rice.

A summary of key indicators for trade in food and agriculture for each ASEAN economy is noted below. These indicators are described in further detail at Annex 3.

[47] ASEAN Secretariat Statistics, 2001 for both intra and extra ASEAN trade for products HS 1-24 including rubber (HS 40).
[48] *Ibid*

Table 2.2 – Key indicators for trade in food and agriculture for ASEAN member economies

Country	Balance of trade (US$)	Balance of trade in agriculture (US$)	Share of agriculture exports as a % of total exports	Share of agriculture imports as % of total imports	Main agriculture and food exports	Main agriculture and food imports
Indonesia	25 billion	502 million	3.6	11	Palm oil, rubber, crustaceans and mollusks. Cocoa, fish	Wheat, animal feed, oil seeds, rice, sugar
Malaysia	-304 million	1.5 billion	5.4	6.3	Palm oil, rubber, crustaceans and mollusks, tobacco, cocoa	Edible products, milk powder, natural rubber, sugar
The Philippines	3.7 billion	1 billion	5	8	Coconuts oil, bananas, shrimps, desiccated coconuts, canned tuna, pineapple products, seaweeds/carrageenan	Wheat , soybean meal, fishmeal, milk and dairy products, meat
Thailand	2 billion	4.5 billion	18.5	7.9	Rice, shrimp, rice, rubber, sugar, tapioca, fruits, canned fruits, meat, canned fish, chicken meat	Fish, animal feed, oil seeds, milk powder
Singapore	-1.2 million	-1.4 billion	2.2	3.3	Tobacco, alcoholic beverages, fish, spices rubber	Tobacco, alcoholic beverages, fruits and nuts, meat
Brunei Darussalam	0.7 billion	-188 million	0.5	n/a	Hides and skins, crustacean and mollusks, chocolate preparations	Edible products, cereals, flour and starch, live animals, fruits and nuts
Viet Nam	160 million	2.7 billion	26	10.6	Rice, coffee, rubber, shrimp, cashew nuts, pepper	Milk and dairy products, oil cake, heat, tobacco, animal feed
Myanmar	-249 million	121.8 million	17	10	Dried vegetables, rice, fish, palm oil	Palm oil, milk and cream, tobacco
Lao PDR	-42.6 million	-41.1 million	11	18	Coffee, cattle, buffaloes	Cigarettes alcoholic beverages, refined sugar,
Cambodia	-220 million		2.9	15	Rubber, rice, crustaceans, shrimps, fish	Cigars and cigarettes, cane and beet sugar, non alcoholic beverages

ITS Chart
Source: See Annex 3

b) Levels of protection

Levels of tariff of protection on these products vary across ASEAN Countries. Tariffs on key agriculture and food products in markets where agriculture is of less importance, namely Singapore and Brunei Darussalam, are low or zero. The highest barriers exist in lesser developed ASEAN members that are less integrated into the global economy, namely, Laos, Viet Nam, Myanmar and Cambodia. Among the other ASEAN member economies, Thailand maintains relatively high levels of tariff protection of key-traded products. Tariff levels in Malaysia and Indonesia on most key traded products are lower, although peaks remain for certain products such as rice, tobacco, some edible products and fish.

Under AFTA tariffs are lower on average than most-favoured nation (MFN) tariffs. It is not necessarily the case that this reflects greater liberalization as not all traded products are listed and therefore not subject to commitments. Where listed they tend to be products for which trade is low. Furthermore, some commitments are yet to be fully realized, particularly for the CLMV countries.

Table 2.3 – Summary of tariff protection in ASEAN member economies

Country	WTO – tariff protection	AFTA – tariff protection
Indonesia	• Average level of applied tariff protection - 8.4 percent, although certain peak rates and tariff ranges remain • Bound MFN rates - simple average of 47.3 percent • Applied MFN range between 0 percent and 15 percent • Average tariffs are higher for food • Tariff quotas apply for commitments for milk and cream and its products	• Not all tariff lines are listed for commitments, but those listed for the top ten exported products are on the "normal track" for reductions in protection. • CEPT 2002 tariff rates - 0 to 25 percent, higher rates applied in some fruit and nut products • CEPT rates for 2003 for listed products - between 0 and 5 percent. • Rice is excluded from AFTA commitments. • Coffee is listed as sensitive with a tariff rate of 10/T $220.
Malaysia	• Average tariff rates are generally low across the board- average bound rate for agriculture products in 2001 was 11.8 percent, average applied rate 3.5 percent. • Applied MFN rates for the most traded agriculture products range between 0 percent and 20 percent, with some products higher	• Not all products are subject to tariff reductions under AFTA. • For products listed, tariff f rates are lower than MFN rates, ranging between 0 and 20 percent for 2002, with most set at 0 percent. • Most products listed as subject to "normal track" • Rice in 2002 was also listed as "sensitive"
The Philippines	• Applied simple average tariff for agricultural products is 16.6 percent. • Applied MFN rates are relatively low, ranging between 3 and 10 percent • Higher for some products - certain edible products, live animals, meat and maize, rice	• Most listed products placed on the "normal track", with the exception of rice which is listed as "sensitive". • CEPT 2002 rates range between 3 and 5 percent, although some edible products higher • Some meat products and rice not subject to commitments. • CEPT 2003 rates were slightly lower, with most products subject to tariff rates of between 3 and 5 percent
Thailand	• Simple average bound tariff rate in agriculture products in 2002 was 34.4 percent and in 2003, 33.1 percent. • Average applied rate was 26 percent • Average tariff rates for food products range from 15.2 percent to 27.6 percent and applied rates range between 0 and 140 percent. • Applied MFN rates for the most traded agriculture and food products range between 5 and 60 percent. Most products are subject to tariff rates of between 5 to 30 percent	• All top ten agriculture and food exports and imports, where listed as subject to CEPT commitments, placed on the "normal track". • CEPT 2002 rates were mostly 5 percent, although some live animals and milk powder were listed as subject to lower rates. • Alcoholic beverages were subject to rates of up to 20 percent. • CEPT rates for 2003 are similar.
Singapore	• The agriculture sector is largely unprotected • Nearly 100 percent of tariffs in the agriculture sector are bound • Bound MFN tariff rates for 2000 are set at an average of 15.4 percent • Applied MFN rates for all the above products are low, most at 0 percent.	• Zero tariff duties apply to products under AFTA subject to the normal track, where listed. • Similarly, zero tariff duties apply on live animals, meat, rice and maize.
Brunei Darussalam	• Current applied simple average MFN tariff rate is low, at 0.4 percent for agriculture • Tariff rates range from 0 to 5 percent for agricultural products • Tea and coffee are subject to specific import duties for which ad-valorem equivalents are not available	• Most agricultural products subject to rates of 0 percent • Some edible products subject to higher rates of 5 percent • Listed products are subject to the "normal tack" for tariff reduction commitments. • Products excluded from CEPT reductions include tea, coffee, tobacco and alcohol, which have specific rates of duty
Viet Nam	• Average applied tariff rate for agricultural products is 29.3 percent under MFN schedule • Products subject to the highest rates of between 40 percent and 50 percent include fresh fruit, rice, vegetable oil, refined sugar, some processed products • Live animals, maize, wheat and sugar cane are subject to the lowest rates at 1 percent to 10 percent • The average rate of protection in agriculture in 2002 was 54.1 percent.	• Under AFTA, committed to reduce most tariff rates on exported products to between 5 and 10 percent by 2006. • Under CEPT for 2002, rates range between 0 and 20 percent. • Most products fall within the range of 10-20 percent • Most listed products are included on the normal track

Myanmar	• Applied MFN tariff rates for the exported products range between 0 and 15 percent. • Tariffs on dried vegetables and live animals are at zero. Tariffs for other products range between 10 and 15 percent. Tariffs on sugar are set higher at up to 20 percent. • For food and agriculture imports, tariffs are slightly higher, set between 1 percent and 40 percent, the latter applicable to alcoholic beverages	• Some of the products are on the exclusion list for which no commitments have been made. • Several other products are listed on the sensitive list (some coffee products, some sugar and maize). • For the few exported products on the normal track, tariffs range between 0 and 10 percent in 2002 and are to be reduced to between 0 and 5 percent by 2006. • Some imported products such as palm oil and margarine are listed on the "fast track".
Lao PDR	• MFN applied tariff rates for most traded agriculture products range between 5 and 40 percent, with the majority of lines set at 20 percent or less. • The simple average of import tariffs on agricultural products in 18.7 percent (excludes processed foodstuffs). • The highest rates across all agricultural products apply to vegetables, mineral water, beans, tea and coffee	• Some, but not many commitments under AFTA • Commitments include reducing the tariff applicable to coffee to between 25 and 30 percent by 2002 and to 5 percent by 2006 • Live bovine animals are excluded from AFTA commitments, as are non-alcoholic bev erages, cane and beet sugar, cigars, breads and milk and cream - some of the major imports
Cambodia	**N/A**	• Some commitments to reduce tariffs under AFTA however rice, crustaceans, cigars, cane and beet sugar and non-alcoholic beverages remain excluded • Some live fish products are on the Sensitive List. • Reduction commitments reduce the tariff, where included on the normal track, from up to 10 percent in 2002 to up to 7 percent by 2006.

ITS Chart
Source: See Annex 3 and 4

Levels of tariff protection are noted in further detail at Annex 3 and 4.

c) Non-tariff protection

Non-tariff barriers remain in almost all ASEAN economies and for some products appear more important than tariff barriers. Almost all countries maintain non-tariff barriers on exports and imports of key products such as rice.

A summary of no tariff protection is noted below. It is noted in further detail in Annex 3.

Table 2.4 – Summary of non tariff protection in ASEAN member economies

Country	Import restrictions	Controls on exports
Indonesia	• Special import licenses apply to sensitive products, such as rice, sugar, corn and soybeans • Non automatic licenses also enforce import controls, including embargoes mainly on health, quarantine, environmental and security grounds. • Import restrictions and special licensing requirements imposed on meat and poultry products, cloves, alcoholic beverages and artificial sweeteners • Bans for sanitary reasons have affected imports of chicken and fresh milk • Non automatic import licensing accompanied by exclusive import rights accorded to domestic producers of certain sensitive agricultural products such as rice, cloves, alcoholic beverages, and sugar	• Only registered and approved exporters can sell restricted exports. Controls include bans, quotas, licensing and "supervision". • Bans on exports of certain live fishery products, rubber of low quality and some rubber materials • Regulated exports through licensing and quotas include manioc destined for the EU, coffee and rubber • Price controls retained on sensitive items such as rice.
Malaysia	• Various non-tariff border measures barriers used, such as import licensing measures used on a discretionary basis to regulate import flows • Licensing requirements most pervasive in animals and animal products and vegetable products • Several tariff lines for agricultural products subject to import licensing	• Some items subject to export duties - palm oil products, selected fish products, avocados, certain citrus fruits, and semi-processed palm oil. • A few products also subject to prohibitions, restraints and licensing requirements • Licensing requirements most pervasive in the agriculture sector in the case of animal and animal products
The Philippines	• Most quantitative restrictions abolished except for rice • Other quantitative restrictions, including import prohibitions and import licensing, maintained for	• Exports allowed without restriction except for certain products classified as "regulated", or "prohibited" • Regulated and prohibited export products

	national security and similar objectives • Tariff quotas implemented in 1995 for 15 groups of agricultural products including coffee, corn, meat, potatoes and sugar	require export clearance from appropriate government agencies
Thailand	• Import licensing for various items • A number of other non tariff border measures are in place, for example to protect infant industries • Some agriculture and fisheries products are subject to import licensing (various vegetables, coconut, coffee, tea and pepper, maize, rice, soybeans, copra, palm oil and its fractions, coconut oil, fish meal and oil cake residues)	• Certain agriculture products subject to export taxes which consist mainly of applied and statutory rates. Both rice and rubber have statutory rates set for export taxes at 10 percent and 40 percent respectively, however the applied rate is 0 percent • Some other agriculture products subject to export licensing requirements.
Singapore	• Automatic and non-automatic import licensing for environmental and health and safety reasons • Import permits required for all imports with some exceptions	• Excise taxes levied on a number of agricultural and food products, including alcoholic beverages
Brunei Darussalam	• Certain products subject to import restrictions for the purpose of maintaining food supplies - rice, sugar and salt. • Import permits required for some products such as plants, animals, birds, fish, salt, rice and sugar	• Few impediments to exports and no export taxes • Restrictions maintained to ensure the security of domestic supplies for oil palm, rice and sugar
Viet Nam	• Prohibition on imports of tobacco, cigarettes. • Export quotas apply to rice and sugar • Some agricultural products subject to licensing requirements of line Ministries	**N/A**
Myanmar	**N/A**	**N/A**
Lao PDR	• Agricultural products subject to the same import licensing requirements as other imported products • Some agricultural products banned - chilies, aubergines, tomatoes, bananas, lemons and some other fruits • Special restrictions apply to the importation of rice.	• Export tax of 5 percent on coffee beans and livestock • Right to apply controls on rice reserved for food security purposes • Export licenses required for all products, except exports of garments and products on the AFTA Inclusion List • Exports of live animals and animal skins products require prior approval of the Ministry of Agriculture and Forestry
Cambodia	• Import licensing requirements cover only a small range of products and do not apply to agricultural products • Several categories of imported goods subject to excise taxes- soft drinks, beer, wine and spirits and cigarettes and other tobacco products	• Several items subject to export duties - pure bred bovine animals and swine, live fish, prepared fish and fish products, live crustaceans and molluscs, natural rubber • Quantitative restrictions for rice and timber • Exports of rice also subject to non-automatic licensing

ITS chart
Source: Annex 3

d) Issues for ASEAN

Levels of protection on key traded food and agriculture products remain relatively high, more so in the lesser developed ASEAN economies. Strategies to maximize the benefits of trade liberalization should focus on further integrating CLMV countries into global economy and further reducing protection on key traded products, particularly by addressing non-tariff barriers.

3. CONSUMER DEMAND AND CONSUMPTION PATTERNS IN ASEAN MEMBER ECONOMIES

a) Summary

The population of ASEAN Countries was 521 million in 2000 and is growing at the annual rate of 1.7 percent. The growth rate of GDP has also been high reaching 7 percent over the 1990-1997 year period. Although it declined with the financial crisis, ASEAN has since been experiencing a modest recovery. Food demand has diversified and expanded as incomes have risen. Rapid economic growth, rising consumer incomes and urbanization have underpinned changes in the structure of food demand and diet in some countries. In the more

affluent economies demand generally shifts from basic staples such as rice to meats, fish and breads, whilst lesser developed economies tend to increase their demand for staples[49]. This pattern appears to apply to ASEAN economies such as Malaysia and Thailand on the one hand and Viet Nam, Cambodia and Myanmar on the other.

Consumption trends across ASEAN economies are broadly consistent with global trends. For ASEAN economies, rice is the most important food crop. Fish and seafood is the largest consumed fisheries and livestock item. In Malaysia, Indonesia and the Philippines there has been growth in the consumption of oil seeds. Consumption of fruits, vegetables and sugar has remained relatively stable in the latter three economies and also in Thailand. Consumption of livestock products is dominated by poultry, particularly in Thailand. Several countries however experienced increased levels of consumption of both poultry and pig meat over period analyzed. For the lesser developed CLMV countries, rice, fruits, vegetables and sugar remain the major consumption items. Whilst livestock products are consumed at much lower levels, most countries recorded increases in consumption levels in 2001 compared with 1996.

b) ASEAN demand for food and agriculture products

Demand in ASEAN economies is driven by population size and growth, as well as GDP per capita and levels of development. The more developed economies such as Singapore and Brunei are markets for processed and meat products, consistent with higher GDP per capita. Thailand and Malaysia are also markets for such products due to relatively high levels of GDP per capita (although less than Singapore and Brunei) and increases in the purchasing power of households over the past decade. Other counties such as Indonesia and the Philippines represent much larger economies in terms of population size and consumer demand, but slightly lower GDP levels per capita and therefore also demand for more processed products.

For the lesser developed CLMV economies demand is largely population driven, with Viet Nam the largest market. Consumer markets in Cambodia, Lao PDR and Myanmar remain smaller and largely under developed.

c) Apparent consumption patterns

Apparent consumption[50] can be used as a guide to indicate consumption patterns of major food and agriculture items in ASEAN member economies. Whilst it can be used to indicate levels of consumption in metric tons of each item and is therefore useful for comparing absolute amounts or changes in levels of consumption, it does not provide an indication of the relative value or importance of each item in dollar terms. This necessarily means higher value-added and processed products, although representing smaller quantities may in fact be more important to the respective economy in value terms.

For ASEAN overall the most consumed crop product was rice. Sugar was also important in the Philippines, Indonesia and Thailand and oil crops in the Philippines, Indonesia, Malaysia and Thailand. Maize was also important in Malaysia, the Philippines, Thailand and Brunei. There was generally no increase in the levels of consumption of vegetables, fruits and sugar in 2001 compared to 1996 in Indonesia, Malaysia, the Philippines and Thailand, although consumption of oil crops increased in the former three economies.

For livestock and fisheries products, fish and seafood was the most consumed item in all ASEAN economies. For Indonesia, Thailand, Malaysia and Brunei, consumption of poultry was also important, and pig meat for the Philippines and Thailand. Bovine meat was important in Brunei. Malaysia, the Philippines and Brunei also recorded increased levels of consumption of poultry meat in 2001 compared with 1996, and for the Philippines also consumption of pig meat.

[49] Regional Strategy for Agriculture development and food security in the countries of the Association of South East Asian Nations 2002.

[50] Calculated by the FAO as production plus imports (and stock) minus exports in metric tons. Includes consumption by food, manufacturing and as feed.

In Viet Nam, Laos, Cambodia and Myanmar the main items of consumption were rice, sugar and vegetables. Each consumed less meat than more developed ASEAN economies, but showed increasing levels of consumption of some meats, such as pig meat and poultry meat since 1996.

Table 2.5 below provides a summary of key consumption and demand trends by country. This summary is noted in further detail at Annex 5.

Table 2.5 – Summary of key consumption and demand patterns by country

Country	Demand			Consumption	
	Population (2002 unless stated)	**GDP ppp terms (US$)**	**Growth in GDP(% 2002 unless stated)**	**Main agriculture and food items consumed -in metric tons 2001**	**Key trends 1996 - 2001**
Indonesia	234.9 million	714. 2 billion, 3,100 per capita	3.7	Rice, maize, sugarcane and oil crops	• Increased consumption of rice and oil crops • No changes in consumption for vegetables, fruits and sugars • Meat consumption dominated by fish followed by poultry
Malaysia	24.5 million	198 billion, or, 8,800 pr capita	5.5	Rice, maize, oil crops	• No significant changes in consumption of sugar, vegetables, milk or rice • Increased consumption of rice, maize and oil crops
The Philippines	84.6 million	379.7 billion or 4,600 pr capita	4.4	Rice, maize, fruits and oil crops	• Increased consumption pig and poultry meat • Increased imports of consumer goods
Thailand	64.3 million	445.8 billion, 7,000 per capita	5.3	Rice, maize, fruits and oil crops	• Growth in retail sector driven by expansion multinational companies • Growth in retail sector attributable to higher purchasing power of households
Singapore	4.5 million	112.4 billion, 25,500 per capita	2.2	N/A	• Advanced food retailing system • Limited processing sector • Imports majority of food ingredients
Brunei Darussalam	350 thousand	6.5 billion, 18,600 per capita	2	Rice, vegetables and fruits, wheat and maize	• Increase consumption of rice • Increase consumption of meat - poultry and bovine
Viet Nam	81.6 million	183.8 billion, 2,300 per capita	7	Rice, sugar, fruits, vegetables, fish and seafood	• Increased consumption of fish and seafood, and some meats
Cambodia	13.1 million	20.42 billion, 1,600 per capita	4.5	Rice, vegetables, fruits	• Increased consumption of meat and fish products
Lao PDR	5.9 million	10.4 billion, 1,800 per capita	5.7	Rice, vegetables, sugar, fruits	• Increased consumption of meat, vegetables and rice.
Myanmar	48 million	1,700 per capita	5.3	Rice, sugar cane, vegetables	• Milk and seafood consumption also important.

ITS Chart
Source: Annex 5

d) Issues for ASEAN

ASEAN faces the challenge of meeting changes and trends in consumption and demand as incomes rise with population growth and greater economic growth. The challenge will be to accommodate shifts toward livestock and processed products in more affluent economies whilst continue to meet rising demand for staples such as rice in lesser developed CLMV countries.

4. ASEAN LIBERALIZATION AND INTEGRATION

a) Summary

AFTA seeks to enhance ASEAN economic integration through trade liberalization. The scope for doing so is dependent on the extent to which ASEAN economies trade with each other and the level of commitments to remove barriers to agricultural trade. Only about 22

percent[51] of agricultural trade of ASEAN economies is with other ASEAN's and commitments to liberalize trade in agriculture in AFTA are limited. The capacity of AFTA to promote integration in a way which will enhance economic welfare is limited.

b) Economics of AFTA

The aim of the Common Effective Preferential Tariff (CEPT) the principal mechanism to implement AFTA is to promote economic integration among AFTA economies through reducing barriers to trade among ASEAN Countries. The classical gain from trade liberalization is achieved when comparative advantage is better utilized after trade barriers are removed. The capacity of AFTA to deliver that gain depends on the variation of comparative advantage among ASEAN economies and the extent to which ASEAN economies trade among themselves. The greater the difference in comparative advantage among ASEAN economies and the greater the share of total trade in the share of trade among ASEAN Countries, the greater is the prospective gain.

Around only 22 percent[52] of agricultural trade of ASEAN economies is with other ASEAN states. The remainder is with countries outside ASEAN. This is the case with most of the trade in goods of ASEAN economies.

Liberalization within ASEAN should produce some gains. However, most ASEAN economies are more competitive in agriculture than the three of the world's biggest markets – the EU, Japan and the US and entering fully liberalized trade agreements with the latter economies would deliver a substantial gain in economic welfare, probably greater than liberalization only among ASEAN Countries. Regrettably the major industrialized economies are not likely to make such commitments that will increase significantly export opportunities for ASEAN agricultural exports in the review period. The comparative advantage of ASEAN Countries in agriculture is similar and the difference in competitiveness at large is smaller.

The extent and economic value of integration of the ASEAN market through AFTA depends on the level of global competitiveness of agricultural production inside ASEAN. If removal of intra-ASEAN barriers to trade in agricultural products does not result in a level of competitiveness that matches the best in world markets, even if it integrates markets and increases investment, the outcome could even be economically negative for ASEAN Countries. In a number of products, while ASEAN producers may be much more competitive than many other producers in other countries, they may not be as competitive as the world's most competitive producer.

c) Integration and CLMV

The expansion of ASEAN to include the CLMV economies alters somewhat the economic dynamic of integration in ASEAN. While most trade of ASEAN Countries is with countries outside ASEAN that is not the case with some CLMV countries, especially in agriculture. It appears for example that the share of agricultural trade of Laos and Cambodia with other ASEAN economies is much larger.[53]

The economics of integration from trade liberalization can also be different for least developed economies. Recent research highlights the relative importance of the level of advancement of an economy for the securing of benefits from trade liberalization. It certain circumstances, it may not be in the interests of least developed economies to enter trade liberalization arrangements with other more advanced developing economies. [54]

Other forms of economic cooperation, such as investment and provision of aid to strengthen infrastructure and improve production may be more important to supporting development of agricultural sectors than reciprocal trade liberalization. Preferential access to markets such

[51] ASEC data 2001
[52] *Ibid*
[53] The full extent of intra ASEAN trade of CMLV countries is likely to be higher. Statistics also generally do not reflect cross border and informal trade which is commonly observed to be significant.
[54] World Bank Trade Blocs 2000

as that some ASEAN economies are offering to least developing economies [55] may be more effective in promoting growth and production.

d) Patterns of ASEAN agricultural trade

The most important agricultural exports from ASEAN Countries are rubber, palm oil, fish, crustaceans (principally shrimps), rice, and for various ASEAN economies, coffee, sugar, copra and coconut oil. Palm oil dominates the exports of Indonesia and Malaysia. Most is exported to countries outside ASEAN. Some products - sugar and rice – face high trade barriers in the large developed market economies. Increasingly fish, crustaceans and vegetable products are facing higher quarantine barriers. The most important exports common to most ASEAN economies are crustaceans, rubber and rice.

As noted about 22 percent of ASEAN food exports are traded within ASEAN economies. Exact figures are difficult to obtain because a significant percentage of those statistics include re-exports through Singapore.[56] Domestic consumption in Singapore and consumption in the higher income consumer markets in the large cities in ASEAN are likely to account for consumption of food imported from other ASEAN economies.

e) Trade competitiveness

There are established methodologies to measure competitiveness entailing comparisons of prices for products and inputs at various points over the production chain with world prices. It is beyond the scope of this project to undertake such an analysis. However reviews of patterns of trade and protection can provide general indicators. Generally, if a country is a major exporter of a product it may be globally competitive in it, and conversely if a country is a major importer, it is unlikely to be globally competitive.

A second consideration is the level of protection of the domestic industry. If a country is a major exporter of a product but also has high barriers restricting imports of the same product, it raises a question about whether that industry is globally competitive. In ASEAN there are some agricultural industries which are significant net exporters and where tariffs are low, for example crustaceans. These are likely to be globally competitive. There are others, for example rice and chicken meat, where industries are significant net exporters, but import barriers in the producing economies are high. Closer examination is required to establish the global competitiveness of those industries.

The net balance of trade across ASEAN in some products can create a misleading picture. Thailand and now Viet Nam are major rice exporters. Yet other ASEAN economies are rice importers. It is not clear that rice is a major traded item between ASEAN economies.

f) Commitments under AFTA

On average tariffs are lower and levels of support for production of agriculture are likely to be lower for ASEAN Countries at large than in the major industrialized economies – the US, EU and Japan.[57] On the other hand, in every major product traded globally, there is a world price set by a lower cost producer. By that yardstick, average tariffs in agriculture on most agricultural products in ASEAN are significant.

The comparison of average MFN tariffs with listed commitments in AFTA shows that by and large, AFTA tariff levels are lower. This does not necessarily indicate a preparedness to encourage competitive liberalization among AFTA economies or interest in promoting competitive economy of scale.[58] Tariffs are often lowered on products in which trade is low. The AFTA mode of liberalization is the "positive list" approach where countries select which products will be subject to advanced liberalization. Some ASEAN economies regarded

[55] Like Thailand in the case of the Lao PDR.
[56] In this analysis, trade with Singapore is halved as a means of discounting imports to Singapore for re-exporting, assuming the remaining figure accounts for consumption in Singapore.
[57] The principal measure of support for agriculture is the Producer Equivalent Support Measure which was developed by the OECD. These calculations are made for industrialized economies but not for developing countries. The general observation of developing countries is that expenditure on general supports is well below that of the major industrialized economies.
[58] The extent of liberalization in ASEAN is measured by the number of tariff lines which are subject to commitments of liberalization. This does not indicate the liberalizing effect of the commitments. The trade weighted average value of the commitments needs to be assessed.

agricultural products as very sensitive and it was difficult for ASEAN economies to commit to advanced liberalization in agriculture in AFTA.

General commitments have now been made to shift all agricultural products to the Inclusion List, but this will not result in substantial tariff reductions for several years. In addition, non-tariff measures do not need to be removed until products have been on the Inclusion List for 5 years. For a number of products, non-tariff restrictions appear more important trade barriers than tariffs. The benefits of liberalization under AFTA will not be felt until towards the end of the period of review.

g) Integration of food production and trade

As noted above, an ambition of ASEAN economies is to integrate production and processing of food among ASEAN economies. Agreements to liberalize trade are indirect tools. They work by encouraging greater competitiveness and clearing the way for investment to occur where the benefit will produce the best result.

It was noted above that trade liberalization theory holds that the greatest economic return is secured when barriers are removed among countries where variations in comparative advantage are greatest. It has also been demonstrated that important gains in economic welfare can be secured where variations are not so great.[59] There are several products where it should be expected that ASEAN-wide benefits should be secured, even if it appears that producing industries are competitors in exports markets.

Since the basic geographic endowment of several ASEAN economies is so similar, it is not surprising that agricultural industries are similar. Rice is a major agricultural crop in most ASEAN economies, and so is rubber and to an extent, palm-oil. There are restrictions on trading rice among ASEAN economies and the economics of production vary noticeably. Food security policies have important impacts. Removal of barriers to trade to rice should produce net economic gains for ASEAN economies; however policies on food security would need to be addressed as well.

Direct policies can also be pursued to promote integration of food production. The goal of enhancing processing of primary products to add value to production is generally supported by ASEAN food and agriculture Ministries. Policies to enhance processing of food are traditionally not agricultural policies, beyond policies aimed at generating products which are low cost inputs for food processing. Policies to promote food processing are policies in general to promote manufacturing.

Some government measures relating to food, such as food standards, inhibit integration. Government action to remove such barriers promotes integration.

h) Issues for ASEAN

Removal of trade barriers to intra-ASEAN trade in agricultural products would improve the competitiveness of agricultural production in ASEAN and foster economic integration. As demonstrated above, this is a sensitive issue and the pace of change is unlikely to be fast. Because the share of trade of total agricultural trade is small, the effect would also be reduced.

Adjustment of domestic agricultural policies to improve competitiveness and efficiency of production is likely to have a more significant impact than the processes of reform required under AFTA. In the case of the CLMV, greater access to other ASEAN economies for agricultural exports would support growth in agriculture, but direct assistance to improve infrastructure and technology in agriculture is probably of equal importance.

[59] Industrialized economies secured valuable gains by reducing trade barriers among them in industrialized products where differences in comparative advantage where not evidently large. Economists concluded that differences in comparative advantage at micro levels, for example, among standards of production in industries where macro differences in comparative advantage appear small, can be worked to produce net economic gains for all parties.

5. KEY AGRICULTURAL POLICIES IN ASEAN

a) Summary

For the majority of ASEAN economies, the major focus of domestic agriculture polices is on self sufficiency and food security, as well as poverty alleviation and reduction.

Improved competitiveness and greater liberalization is a feature of most of the more developed ASEAN economies, although this is mainly focused on improving global competitiveness through reductions in tariff barriers under the WTO and AFTA. Little emphasis is given to enhancing competitiveness through reductions in non-tariff and domestic trade barriers. Other policies focus on improving technology transfer and investment in research and development in the agriculture sector.

Brunei and Singapore's agricultural polices remain mainly focused on productivity improvements to increase output, given the small size and relative importance of their agriculture sectors

For the CLMV countries, agriculture policies have as their main priorities food security and poverty alleviation through agriculture development, and adjustment for more liberalized and open economies.

A summary of the main features of key agriculture policies for each ASEAN economy is noted at Table 2.6 below.

Further detail on the policies of each individual country is noted at Annex 6.

Table 2.6 – Summary of main features of key agricultural policies of ASEAN economies.

Country	Features of key agricultural policies
Indonesia	Due to the economic crisis of 1997 and 1998, Indonesia accelerated economic reforms as matter of urgency. The removal of trade restrictions was at the heart of the recent reform process, although some restrictions have been reintroduced since then. Indonesia deregulated trade in most agricultural products (except rice) and sharply lowered tariffs. In the agriculture sector, Indonesia' longstanding policy objective has been to foster food production in order to meet the demands of a growing population, and to achieve self sufficiency in the main staple foods, especially rice. Under the Guidelines for National Development 1999-2004 (GBHN) agricultural business development has a strategic position in the economic development of Indonesia through the strengthening of food security based on diversified food commodities, local culture and institutions and the acceleration of rural development within the context of empowering the rural population, especially farmers and fishermen. Since 1989 an export enhancement program and several self/reliance sufficiency programs have also been launched.
Malaysia	The Third National Agricultural Policy (NAP) sets out the strategic directions for agricultural and forestry development of Malaysia to the year 2010. NAP focuses on new approaches to increase productivity and competitiveness, deepen linkages with other sectors, venture into new frontier areas as well as conserve and utilize natural resources on a sustainable basis. The policy thrusts, strategies and implementation mechanisms aim to address national concerns on agriculture development and the whole economy. Specifically, they are centered on food security, productivity, inflation, and private sector investment in agriculture, enhancement of exports, and conservation and sustainable use of natural resources. Human resource development (HRD) is also a feature. Specific policy directions have been established for paddy rice, livestock, fisheries, fruits and vegetables.
The Philippines	The Medium-Term Philippine Development Plan (MTPDP) 2001-2004 is the country's main planning document. Spearheaded by National Economic and Development Authority, the MTPDP exemplifies the antipoverty and overall development framework of the administration. The Plan seeks to expand and equalize access to economic and social opportunities, inculcate receptivity to change, and promote personal responsibility. A major focus is on agriculture and fisheries modernization with social equity. To address poverty, which is mainly a rural phenomenon; the government aims to pursue a comprehensive rural development strategy based on productivity improvements, agrarian reform industrialization and sustainable development, consistent with the Agriculture and Fisheries Modernization Act (AFMA). To implement AFMA, the government is pursuing the *Ginintuang Masaganang Ani – GMA ("Golden Bountiful Harvest"*) as its banner program for agricultural development.
Thailand	A range of Thai agricultural policies have currently been identified as the focus of interest both domestically and globally. These include policies relating to bio-technology; agriculture, trade and the environment; food safety; traceability (tracking of products throughout the food chain), risk management and communication. The Thai Government has targeted 2004 as the year to focus on improving standards for food safety. The Government also has a development strategy for the agriculture sector which focuses on generating employment for rural households, especially those that lack income stability. The Government's agriculture sector objectives are currently embodied in a framework for restructuring the agriculture sector approved by the Cabinet in May 1998. The twin objectives of sustaining agricultural growth and enhancing export competitiveness are underpinned by the policy measures under the Agriculture Sector Reform Program.

Singapore	Singapore's agriculture sector is small, relatively insignificant in terms of its contribution to GDP and quite liberalized. As a result, Singapore's polices for the services and manufacturing sectors have taken priority given their relative importance to employment and the economy. Singapore's underlying economic strategy has been to provide an environment conducive to business, with competitive prices and tax incentives, and more importantly, underpinned by political stability, social cohesion, stable financial systems and transparent legal and corporate frameworks. Because of the limited amount of land devoted to agriculture, Singapore has concentrated on productivity improvements to increase output.
Brunei Darussalam	Brunei's agricultural polices aim to increase the importance of the agricultural sector to move towards self-sufficiency through food security measures and through the pursuit of the welfare of farmers community. The government has also identified issues and strategies to be addressed in the sector such as ensuring and adequate supply of safe and high quality food; maximizing land utilization; strengthening competitiveness; enhancing private sector investment in agriculture sector; transforming small-scale farms into commercialized farms; and ensuring sustainable agriculture development. In the meantime, agricultural policies are mainly focused on promoting integrated or mixed farming in agriculture, spurring market-oriented production and enhancing production of quality and safe agricultural products. Other strategies focus on import substitution for self-sufficiency in the production of some agricultural commodities such as poultry and vegetables.
Viet Nam	The recently completed Comprehensive Poverty Reduction and Growth Strategy translates a vision of transition for Viet Nam towards a market economy with socialist orientation into concrete public actions Polices in the agriculture sectors thus far have been influenced by a revitalization of agriculture polices, the shift from collectivization to land-use rights of farmers, opening of market opportunities to farmers and conferment of rights in agricultural production and trade. Polices have focused on the agricultural sector generally and have also been targeted at directly promoting agricultural production. The main polices relate to land use, tax policy, investments in the agricultural sector, development of rural credit networks, liberalization of trade policies and development of a nation-wide agricultural extension system.
Cambodia	Cambodia's agricultural sector development policy is based on two related objectives: ensuing food security for all citizens of the nation and achieving sustained growth in agricultural production, processing and marketing. The principal objective of the Government of Cambodia is to achieve development with equity and social justice through sustainable economic growth, human resources development and sustainable use of the country's natural resources. Priority is given to poverty reduction and to improving the welfare of the population through programs to increase agricultural production and rural development.
Lao PDR	The 1996 – 2000 Lao Social Development Plan lays down the Government's objectives for the period. The development strategy sets out five general guidelines for continued promotion of the market oriented economy; development of the agriculture, industrial and service sectors; development of regional economic structure; concentration on rural development; and expansion of external economic cooperation.
Myanmar	The government's policy objectives to boost agricultural production include development of land resources for agricultural expansion, provision of adequate irrigation water for agricultural purposes, support for agricultural mechanization, accelerated transfer of improved new technologies and development and utilization of high yielding quality seeds. With a view to improve the agriculture sector and to uplift the national economy, Myanmar's agriculture policy was established in 1992. It focuses on: production of food crops and industrial crops with no restriction; production of industrial and plantation crops on a commercial scale; expansion of agriculture production in cultivable waste land for private investors and farmers; participation of the private sector in the distribution of farm machinery and other farm inputs; and utilization of agriculturally unproductive lands for other production programs.

ITS Chart
Source: Annex 6

b) Issues for ASEAN

Agricultural policies must continue to address the needs and issues of each country in their respective agriculture sectors and be developed and updated as challenges arise in both a global, regional and country specific context. This means striving to ensure domestic policies adequately reflect the concerns of each country. For the more advanced ASEAN economies, the focus is on improved competitiveness, productivity and technology transfer in the agriculture sector, whilst for the lesser developed economies, rural development and poverty alleviation are a major priority as ASEAN members seek to further integrate into the global economy and reap its associated benefits. Food security (ensuring that there is an available food supply to meet the needs of the population) and to a degree self sufficiency (the ability to provide for food and agriculture needs without the aid of imports or exports) remain an overarching and important policy goal for all ASEAN Countries.

6. ASEAN COOPERATION AND INTEGRATION INITIATIVES IN FOOD AND AGRICULTURE

a) Summary

ASEAN has undertaken various activities under the auspices of the SPA and the HPA to enhance cooperation and integration in the food and agriculture sectors. Activities have focused on strengthening ASEAN food security mechanisms, promoting the competitiveness

of and ASEAN trade in agriculture and forest products and enhancing trade of goods in transit. Other activities have focused on harmonization of standards and practices in the agricultural sector, including in pesticide MRLS, livestock and fisheries as well as customs procedures and SPS measures. ASEAN has also acknowledged the importance of agricultural biotechnology and put in place procedures for member economies to address this new issue.

b) Overview

ASEAN cooperation initiatives in food, agriculture encompass food security, food handling, crops, livestock, fisheries, agricultural training and agricultural cooperatives. The basic objective of ASEAN cooperation in food and agriculture is to "formulate and implement regional cooperation activities to enhance the international competitiveness of ASEAN food and agricultural products as well as to further strengthen the food security arrangements in the region and joint position in international fora[60]".

The broad goals of ASEAN as a region, including those for food and agriculture, were set out in the Vision 2020 in 1997. The Hanoi Plan of Action was then developed for the years 1999-2004 in order to manage that strategy and realize the goals set out in the Vision 2020 through implementation of specific activities. In food and agriculture, the Strategic Plan of Action as then developed to achieve cooperation in these sectors. It set out a series of strategic plans and activities to support this goal. Several activities and initiatives have been undertaken under the auspices of the SPA to enhance ASEAN cooperation of food and agriculture, including the agreement on Rice Reserves, the MOU on Trade Promotion and the Framework Agreement on Goods in Transit. A summary of these activities is noted below.

c) Summary of relevant instruments for ASEAN cooperation in food and agriculture

i) Vision 2020

In December 1997, ASEAN members adopted the ASEAN Vision 2020 which sets out a broad vision for the ASEAN to achieve by the year 2020. The Vision 2020 sets out 4 broad goals for ASEAN to achieve as a regional grouping.[61]

On food and agriculture the Vision 2020 commits members to "moving towards closer cohesion and economic integration, narrowing the gap in the levels of development among member countries, ensuring that the multilateral trading system remains fair and open, and achieving global competitiveness". Members have committed to "create a stable, prosperous and highly competitive ASEAN economic region in which there is the free flow of goods, services and investment, a free flow of capital, equitable economic development and reduced poverty and socio- economic disparities. ASEAN members have resolved to undertake to advance eco integration and cooperation through the following general strategies:

- Fully implement AFTA and accelerate liberalization of trade in services;
- Realize the ASEAN Investment Area by 2010 and free flow of investments by 2020;
- Intensify and expand sub-regional cooperation in existing and new sub regional growth areas;
- Further consolidate and expand extra-ASEAN regional linkages for mutual benefit, cooperate to strengthen the multilateral trading system;
- Recognize the role of the business sector as the engine of growth.

[60] The Strategic Plan of Action on ASEAN Cooperation in Agriculture, Food and Forestry 1999-2004

[61] A concert of southeast Asian nations- "a zone of peace, freedom and neutrality"; A partnership in dynamic development – "which will forge closer economic integration within ASEAN"; A community of caring societies – "conscious of its ties of history, aware of its cultural heritage and bound by a common regional identity"; An outward looking ASEAN- "playing a pivotal role in the international fora and advancing ASEAN's common interests.

Members have also agreed to undertake to "enhance food security and the international competitiveness of food, agricultural and forest products, and to make ASEAN a leading producer of these products".

ii) The Hanoi Plan of Action

The HPA was drawn up first of a series of action plans to implement the ASEAN Vision 2020. The HPA had a six year time period of 1999-2004. It specifically addressed measures ASEAN could take to implement activities to hasten cooperation in light of the financial crisis and its impact.

Specifically the HPA committed members to implement initiatives to enhance greater economic integration, including the food and agriculture sectors. It committed members to work towards enhancing food security and global competitiveness of ASEAN food and agriculture products. Under the HPA ASEAN "would strive to provide adequate levels of food supply and food accessibility within ASEAN during instances of food shortages to ensure food security and at the same time, enhance the competitiveness of its food, agriculture and forestry sectors through developing appropriate technologies to increase productivity and by promoting intra ASEAN and extra ASEAN trade and greater private sector investment in the food, agriculture (and forestry) sector."

This includes:

- Strengthening food security arrangements in the region;
- Developing and adopting new and existing technologies;
- Enhancing the marketability of ASEAN food, agriculture (and forestry) products and commodities;
- Enhancing private sector involvement;
- Enhancing ASEAN cooperation and joint approaches in international and regional issues;
- Promoting capacity building and human resources development.

iii) The Strategic Plan of Action on ASEAN Cooperation in Food and Agriculture (and Forestry)

In 1999, ASEAN developed its SPA for cooperation in food and agriculture for the period 1999-2004. The SPA was developed in line with seven priorities identified by the Ministerial Understanding on ASEAN Cooperation in Food, Agriculture and Forestry, signed in November 1993. The priories are:

1. Strengthen food security in the region;
2. Facilitate and promote intra and extra ASEAN trade in agriculture, fisheries and forest products;
3. Technology generation and transfer to increase productivity and develop agribusiness and silvibusiness;
4. Agricultural rural community and human resources development;
5. Private sector involvement and investment;
6. Management and conservation of natural resources for sustainable development; and
7. Strengthening ASEAN Cooperation and joint approaches in addressing international and regional issues.

The SPA emphasizes six strategic thrusts to achieve the objective of cooperation in food and agriculture. The six thrusts are as follows:

1. Strengthening food security arrangements in the region;

2. Enhancement of international competitiveness of ASEAN food and agricultural products/commodities;
3. Enhancement of ASEAN cooperation and joint approaches on international and regional issues;
4. Development and acceleration of transfer and adoption of new technologies;
5. Enhancement of private sector involvement;
6. Management, sustainable utilization and conservation of natural resources.

Under each strategic thrust, ASEAN has implemented various cooperation projects.

The main initiatives are summarized below and discussed in further detail in Research Report 3.

iv) The Bali Concord and the Vientiane Action Programme

The Bali Concord II agreed at October 1993 at the 9th ASEAN Summit was a landmark decision made by ASEAN Member Countries to solidify and accelerate integration in the region. It provides a set of milestones to reach the goals and objectives of the ASEAN Vision 2020 and further defines the four themes of the ASEAN Vision that were set out in 9997.

The Concord is supported by three pillars for establishing the ASEAN community. These are:

- *Political and security cooperation* – the ASEAN Security community; to envisage to bring ASEAN political and security cooperation to a higher plane to ensure that countries in the region live at peace;
- *Economic cooperation*- the ASEAN economic community; of the realization of the end goal of economic integration as outlined in the ASEAN Vision 2020, to create a stable, prosperous and highly competitive ASEAN economic region in which there is the free flow of goods, services, investment and a freer flow of capital, equitable economic development and reduced poverty and socio-economic disparities in the year 2020;
- *Socio-cultural cooperation*- the ASEAN socio-cultural community; in consonance with the goal set by the ASEAN Vision 2020 envisages a Southeast Asia bound together in partnership as a community of caring societies.

Theses goals will form an integral part of the next Plan of Action, the Vientiane Plan of Action (VPA), which is intended to serve as successor to the Hanoi Plan of Action (HPA), setting strategies, mechanisms and activities for achieving these goals for the next 6 year time period from 2004 to 2010.

d) Specific activities and mechanisms for enhancing cooperation in food and agriculture

i) Food security

Ensuring food security is a major issue and fundamental goal of ASEAN cooperation.

The Agreement on the ASEAN Food Security Reserves

The Agreement on the ASEAN Food Security Reserves is a collective agreement on food security which involves the sharing of rice stocks in times of shortage. The agreement deals with food security needs on the basic food stocks, particularly rice, to be maintained by each ASEAN member country within its national borders as a matter of national policy. It includes commitments of the ASEAN Emergency Rice Reserve.

The Agreement establishes a Food Security Board to provide supervision and coordination in the implementation of the ASEAN food security reserve, including considering supply and demand of rice with the view to facilitating subsequent bilateral negotiation on prices and other terms of long term contracts in respect of official purchases for member countries.

The Agreement on ASEAN Emergency Rice Reserves

Members also agreed to the establishment of the ASEAN Emergency Rice Reserve for the purpose of meeting emergency requirements. The emergency rice reserve requires each country to earmark within or over and above its national reserve, a certain quantity of rice, which is to constitute the emergency rice reserve. Members set out a certain amount that each agrees to earmark for the reserve.

The Pilot Project on East Asian Emergency Rice Reserve (EAERR)

This project aims to expand and improve the existing coordinating and monitoring system for the Food Security Reserve Board and to examine the possibility of the system to include China, Japan and Korea. It has been implemented for the three years from 2004 to 2007. The findings from the pilot project will be used a basis for member countries to make decisions and improvements related to the establishment of the East Asian Emergency Rice Reserve System

The ASEAN Food Security Information System (AFSIS)

This has been developed in parallel to complement the EARR. It is a five year undertaking from 2003 to 2008 to establish an information network on food security among the ASEAN +3 countries and to document training and data collection and management. ASEAN members aim to eventually create an agriculture database to assess food security in the region.

Sustainable fisheries for food security

ASEAN Ministers responsible for fisheries have adopted the Resolution for Sustainable Fisheries for Food Security for the ASEAN region. The resolution aims to achieve sustainable supplies of fish and fisheries products in the ASEAN region. A plan of action of sustainable fisheries for food security was also set up to give effect to the agreement. It comprises several components including fisheries management, aquaculture, and sustainable utilization of fish and fisheries products, fish trade and regional and international policy formulation.

ii) Trade promotion and cooperation

ASEAN Cooperation and Joint Approaches in Agriculture and Forest Products Promotion Scheme

ASEAN is undertaking an ongoing scheme which provides opportunities for ASEAN Member Countries to come together to plan and implement R & D and promotional activities that facilitate intra and external ASEAN trade in agriculture and forestry products. The scheme was established in 1994 under the MOU on Trade Promotion between ASEAN member governments.

The scheme is aimed at improving the competitiveness of ASEAN agriculture and forestry products. Its objectives are to:

- Strengthen the collective bargaining position of ASEAN on matters affecting agriculture and first trade in world markets;
- Expand agriculture products exports through product diversification;
- Identify downstream processing and higher value-added activity;
- Continue upgrading of quality of ASEAN agriculture products;
- Provide foundations for closer economic ties between ASEAN Member Countries

The scheme applies to products listed in a schedule to the agreement. Products listed under the scheme include palm oil, coconut oil, cocoa and cocoa products, canned tuna, canned pineapple, frozen chicken meat, frozen shrimps, tapioca, seaweed, pepper, coffee, tea, peas and beans rubber and forestry products. To be included the scheme products must be subject to discriminatory treatment or trade related issues, be of major export interest or have an economic impact on the employment of a large number of people in ASEAN.

The scheme establishes guidelines and procedures for joint ASEAN product promotion between the public and private sector, such as efforts to promote ASEAN products in

overseas markets, negotiations to overcome discriminatory non-tariff barriers and unfair practices imposed by importing countries. It also encourages joint efforts to counter customs barriers to ASEAN products and encompasses efforts to enhance intra-ASEAN trade by providing for efforts of members to consult and exchange information of trade and investment policies and to cooperate on measures for the removal of barriers to trade. It also compels member countries to take action to enhance the long tem competitiveness of ASEAN food and agriculture products by identifying cooperation in technology development and transfer and by accelerating the harmonization of standards.

ASEAN Animal Health Trust Fund

There has been recent agreement in principle for the establishment of an ASEAN Animal Health Trust Fund. The objective of the fund is to facilitate the implementation of a unified and harmonized animal health program in ASEAN. It is intended that the fund will collect and administer funds to support regional coordination and implementation of FMD controls and eradication.

Other activities support technical cooperation, knowledge generation and dissemination and involve the ASEAN Technical Working Group on Agricultural Research and Development. Activities aim to improve the knowledge flow and exchange of information on agriculture R&D in ASEAN. ASEAN has also established several strategic alliances among agricultural cooperative organizations including in data and information exchange, agricultural production, dairy farming, the coconut by-product industry, organics fertilizer, agro tourism, beef farming and the cooperative productivity enhancement program.

ASEAN Halal food program

The ASEAN Halal food program promotes intra ASEAN food trade by providing the food industry (food processors, manufacturers, importers, exporters and distributors) with an understanding of the concepts and issues related to the halal food preparation, processing, certification and quality assurance. ASEAN has also established guidelines on the preparation and handling of halal food in the hope of further expanding intra ASEAN trade in meat and meat based products. ASEAN is currently working an accreditation scheme for the halal food establishment.

ASEAN Framework Agreement on Facilitation of Goods in Transit

The Framework Agreement on Facilitating Goods in Transit aims to facilitate transportation of goods in transit, simplify and harmonize transport trade and customs regulations for goods in transit and establish a core integrated system for goods in transit within ASEAN.

The agreement sets out obligations on parties to grant rights in respect of transit transport, designate transit transport routes, provide general conditions for road and rail transport, and also establish systems for customs controls and SPS measures. Principles such as MFN, national treatment, consistency, simplicity and transparency are to “guide” members under the agreement.

For customs control and SPS measures the agreement provides fro harmonization and simplification of custom procedures, the establishment of a customs transit system for the purpose of facilitating goods in transit and the establishment of SPS measures to facilitate the movement of goods and ensure their compliance with relevant laws and regulations. These SPS measures are set out in Protocol 8 Sanitary and Phytosanitary Measures to implement the ASEAN Framework Agreement in the Facilitation of Goods in Transit. The protocol imposes obligation on members to be guided by international standards in their enforcement of SPS measures and to ensure SPS laws and regulations are readily available to other ASEAN members. Under the Protocol ASEAN members have also agreed to mutually consult with each other to establish bilateral multilateral or ASEAN SPS arrangements and inspection procedures to facilitate the transit of goods.

iii) Harmonization of standards and practices in the agricultural sector

To support AFTA and to facilitate free trade in agricultural products, ASEAN member economies have undertaken some activities for harmonization of good manufacturing

processes (in food handling) and good agricultural practices in corps, livestock and fisheries sub sectors.

Pesticide MRLs

The increasing awareness of food safety has prompted ASEAN Member Countries to undertake the harmonization of MRLS of pesticides in agricultural products that are traded in the region. To date the total number of harmonized MRLs of pesticides in vegetables and fruits endorsed by Ministers on Agriculture is 256, involving a total of 20 pesticides.

Livestock

ASEAN has embarked on establishing standards for vaccines used in the livestock industry in the region to ensure that only vaccines which meet international standards for safety, efficacy and quality are being used to protect animal health in the region. ASEAN has also established several procedures and guidelines related to vaccine productions which are published for the livestock industry in the region. In order to promote international trade in livestock among ASEAN Member Countries ASEAN has also established criteria for accreditation of livestock establishments for chick and duck eggs, cattle and buffalo for slaughter, and poultry for breeding.

Fisheries

ASEAN has developed and published the Manual on Good Shrimp Farm Management Practices and the Harmonization of Hatchery Production of Tiger Prawns in ASEAN. Some member countries have translated the manuals into their national languages for use by shrimp farmers.

ASEAN has also adopted the "Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals and the Beijing Consensus and Implementation Strategy" as a tool to reduce the risk of disease due to transboundary movement of live aquatic animals.

iv) Biotechnology and GMOs

ASEAN has acknowledged the importance of agricultural biotechnology as a tool to increase food productivity on a sustainable basis, but has also noted public concern over use of biotechnology that needs to be addressed by the respective authorities. In light of this ASEAN has adopted guidelines on the risk assessment of agriculture related to genetically modified organisms. The guidelines serve to provide ASEAN Member Countries with a common understanding and approach when conducting scientific evaluations for the release of agriculture related GMOs. The guidelines describe the procedure for notification, approval and registration of agriculture related GMOs and the need for each ASEAN member country to establish a national authority of genetic manipulation. The roles and responsibilities for the authority in regulating agricultural GMOS are also addressed by the guidelines.

e) Issues for ASEAN

Following the landmark decision by ASEAN members in October 2003 of the Bali Concord, the Strategic Plan of Action is due to be revised and refined. The successor to the HPA, the VAP, aims to set the strategies, mechanisms and activities for moving toward ASEAN goals with the next 6 years period (2004-2010). Accordingly, new strategies and mechanisms will be developed specially for the agriculture and food sectors. The current strategic plan of action, in line with the VPA, will also be refined and revised to provide the means to implement ASEAN's strategic goals for the next six year period.

ASEAN needs to ensure that strategies for food and agriculture continue to build on cooperation and integration efforts and provide credible and worthwhile activities which contribute towards achieving the goals of the Vision 2020. This means ensuring that activities:

- Create meaningful steps towards achieving free trade in goods and services by 2020;
- Continue to take into account and address the integration needs of the lesser developed ASEAN economies; and

- Adequately respond to trends and developments at both the regional and global levels that are relevant to the food and agriculture sector. For example, building on efforts to regulate GMOs at the ASEAN level will be important as new GM technologies and potential consumer markets develop.

7. FOOD SECURITY ISSUES

a) Summary

There is generally a positive relationship between international trade and food security (ensuring that there is an available food supply to meet the needs of the population). This has been borne out by global trends, evidenced though the importance of trade in meeting food consumption needs in developing countries over the past decade.

ASEAN has been self sufficient (able to provide for food and agriculture needs without the aid of imports or exports) in food since the early 1970s and has achieved large increases in food production. At the same time however, a declining proportion of its products is derived from the agriculture sector. Although its importance in overall trade has declined, it remains the most important sector for ASEAN in terms of employment and livelihood and is a major concern for ASEAN economies, particularly for the poorest among them.

ASEAN has pursued strategies to address these concerns through supporting economic recovery since the late 1990s as well as developing rural based agro-industry. It has also undertaken several cooperation activities at the ASEAN wide level to address food security concerns consistent with the SPA. Primarily polices have been targets at rice, for which all countries, except for Thailand and Viet Nam, remain net exporters.

b) Theory of food security

Food security is defined by the World Bank as having three dimensions: food availability, affordability, and stability of access. The World Bank finds trade and trade liberalization influence food security in the following ways:

- through making up the difference between production and consumption needs;
- reducing supply variability;
- fostering economic growth;
- making more efficient use of world resources.

A wide literature deals with the interaction between trade liberalization and the availability of, and access to, food among the poorest least developed countries (LDCs)[62].

See Box 2.1 below.

Box 2.1 – Food self sufficiency and food security

Food self sufficiency is a policy regime where food production, particularly rice, must all be produced locally. This regime is, in part, due to several concerns at work: (a) the need to satisfy political imperatives as paddy farmers account for a large share of all farmers; and (b) the perceived concern that only about 5-7% of global rice supply is traded and therefore, a nation may not be able to access food if there are global shortages. Considering production targeting, food self-sufficiency has a cost. Given the scarce resources in many developing countries, other farmers and commodities with comparative advantage will be unable to access resources for their development.

Food security is a policy regime of meeting a nation's food needs that ensures availability and affordability of food (i.e. rice) to all inhabitants through local production or importation. The regime allows the country to exploit its natural resource endowments and comparative advantages.

As an example, in the early 1980s, Malaysia launched its forward-looking National Agricultural Policy (NAP). Among its strategic goals is farm profitability, and 70% rice self sufficiency. Rice production was focused on 13 so-called granary areas. The Government at that time felt that marginal rice lands are better used by other crops (i.e. oil palm, fruit trees and rubber) and thereby generate better incomes for smallholders. With respect to rice deficits, they can be imported from neighboring Thailand which incidentally has the competitive advantage in rice production. Since 1983 when the NAP was launched, Malaysia has never faced rice shortages. It was a bold and sound policy in the context of the early 1980s.

Source: CFA 2004

[62] WTO 2000

Broadly much of the literature finds positive effects for the economy overall from trade liberalization, and in many cases, for food security[63]. The Organization for Economic Cooperation and Development (OECD) finds liberalization of international trade generally having positive effects for food security through increasing the variety of foods available and enhancing the capacity for import[64]. India and China are given as examples to stress that overall self-sufficiency does not mean access of all individuals to food.

The FAO finds that agriculture accounts for much of trade in developing countries that are most food insecure[65]. Among developing countries as a whole, agricultural products represent around 8 percent of both exports and total merchandise trade, while for the countries where hunger is most prevalent, the share rises to over 20 percent. Yet the FAO also suggests that this high dependence on agricultural trade does not imply that agricultural trade contributes to food insecurity. Instead, the report "The State of Food Insecurity in the World[66]" finds that increasing integration of international markets has stirred widespread concern that agricultural trade may jeopardize food security in developing countries, yet much analysis suggests that, in general, engaging in agricultural trade is associated with less hunger, not more.

Other papers examine the effects of trade liberalization on the variability of prices and on concentration on one type of food or another.[67] These reports suggests that a range of inadequacies, in concert with trade liberalization, have contributed to the problem of food insecurity, notably, problems due to over-specialization on a very small number of commodities, weak institutions for competition and redistribution, and poverty reduction. Examining 16 countries the FAO finds a common reported concern was with a general trend towards the concentration of farms, in a wide cross-section of countries[68]. Further the FAO reports that while this concentration led to increased productivity and competitiveness with positive results, in the virtual absence of safety nets the process also marginalized small producers and added to unemployment and poverty[69].

Table 2.6 outlines measures taken by ASEAN Countries to limit restrict or regulate trade in food products for the goal of food security.

c) Long term global trends in food security[70]

Globally, agricultural production has been increasing steadily, outstripping world population growth by a widening margin since the 1960s. However world agricultural growth (for all products) has actually been slowing down, from 3 percent per annum in the 1960s to 2 percent per annum in the mid-1990s.

Developing countries account for much of the growth in overall commodity demand since the 1970s because of their higher population growth rates, their comparatively buoyant per capita GDP expansion and the greater responsiveness of their demand to income growth. Among the developing countries, East and South Asia have made the most impressive gains in production since 1970, more than doubling their cereals production and increasing their share of global cereals output from 31 percent to 38 percent. The region increased output of vegetable oils more than five fold and raised their share of global production from 25 percent to 44 percent. East and South Asia's production of livestock products more than trebled and their share of global production increased from 25 percent to 45 percent. However, their production still lags behind consumption, so that East and South Asia have not increased their presence in world export markets, with the exception of vegetable oils. They have tended rather to increase imports as well as production to supply rapidly growing domestic markets.

[63] UNDP, 1997; World Bank, 1997; Ben-David & Winters, 2000; OECD, 2000; FAO, 2003
[64] OECD 2000
[65] FAO 2003
[66] FAO 2003
[67] de Haen & P. Konandreas, 1998; Konandreas and J. Greenfield, 1998; FAO, 1999
[68] FAO 1999
[69] *Ibid*
[70] FAO Symposium on Agriculture, Trade and Food Security

From a trade point of view expansion in trade in food commodities and in agricultural as a whole has not occurred at an even pace, due largely to external shocks such as the oil crises (1973, 1979) and a sharp decline in commodity prices in the 1980s. Developing countries accounted for 37 percent of total food imports in 1997, up from 28 percent in 1974. Their share of food exports in 1997 had risen to about 34 percent from 30 percent. In 1997, developing countries imported about US$168 billion worth of food commodities, compared with US$ 155 billion worth of food exports. These trends highlight the growing importance of trade in meeting food consumption needs, especially for the developing countries. The FAO finds empirically that agricultural trade made a substantial contribution to the improvements in global and household food security that occurred during the 1980s. Ample food supplies were available on world markets at decreasing prices. The volatility of world prices decreased. World cereal stocks rarely fell below the 17 to 18 percent of world cereal consumption estimated by the FAO as the minimum necessary to ensure world food security.

Around 40 percent of persons in LDCs are undernourished, and 20 percent are undernourished in the net food-importing developing countries. Small variations in year to year supply can have considerable implications for the nutritional situation in these countries, particularly in cereal markets.

d) Food security among the ASEAN Countries[71]

The population of ASEAN Countries was 521 million 2000 and is growing at the annual rate of 1.5 percent among the emerging economies (Thailand, Malaysia, the Philippines and Indonesia) and 1.9 percent in the transition economies (Cambodia, Laos, Myanmar and Viet Nam). Per capita dietary energy supply among ASEAN Countries ranges from a high of 2,930 and 2,900 in Malaysia and Indonesia respectively, to a low of 1,980 and 2,150 kcal/day in Cambodia and Lao PDR, respectively.

ASEAN has been self-sufficient in food since the early 1970s. ASEAN Countries have achieved a large increase in food production over the past 20 years. By the end of the 1990s, the region was a net rice exporter, but a net importer of livestock products. All ASEAN Countries apart from Lao PDR and the Philippines were either self-sufficient or net exporters of food. Growth in food production in the region on average had more than kept pace with population growth, as the 1989-1991 based per capita production index increased from 88 in 1979-81 to 110 in 1999. This growth does not necessarily translate into increased supply for domestic utilization. In most ASEAN Countries there is a diverse range of agricultural products produced. ASEAN Countries have experienced an average food self-sufficiency rate above 100 percent even as the population has increased.

Increasing wealth in many ASEAN Countries has seen a declining proportion of annual product coming from agriculture: In 1979-81, agriculture accounted for 25.3 percent of total merchandise exports and 11.5 percent of total imports of ASEAN Countries. By 1999, these shares had declined to 9.7 percent and 8 percent, respectively, due to rapid development of industry and services.

However agriculture remains the region's most important sector in terms of employment and livelihood. Despite impressive improvements in food production, food security remains a major concern for the ASEAN Countries. In the majority of countries the annual cropped area is still dominated by rice production. Economic growth was damaged by the financial and economic crises of 1997-8, which demonstrated the region's vulnerability to food insecurity. A country's trade balance and debt servicing are determining factors of the ability of a country to import food. Furthermore, increases in food production and productivity are only two aspects of food availability, which depends on exports, imports, terms of trade, existing stocks and domestic networks for distribution.

While significant advances have been made in food production and economic growth in Asia, food security is a major concern for ASEAN Countries. The Asian financial and economic crises demonstrated the vulnerability of ASEAN Countries to food insecurity.

[71] FAO studies elaborated on the basis of national strategy papers for agricultural development, "Regional Strategy for Agriculture Development and Food Security in the Countries of the Association of Southeast Asian Nations."

Strategies to address food insecurity among ASEAN Countries generally include enhancing economic recovery and growth and developing rural-based agro-industries. This involves improving microeconomic productivity, diversification of agricultural production, improvement in the infrastructure and institutions to promote agricultural and rural growth, and improvement of the support services for small and medium agro enterprises. This is particularly the case where subsistence agriculture is predominant (for example in Cambodia and Lao PDR).

e) ASEAN – regional and national policies

ASEAN has a collective agreement on food security involving the sharing of rice stocks at times of shortage. An emergency food stockpile was established in 1979 (initially consisting of 53,000 metric tons of rice) to which all members would in principle contribute to, and from which each could withdraw in times of urgent need. ASEAN Countries also have a regional food security information system.

The SPA was also formulated for the period 1999 - 2004 in order to ensure cooperation in these sectors is beneficial for and consistent with specific goals for the sector and the overall goals of the HPA and the ASEAN Vision 2020. A new SPA will be formulated for the period 2005 – 2010 under the Vientiane Plan of Action, due to be completed in November 2004.The SPA has as one of its strategic thrusts to address problems surrounding food security. Targeted programs include:

- Strengthening of ASEAN food security statistical database and information to provide technical and institutional assistance for initiative hitherto undertaken by the ASEAN Food Security Reserve Board (AFSRB) and its secretariat to compile, manage and disseminate statistical data and information on food and food security which will pave the way for a more effective planning of food production and trade within the region;
- Development of a Common Framework to Analyze and Review Regional Food Trade Policies in the Light of the AFTA to Enhance Intra-ASEAN Food Trade;
- Strengthening the Food Marketing System of Agricultural Cooperatives for Enhancing Food Security in ASEAN;
- Study on Long-term Supply and Demand Prospects of Major Food Commodities (rice, corn, soybean, sugar, pulses and oilseeds) in ASEAN;
- Establishment of a Regional Food Security Information System for ASEAN to allow Member Countries to effectively forecast, plan and manage their food supplies and utilization for basic commodities using up-to-date techniques as well as to provide information for investors to undertake investments and/or joint ventures in food production in conducive areas;
- Review of the Agreement on the ASEAN Food Security Reserve to realize effective cross-supply arrangements of food, especially rice, from food surplus countries, or other Member Countries, to food-deficit countries during times of emergency.

i) National programs

A range of targeted programs have also been adopted in different countries. Most countries other than Brunei and Singapore (who do not have significant agricultural sectors) have programs targeting household food security, microeconomic and structural reform in the agro-industries, addressing problems of land and water scarcity and irrigation, and programs to target weak markets, credit and related infrastructure.

Examples include programs in Viet Nam and Laos that have concentrated on hunger elimination and poverty reduction. In Viet Nam, Lao PDR and Cambodia, rain-fed agriculture has been promoted, as have the diversification of crops and the raising of livestock. In Thailand, the emphasis has been on integrated farming systems due to problems of insufficient water supplies and problems of irrigation. Indonesia also has a program for agribusiness promotion. Indonesia has also instituted national plans of action to address

nutritional problems, specifically addressing household food security. In the Philippines the emphasis is on promoting the production of high value crops and the strengthening of rural infrastructure and support services, from irrigation to the strengthening of credit markets.

ii) Rice

The primary policy of the ASEAN Countries with regard to rice has been the target of self-sufficiency. However in 2002 all ASEAN Countries save Thailand and Viet Nam were net rice importers. The concept of food security in rice has evolved from meaning self-sufficiency in absolute terms to a more flexible concept of self-reliance and global competitiveness, which encourages imports during times of seasonal shortage and manages agricultural production based on the principle of comparative and competitive advantage.

Table 2.7 – Production of rice by volume (metric tons) and by country, 2002

Country	Rice, Paddy
Brunei Darussalam	400
Cambodia	3,822,509
Indonesia	51, 489,696
Laos	2,416,500
Malaysia	2,091,000
Myanmar	22,780,000
The Philippines	13,270,653
Singapore	0
Thailand	26,057,000
Viet Nam	34,447,200

ITS Table
Source: FAOSTAT 2002

Table 2.8 - Imports of rice by volume (metric tons) and by country, 2002

Country	Rice, Paddy	Rice, Husked	Milled Paddy Rice	Broken Rice
Brunei Darussalam	21,216	11	7,002	297
Cambodia	0	0	75,073	0
Indonesia	19,662	81,754	1,160,000	717,337
Laos	0	0	26,400	0
Malaysia	28	1,492	454,466	64,934
Myanmar	0	0	6,556	0
The Philippines	100	0	1,196,094	0
Singapore	0	1,529	473,514	22,368
Thailand	0	29	869	0
Viet Nam	0	0	40,000	0

ITS Table
Source: FAOSTAT 2002

Table 2.9 - Imports of rice by value (US$ '000) and by country 2002

Country	Rice, Paddy	Rice, Husked	Milled Paddy Rice	Broken Rice
Brunei Darussalam	10,438	1	2,162	183
Cambodia	0	0	11,015	0
Indonesia	2,936	25,728	225,000	123,416
Laos	0	0	3,500	0
Malaysia	8	2,978	124,882	14,420
Myanmar	0	0	795	0
The Philippines	100	0	211,663	0
Singapore	0	617	114,562	4,028
Thailand	1	13	375	0
Viet Nam	0	0	5,500	0

ITS Table
Source: FAOSTAT 2002

Table 2.10 - Exports of rice by volume (metric tons) and by country, 2002

Country	Rice, Paddy	Rice, Husked	Milled Paddy Rice	Broken Rice
Brunei Darussalam	0	0	0	0
Cambodia	0	0	3,846	0
Indonesia	441	2,627	1,176	64
Laos	0	0	0	0
Malaysia	5	22	139	2,541
Myanmar	0	0	730,300	0
The Philippines	0	0	2	0
Singapore	0	4	10,855	0
Thailand	0	91,433	6,004,383	1,241,745
Viet Nam	0	0	3,241,000	0

ITS Table
Source: FAOSTAT 2002

Table 2.11 - Exports of rice by value (US$ '000) and by country

Country	Rice, Paddy	Rice, Husked	Milled Paddy Rice	Broken Rice
Brunei Darussalam	0	0	0	0
Cambodia	0	0	1,691	0
Indonesia	134	722	253	21
Laos	0	0	0	0
Malaysia	3	17	139	531
Myanmar	0	0	107,390	0
The Philippines	0	0	1	0
Singapore	0	7	2,188	0
Thailand	0	22,948	1,400,536	208,479
Viet Nam		0	610,000	0

ITS Table
Source: FAOSTAT 2002

Table 2.12 - Food security measures that involve intervention in trade, ASEAN, by country

Country	Commodity	Details
Singapore	Rice	As of 2003 rice imports in Singapore were subject to licensing, either automatic or non automatic depending on grade. Licenses are issued by the Singapore Trade Development Board (TDB). There are two categories of license: stockpile licenses, and ordinary licenses. The former are issued for imports of "stockpile grades"; all importers holding this license are required to maintain a constant stock of rice equal to twice the quantity imported. Stocks must be held in warehouses approved by the TDB at a cost borne by the importer. There is no limit on the number of licenses issued annually and no corresponding limit on the amount of rice to be imported per year. The rationale for the licensing scheme for "stockpile grades" appears to be that it enables the authorities to keep track of the rice importers so that they can ensure that the stockpile is maintained. Ordinary licenses are issued for non-stockpile rice (that is, specialty rice, such as parboiled rice, glutinous rice, basmati rice and brown rice), which is not normally consumed by the general population and is generally much more expensive than normal rice. It would appear that ordinary licenses are necessary to prevent stockpile grades of rice being imported in the guise of other rice, thereby avoiding the costs associated with stockpiling requirements. Source: (WT/TPR/S/67, UNCTAD, 2003).
Brunei Darussalam	Rice	No restrictions on rice imports, price of rice domestically Restrictions on foreign investment in agriculture, fisheries, and food processing, with up to 30 percent local ownership required. Source: (WT/TPR/M/84).
Thailand	Rice, tapioca, durian, longan	Exports require registration with the Department of Agriculture Source: (WT/TPR/S/123).
Malaysia	Rice	Government provides support and accords protection: subsidized inputs (fertilizer, approximately RM 500 million annually), more gradual tariff reduction, minimum price support. The Government maintains a Guaranteed

		Minimum Price and a Paddy Price Subsidy for paddy farmers. Under the Guaranteed Minimum Price scheme, BERNAS (a privatized enterprise involved in state trading) undertakes to buy paddy from farmers at not less than the guaranteed minimum price. Under the paddy price subsidy program, the Government makes fixed payments to farmers for the paddy sold by them to any commercial rice mill. These payments constituted the largest source of domestic support for agricultural production in 2001 Source: (WT/TPR/S/92).
Indonesia	Rice	Market price support for rice, through BULOG (Badan Urusan Logistic Nasional, national food logistics body) allows floor producer prices to be set up to 30 percent above production costs; thus, domestic prices of rice were some 20 percent to 30 percent above world levels during 2002. Consumer subsidies, at substantial albeit declining budgetary cost, help offset these cost increases. The Indonesia n government increased applied tariffs on rice to an equivalent ad valorem rate of 35 per cent. BULOG's rice import monopoly dismantled. Source: (WT/TPR/M/117.
	Cloves, corn, soya beans, and sugar	Import licensing Source :(WT/TPR/S/117).
The Philippines	Rice	The government agency responsible for ensuring food security and stabilizing rice supply and prices is the National Food Authority (NFA). The NFA procures and distributes palay through a system of buffer stocking and price support. It buys rice at support prices during the harvest season and distributes them during the lean season. The NFA used to have a monopoly on rice importation. In 2003, however, it implemented the "farmers-as-importers program," thus, opening rice importation to interested farmers' Source: (WT/TPR/M/59).
Cambodia	Rice	Government, through the Ministry of A griculture, manage a Rice Seed Bank, which provides rice seed to farmers affected by natural disasters. Local offices of the Ministry of Water Resources and Meteorology also distributed diesel fuel free of charge to be used by farmers in the operation of irrigation water pumps in emergency drought situations Government acts through Ministry of Commerce to Ministry of Commerce to Green Trade Company to buy rice. In 2001 export licensing on rice was lifted. Source: (WT/ACC/KHM/21).
Viet Nam	Rice	From 1997 to 2000 rice and fertilizer were the subject to export quota controls. Rice exports were controlled to ensure food security and avoid locally high prices. Source (Gill *et al*., 2003).
Myanmar	Rice	Myanmar has a policy "to achieve surplus in paddy production (to increase rice production so that more surplus of rice could be exported after reserving enough quantity for local consumption." Precise details of the trade impacts of the policy are unavailable (UN, 2002).
Lao PDR		No declared policy on food security

ITS Table
Source: references to WTO Trade Policy Reviews as noted and additional information listed as references.

f) Issues for ASEAN

There is general consensus among the ASEAN economies that addressing food security in ASEAN requires attention to macroeconomic issues: growth, the resilience of markets, the impact of debt repayments and the physical and institutional infrastructure for distribution, as well as to microeconomic issues, such as farm productivity, the level of diversification and specialization in production and the depth of household food budgets among the rural poor.

The greatest problems of food security among ASEAN Countries are found in the poorest countries, Laos, Cambodia and Myanmar. Brunei Darussalam and Singapore enjoy relative affluence and, while they do not have agrarian economies, do not face serious food insecurity. As fast growing economies in the process of trade and economic reform, Malaysia, the Philippines and Indonesia are more likely to suffer from problems of general macroeconomic stability than specifically those of food security in the broadest sense. Viet Nam and Thailand, meanwhile, have become net food exporters, and thus have shifted towards diversification of trade in food and agricultural products.

III. REVIEW OF THE STRATEGIC PLAN OF ACTION ON ASEAN COOPERATION IN FOOD AND AGRICULTURE (1999-2004)

1. BACKGROUND

a) Summary

The current SPA was developed to provide for cooperation activities and initiatives in the agriculture, food and forestry sectors in line with the ASEAN Vision 2020 and the Hanoi Plan of Action. Its strategic emphasis was on strengthening food security arrangements in the region, enhancing the international competitiveness of food and agriculture products, and strengthening ASEAN's position in international fora.

The SPA consolidated existing cooperation initiatives and set out various actions programs to achieve its strategic objectives for the period 1999 – 2004. It was envisaged by ASEAN members at this time that major changes would occur in both regional and global agriculture and food sectors which would necessitate adjustments in cooperation areas in the future.

Accordingly, in light of the Bali Concord of 2003 (and the Vientiane Plan of Action due to be developed for its implementation in 2004) and new developments in food and agriculture sectors, a new plan of action for the agriculture and food sector will be formulated for the period 2004 – 2010 in order to ensure cooperation in these sectors is beneficial for and consistent with specific goals for the sector and also the overall goals of the ASEAN Vision 2020.

b) Background 1993 - 2004

In 1993, the Ministerial Understanding on ASEAN Cooperation in Food, Agriculture and Forestry, identified seven priority areas of ASEAN cooperation in food, agriculture and forestry sectors. The areas were:

1. Strengthening food security in the region;
2. Facilitation and promotion of intra and extra ASEAN trade in agriculture, fisheries and forest products;
3. Technology generation and transfer to increase productivity and develop agribusiness and silvobusiness;
4. Agricultural rural community and human resources development;
5. Private sector involvement and investment;
6. Management and conservation of natural resources for sustainable development; and
7. Strengthening ASEAN Cooperation and joint approaches in addressing international and regional issues.

Sectoral action programs were then endorsed by Ministers for each of the seven priority areas, covering policy coordination, research, technology transfer, production and marketing and investment promotion. They were embodied in the Medium Term Programme of Action for ASEAN Cooperation in Food, Agriculture and Forestry for 1995-1999.

Sectoral work plans were also approved in the major sub sectors of crops, livestock, fisheries, agricultural training and extension, agricultural cooperatives and forestry. These involved 16 projects in addition to a number of existing ones carried over from the previous period, principally aimed at facilitating the full realization of AFTA. The activities were focused on harmonization of measures and regulation in the crops, livestock, fisheries and forestry sectors and aimed at facilitating ASEAN trade in agriculture and forest products[72]. These activities were complemented with other strategies to enhance trade in agricultural products, including the Joint Approach in Agriculture and Forest Products scheme (discussed below)

[72] ASEAN Strategic Plan of Action on ASEAN Cooperation in Food, Agriculture and Forestry 199-2004 (Revised), Grouping of Action Programmes and Activities by Sectors of Cooperation, September 2000

as well as joint efforts to coordinate joint approaches in international fora in the food, agriculture and forestry sectors.

In 1994 ASEAN Economic Ministers decided to include processed agricultural products in the CEPT scheme under AFTA[73] and in 1995 declared cooperation in food and agriculture would need to focus on new initiatives to achieve global competitiveness in the sector while maintaining the sustainability of resources[74]. This was largely a response to changes in the global marketplace and structural changes within the domestic sectors as a result of industrialization, and their impact on the food and agricultural sectors. It was also declared that competitiveness was to improve through the increased application of science and technology, investment in human resource development and greater liberalization on trade in agriculture and food products[75].

In 1996 ASEAN Ministers endorsed the concept of a Strategic Plan of Action in Agriculture, Food and Forestry. This decision was motivated by the need for a vision statement for the year 2002 in all areas of cooperation and the importance of having a clear focus on pursuing further cooperation programs in these sectors. It was felt that emphasis should be placed on having a common quality standard for specific products or commodities that could be recognized internationally or which would be at last comparable to international standards[76].

In December 1997, ASEAN members adopted the *ASEAN Vision 2020* which sets out a broad vision for the ASEAN to achieve by the year 2020. The Vision 2020 sets out 4 broad goals for ASEAN to achieve as a regional grouping. In 1998, the HPA was developed to implement the priority goals in the ASEAN Vision 2020. The HPA consisted of priority issues and cross sectoral programs that would be implemented over six year period between 1999 and 2004.

To meet the intent and objective of the Vision 2020, in line with the conceptual framework of the HPA, in 1999, the Strategic Plan of Action on ASEAN Cooperation in Food, Agriculture and Forestry for 1999 – 2004 was developed. It aimed to cover overall cooperation in the three major sectors but placed a greater emphasis on strengthening food security arrangements in the region, enhancing the international competitiveness of food and agriculture products, and strengthening ASEAN's position in international fora. It also intended to consolidate existing initiatives and focus them toward these goals.

In October 2003 at the 9th ASEAN Summit ASEAN Member Countries took a decision under the Bali Concord II to solidify and accelerate integration in the region. The Concord provided a set of milestones to reach the goals and objectives of the ASEAN Vision 2020 and further define the four themes of the ASEAN Vision 2020 that were set out in 1997. The goals of the Bali Concord II form an integral part of the next Plan of Action, the Vientiane Plan of Action, which is intended to serve as successor to the Hanoi Plan of Action, setting strategies, mechanisms and activities for achieving these goals for the next six year time period from 2004 to 2010.

2. OVERVIEW OF THE STRATEGIC PLAN OF ACTION 1999 – 2004

a) Summary

The current SPA was developed to "formulate and implement regional cooperation activities to enhance the international competitiveness of ASEAN's food, agricultural and forestry products as well as further strengthen the region's food security arrangements and joint positions in international fora". More generally, its purpose was to "further strengthen collaborative efforts not only in trade promotion of ASEAN's agriculture (and forest) products, but also in all aspects of agricultural and forestry development".

[73] Twenty-sixth meeting of the ASEAN Economic Ministers, Chiangmai Thailand, October 1994
[74] Fifth ASEAN Summit, Bangkok, December 1995
[75] ASEAN Strategic Plan of Action on ASEAN Cooperation in Food, Agriculture and Forestry 199-2004 (Revised), Grouping of Action Programmes and Activities by Sectors of Cooperation, September 2000
[76] *Ibid*

It did not aim to completely replace previous cooperation efforts, but instead build upon existing initiatives and implemented new activities with a specific focus on achieving these objectives. It retained the priority areas of cooperation set out in the HPA and the ASEAN Vision 2020 and the sectoral programs developed under previous cooperation efforts. It also developed new cooperation projects, action programs and supporting activities in the agriculture and food sectors, which were principally aimed at assisting these sectors recover from the 1997 economic crisis.

b) Strategic thrusts

The SPA contains six strategic thrusts to achieve the objective of cooperation in food and agriculture, which emphasize the importance of food security arrangements, international competitiveness and the joint ASEAN positions in international fora. The six thrusts are as follows:

1. Strengthening food security arrangements in the region;
2. Enhancement of international competitiveness of ASEAN food and agricultural products/commodities;
3. Enhancement of ASEAN cooperation and joint approaches on international and regional issues;
4. Development and acceleration of transfer and adoption of new technologies;
5. Enhancement of private sector involvement;
6. Management, sustainable utilization and conservation of natural resources.

Human resource development, although not listed as a specific strategic thrust, remains an important strategy as an integral part of collaborative efforts to be undertaken in the food and agriculture sectors.

Under each strategic thrust, specific action programs provide for activities focusing on research and development, technology generation, transfer and adoption, enhancement of human resources development and information exchanges, strengthening of institutional capacities, promotion of ASEAN common standards and collective efforts and enhancement of economic interlinkages and complementarity in the region.

c) Summary of identified action programs

Identified action programs are noted as follows:

i) Strengthening food security

- Strengthening of ASEAN food security statistical database and information to provide technical and institutional assistance for initiative hitherto undertaken by the ASEAN Food Security Reserve Board (AFSRB) and its Secretariat to compile, manage and disseminate statistical data and information on food and food security which will pave the way for a more effective planning of food production and trade within the region;
- Development of a Common Framework to Analyze and Review Regional Food Trade Policies in the light of the AFTA to Enhance Intra-ASEAN Food Trade;
- Strengthening the Food Marketing System of Agricultural Cooperatives for Enhancing Food Security in ASEAN;
- Study on Long-term Supply and Demand Prospects of Major Food Commodities (rice, corn, soybean, sugar, pulses and oilseeds) in ASEAN;
- Establishment of a Regional Food Security Information System for ASEAN to allow Member Countries to effectively forecast, plan and manage their food supplies and utilization for basic commodities using up-to-date techniques as well as to provide information for investors to undertake investments and/or joint ventures in food production in conducive areas;

- Review of the Agreement on the ASEAN Food Security Reserve to realize effective cross-supply arrangements of food, especially rice, from food surplus countries, or other Member Countries, to food-deficit countries during times of emergency.

ii) Enhancing international competitiveness

- Enhancement of intra- and extra-ASEAN trade and long-term competitiveness of ASEAN's food and agricultural products/commodities;
- Monitoring of the implementation of the CEPT Scheme for AFTA for agricultural and forest products;
- Intensification of cooperation in production and processing technology development and transfer and enhancement of development, harmonization and adoption of quality standards for products. For example, through:
    - The development and adoption of quality assurance systems for selected tropical fruits which re traded;
    - Implementation of ASEAN guidelines on halal food for both intra and extra ASEAN trade;
    - Harmonization of phytosanitary measures for crop products;
    - Harmonization of MRLs of commonly used pesticides for vegetables that are widely traded;
    - Harmonization of regulations for agricultural products derived from biotechnology;
    - Establishment of an accreditation scheme for establishments involved in the production of livestock and livestock products that are widely traded between ASEAN Member Countries;
    - Harmonization of fisheries sanitary measures among ASEAN Member Countries;
    - Harmonization of regulations for agricultural products derived from biotechnology;
- Conduct of study to strengthen competitiveness of ASEAN food, agricultural (and forest) products in international markets.

iii) Enhancing cooperation and joint approaches in international and regional issues

- Identification of emerging issues and problems affecting trade in ASEAN products and formulation of joint strategies/positions to enhance ASEAN's competitive posture and to sustain the expansion of ASEAN's exports to international markets; and
- Coordinating the strengthening joint positions in international and regional organizations such as WTO, FAO, APEC, CODEX and ASEAN dialogue partners.

iv) Technology transfer and new technologies

- Conduct of collaborative research to develop new/ improved technology in agricultural production, post harvest and processing activities and sharing of research results and available technology;
- Strengthening programs in agricultural (and agro-forestry) technology transfer, training and extension to increase productivity of food, agriculture (and agro-forestry);
- Empowering agricultural rural communities through enhanced human resource development.

v) Enhancement of private sector involvement

- Collaboration in the establishment of a networking system to promote investment and joint venture opportunities in ASEAN;

- Establishment of strategic alliances among the private sector;
- Continuous consultation with the private sector at all meetings of working groups, SOM-AMAF and AMAF, particularly with regard to trade issues in international and regional fora;
- Promotion of Private Sector Investment in ASEAN.

vi) Management and sustainable utilization and conservation of natural resources

- Establishment of an information network for the sharing of information, such as an inventory of resources on species and genetic diversity;
- Development of an ASEAN framework pertaining to safeguard and accessibility to genetic materials and other biological resources;
- Promotion of sustainable development through natural resources management;
- Coordination of a Common Position on Selected Environmental and Conservation Issues Related to Trade in ASEAN Agricultural and Forest Products.

3. REVIEW OF THE STRATEGIC PLAN OF ACTION - ACHIEVEMENTS IN ACCORDANCE WITH STRATEGIC THRUSTS

a) Summary

Overall ASEAN has made progress with cooperation activities in accordance with its stated strategic objectives. Several of these activities have been highly successful and many are continuing.

Despite these achievements, there seem to be some problems arising from both internal and external factors. They are both procedural and substantive. There seems to be some overlap of activities among ASEAN bodies and also with sub regional groupings such as BIMP-EAGA and the IMT. Funding is a constraint as are processes for approval and implementation. The fieldwork undertaken for the project suggests that activities have not actively engaged the private sector enough and have not been effective in furthering liberalization efforts under AFTA. A further important consideration is that activities have also not adequately provided for the differing levels of development between ASEAN Member Countries so as to substantially benefit the CLMV countries.

b) Activities achievement to date

i) Strengthening food security

Ensuring food security is a major issue and fundamental goal of ASEAN cooperation. ASEAN food security issues have focused particularly on rice, the major staple, under The Agreement on the ASEAN Food Security Reserves.

The Agreement on the ASEAN Food Security Reserves

The agreement deals with food security needs on the basic food stocks, particularly rice, to be maintained by each ASEAN member country within its national borders as a matter of national policy. It includes commitments of the ASEAN Emergency Rice Reserves.

The food reserve is the total of the basic food stocks, particularly rice, maintained by each ASEAN member within its national borders. Members also coordinate national food stock policies which take into account the policies of other ASEAN Member Countries and which result in maintaining a minimum safe level of the ASEAN food security reserve.

The Agreement also establishes a Food Security Reserve Board to provide supervision and coordination in the implementation of the ASEAN food security reserve, including considering supply and demand of rice with the view to facilitating subsequent bilateral negotiations on prices and other terms of long term contracts in respect of official purchases for member countries. Another of its major tasks is to regularly provide food information and early warning systems on food shortages to member countries.

The Agreement on ASEAN Emergency Rice Reserves

Members also agreed on the establishment of the ASEAN Emergency Rice Reserves for the purpose of meeting emergency requirements. The emergency rice reserve requires each country to earmark within or over and above its national reserve, a certain quantity of rice, which is to constitute the emergency rice reserve. Members set out a certain amount that each agrees to earmark for the reserve. The project is currently at the stage of setting up a management team to implement a three year pilot program. A general manager has been recruited to build the team and implement the activities.

The Pilot Project on East Asian Emergency Rice Reserve (EARR) aims to expand and improve the existing coordinating and monitoring system for the ASEAN Food Security Reserve Board and to examine the possibility of the system to include China, Japan and Korea. It has been implemented for the three years from 2004 to 2007. The findings from the pilot project will be used a reference/basis for member countries to make decisions and improvements related to the establishment of the East Asian Emergency Rice Reserve System.

The ASEAN Food Security Information System (AFSIS)

This has been developed in parallel to complement the EARR. It is a five year undertaking from 2003-2008 to establish an information network on food security among the ASEAN +3 countries and to document training and data collection and management. It aims to serve as an early warning system for food shortages. Under it ASEAN members aim to eventually create an agriculture database to assess food security in the region. It is intended to comprise three components, including the Guidelines for Compilation of Food Security Statistical Database and Information, a computer program and operating manual and a capacity building program for the regional and national coordinators. The guidelines, which form the core of the system, are still being developed by member countries.

The ASEAN Food Security Information and Training Centre, located in the Office of Agriculture Economics Building, part of the Ministry of Agriculture and Cooperatives, Thailand at Kasetsart University, Bangkok was officially opened in December 2003 and is the designated place for training planned under the AFIS program. Training in statistics and sampling for ASEAN officials has already begun[77].

Collaboration with the FAO

The ASEAN Secretariat has also initiated collaborative efforts with the FAO to formulate an indicative regional program for ASEAN food security, building on and complementing national programs for food security. This is part of an effort to build partnerships among sub-regional organizations in Asia and the Pacific to address and help realize the Rome Declaration on World Food Security and the World Food Summit Plan of Action.

ii) Enhancing international competitiveness

ASEAN has undertaken various activities to facilitate intra and external ASEAN trade in agriculture and forestry products and enhance their competitiveness, some of which directly involves engaging the private sector. Some of these activities involve harmonization of good manufacturing processes (in food handling) and good agricultural practices in crops, livestock and fisheries sub sectors.

ASEAN Animal Health Trust Fund

There has been recent agreement in principle for the establishment of an ASEAN Animal Health Trust Fund. The objective of the fund is to facilitate the implementation of a unified and harmonized animal health program in ASEAN. It is intended that the fund will collect and administer funds to support regional coordination and implementation of foot and mouth diseases' (FMD) controls and eradication.

Other activities support technical cooperation, knowledge generation and dissemination and involve the ASEAN Technical Working Group on Agricultural Research and Development.

[77] Identifying Key Concerns for the VAP: A synthesis paper, ASEAN Secretariat internal document

Activities aim to improve the knowledge flow and exchange of information on agriculture R&D in ASEAN. ASEAN has also established several strategic alliances among agricultural cooperative organizations including in data and information exchange, agricultural production, dairy farming, the coconut by-product industry, organics fertilizer, agro tourism, beef farming and the cooperative productivity enhancement program.

ASEAN Halal Food Program

The ASEAN Halal Food Program promotes intra ASEAN food trade by providing the food industry (food processors, manufacturers, importers, exporters and distributors) with an understanding of the concepts and issues related to the halal food preparation, processing, certification and quality assurance. ASEAN has also established guidelines on the preparation and handling of halal food in the hope of further expanding intra ASEAN trade in meat and meat-based products. ASEAN is currently working on an accreditation scheme for the halal food establishment.

ASEAN Framework Agreement on Facilitation of Goods in Transit

The Framework Agreement aims to facilitate transportation of goods in transit, simplify and harmonize transport trade and customs regulations for goods in transit and establish a core integrated system for goods in transit within ASEAN.

The agreement sets out obligations on parties to grant rights in respect of transit transport, designate transit transport routes, provide general conditions for road and rail transport, and also establish systems for customs controls and SPS measures. Principles such as MFN, national treatment, consistency, simplicity and transparency are to "guide" members under the agreement.

The agreement requires members to grant each other rights of transit transport and the right to load and discharge third country goods in transit. It also specifies that transit transport is not be subject to any unnecessary delays or restrictions and is to be exempt from customs duties, taxes and other charges except those for specific services rendered in connection with transport.

Harmonization of pesticide MRLs

The increasing awareness of food safety has prompted ASEAN Member Countries to undertake the harmonization of MRLs (maximum residue levels) of pesticides in agricultural products that are traded in the region as well as those exported to other regions. To date the total number of harmonized MRLs of pesticides in vegetables and fruits endorsed by Ministers on Agriculture is 256, involving a total of 20 pesticides.

Pesticides database

ASEAN has established a pesticide database and network among ASEAN Member Countries. A website has also been set to provide a platform for sharing information as well as allowing for discussion, identification, prioritization, implementation and resolution of problems related to pesticide management. The website contains information and data accessible to regulatory authorities, with some available to the public.

Standards in the livestock industry

ASEAN has embarked on establishing standards for vaccines used in the livestock industry in the region to ensure that only vaccines which meet international standards for safety, efficacy and quality are being used to protect animal health in the region. ASEAN has also established several procedures and guidelines related to vaccine production that are published for the livestock industry in the region.

In order to promote international trade in livestock among ASEAN Member Countries ASEAN has also established criteria for accreditation for livestock establishments for chick and duck eggs, cattle and buffalo for slaughter and poultry for breeding.

Guidelines in the fisheries sector

ASEAN has developed and published the *Manual on Good Shrimp Farm Management Practices and the Harmonization of Hatchery Production of Tiger Prawns in ASEAN*. Some

member countries have translated the manuals into their national languages for use by shrimp farmers.

ASEAN has also adopted the "Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals and the Beijing Consensus and Implementation Strategy" as a tool to reduce the risk of disease due to transboundary movement of live aquatic animals. The guidelines are intended to provide a platform for greater cooperation and implementation of aquatic animal health management measures within the region and more broadly to support sustainable aquaculture in ASEAN.

SPS measures on crops, fisheries and livestock products

For customs control and SPS measures, Protocol 8 Sanitary and Phyto-Sanitary Measures to implement the ASEAN Framework Agreement in the Facilitation of Goods in Transit provides for harmonization and simplification of custom procedures, the establishment of a customs transit system for the purpose of facilitating goods in transit and the establishment of SPS measures to facilitate the movement of goods and ensure their compliance with relevant laws and regulations. The protocol imposes obligations on members to be guided by international standards in their enforcement of SPS measures and to ensure SPS laws and regulations are readily available to other ASEAN members. Under the Protocol ASEAN members have also agreed to mutually consult with each other to establish bilateral multilateral or ASEAN SPS arrangements and inspection procedures to facilitate the transit of goods.

ASEAN has also continued to work on harmonization of testing and quarantine producers for groupers in the area of aquaculture development. These activities have been supported by the publications and manuals on harmonization of shrimp framing which have been distributed to farmers (noted above).

iii) Joint approaches in regional and international fora

ASEAN Member Countries have undertaken several initiatives aimed a presenting a common position in various regional and international fora.

Cooperation initiatives have focused on international trade relationships as well as international standards under CODEX. ASEAN has undertaken regular consultations with the AEM and the SEOM to enhance coordination of ASEAN positions during dialogues with trading partners such as Australia, the US and the EU. Dialogue has focused principally on import restrictions imposed by trading partners on ASEAN fresh tropical fruits, canned tuna and vegetable oils[78]. ASEAN also noted that market access for frozen chicken, frozen shrimp, tapioca and cocoa in the international market remain challenges for ASEAN. A recent success is the joint advocacy for the lifting of discriminatory tariffs on canned tuna exports to the EU.

For CODEX, a task force has been established to formulate common ASEAN positions of interest to ASEAN to be presented to the sessions of CODEX Committees and the CODEX Commission. In addition, ASEAN has continued to work on a Uniform Commodity Contract in order to enhance trade in agriculture commodities by using a simplified and standard agreement.

iv) Development and adoption of technology

Technical cooperation

ASEAN has made progress in improving the productivity of the agriculture sector through the development and adoption of new and existing technologies[79].

Projects include the development of the Quality Assurance System for Fresh and Minimally Processed ASEAN Fruits (QASAF), collaboration in food handling (through the ASEAN halal food program noted above), public awareness program on GMOs (noted below) and production of various manuals on shrimps farming and livestock (as noted above) and collaborative projects with SEAFDEC (also noted above).

[78] Review of the Hanoi Plan of Action
[79] Review of the Hanoi Plan of Action, ASEAN Secretariat internal document

The ASEAN Member Countries, through the 25th AMAF in August 2003 also agreed to establish an ASEAN technical working group on agricultural research and development. The group is aimed at improving the flow of knowledge and information exchange on agriculture R & D in ASEAN. It is intended that much of the research will be done in the private sector which will provide a focus as to where research outputs will be most protected or most profitable[80].

ASEAN has established formal cooperation with the network of Aqua Culture Centers in Asia and the Pacific in order to promote the application of appropriate technologies for sustainable aquaculture development and aquatic resources management. The cooperation includes harmonization of fisheries SPS measures and strengthening of national and regional capacities to control aquatic animal disease.

Agricultural training and extension

ASEAN has undertaken various programs aimed a assisting the ability of farmers to select, adapt and apply technologies to increase agricultural production. To this end, ASEAN has established the Integrated Pest Management (IPM) on fruits and vegetables. It involves a "comprehensive approach to improve crop quality and reduce crop losses" which includes development of training modules and regional training in integrated pest management carried out by ASEAN Member Countries.

To help national governments and non-governmental organizations implement the system effectively, ASEAN has also established the ASEAN IPM Knowledge network and an electronic IPM knowledge facility which ensures information is available for program managers and policy makers. The ASEAN IPM Center in the Philippines acts as the database and network administrator. Knowledge hubs located in ASEAN member economies are linked to this center.

Biotechnology and GMOs

ASEAN has acknowledged the importance of agricultural biotechnology as a tool to increase food productivity on a sustainable basis, but has also noted the issue of public concern over use of biotechnology needs to be addressed by the respective authorities. In light of this ASEAN has adopted Guidelines on the Risk Assessment of Agriculture-related to Genetically Modified Organisms. The guidelines serve to provide ASEAN Member Countries with a common understanding and approach when conducting scientific evaluations for the release of agriculture related GMOs. The guidelines describe the procedure for notification, approval and registration of agriculture related GMOs and the need for each ASEAN member country to establish a national authority of genetic manipulation. The roles and responsibilities for the authority in regulating agricultural GMOs are also addressed by the guidelines.

v) Enhancement of private sector involvement

Research and development and promotional activities in agriculture products

ASEAN is undertaking an ongoing scheme which provides opportunities for ASEAN Member Countries and the private sector to come together to plan and implement R & D and promotional activities in agriculture and forestry products. The scheme was established in 1994 under the MOU on Trade Promotion between ASEAN member governments and was extended in 1999 to 2004.

The scheme is aimed at improving the competitiveness of ASEAN agriculture and forestry products. Its objectives are to:

- Strengthen the collective bargaining position of ASEAN on matters affecting agriculture and first trade in world markets;
- Expand agriculture products exports through product diversification;
- Identification of downstream processing and higher value-added activity;
- Continued upgrading of quality of ASEAN agriculture (and forest) products;

[80] Identifying Key Concerns for the VAP: A synthesis paper, ASEAN Secretariat internal document

- Provide foundations for closer economic ties between ASEAN Member Countries.

The scheme applies to products listed in a schedule to the agreement. Products listed under the scheme include palm oil, coconut oil, cocoa and cocoa products, canned tuna, canned pineapple, frozen chicken meat, frozen shrimps, tapioca, seaweed, pepper, coffee, tea, peas and beans, rubber and forestry products. To be included in the scheme products must be subject to discriminatory treatment or trade related issues, be of major export interest or have an economic impact on the employment of a large number of people in ASEAN.

The scheme establishes guidelines and procedures for joint ASEAN product promotion between the public and private sector, such as efforts to promote ASEAN products in overseas markets, negotiations to overcome discriminatory non-tariff barriers and unfair practices imposed by importing countries. It also encourages joint efforts to counter customs barriers to ASEAN products and encompasses efforts to enhance intra-ASEAN trade by providing for efforts of members to consult and exchange information of trade and investment policies and to cooperate on measures for the removal of barriers to trade. It also compels member countries to take action to enhance the long tem competitiveness of ASEAN food and agriculture products by identifying cooperation in technology development and transfer and by accelerating the harmonization of standards.

The ASEAN Secretariat reports that establishment of industry groups in the region has promoted cooperation and collaboration among businesses which has been enhanced by various commodities industrial clubs and their participation in ASEAN meetings. Further consultation and linkage are envisaged under the scheme. The recent success of the joint advocacy of Thailand and the Philippines for addressing the discriminatory tariffs on canned tuna to the EU is a good example of a private sector-government collective effort.

Strategic alliances among agricultural cooperatives in ASEAN

Strategic alliances among agricultural cooperatives in ASEAN are being pursued to establish network opportunities and to promote investment and joint venture opportunities in ASEAN. Shared activities include data and information exchange, agricultural production and marketing, dairy farming, agro-tourism, beef farming and cooperative productivity enhancement programs. Strategic alliances through information exchange among agricultural cooperatives have been published online.

For example, the ASEAN Secretariat reports that in the areas of dairy farming Indonesia has established a breeding and training centre that produces straws for frozen semen for trade exchange. Three milk-processing plants have also been established to produce UHT milk and UHT sweetened condensed milk.[81]

vi) Management, sustainable utilization and conservation of natural resources

ASEAN Ministers responsible for fisheries have adopted the Resolution for Sustainable Fisheries for Food Security for the ASEAN region. The resolution aims to achieve sustainable supplies of fish and fisheries products in the ASEAN region. A plan of action of sustainable fisheries for food security was also set up to give effect to the agreement. It comprises several components including fisheries management, aquaculture, and sustainable utilization of fish and fisheries products, fish trade and regional and international policy formulation.

Capacity building in the agriculture sector

Capacity building activities have been undertaken as part of agriculture and food cooperation activities. These include various training programs in the areas of food handling and IPM for crops and fisheries post harvest technology. For example, following the development of the ASEAN Guidelines on Risk Assessment of the Release of Agriculture-Related GMOs, a series of training workshops were held in ASEAN Countries to promote the guidelines.

Further detail on specific activities and action programs against strategic thrusts is attached at Annex 1.

[81] www.agrolink.moa.my

c) Problems and issues encountered with cooperation activities

i) Reported problems encountered

Problems in implementation of activities under the HPA in the food and agriculture sectors have been recorded[82]. Challenges have been classified by the Secretariat in three categories.

They are:

- Overlap of the activities of various ASEAN bodies

  This is attributed to wide and broad based terms of reference of subsidiary bodies and working groups under SOM AMAF, the overlap in scope of activities covered by ASEAN bodies and subsidiary bodies and working groups under the SOM AMAF. It has been noted that there is a need to strengthen coordination where there is issues of overlap.

- Problems with project design and implementation

  The Secretariat has noted that projects initiated by individual countries do not tend to reflect regional interests. The pace of development and implementation processes have also been slow in some cases due to differing priorities, varying degrees of infrastructure, qualified personnel to fulfill commitments (due to differences in socio-economic conditions between ASEAN economies) and overly ambitious time schedules. A further problem has been an inadequacy of funds to support planned activities which has caused delays specifically with projects in the food and agriculture sectors, where a majority of projects are dependent on external funding arrangements.

- Problems with management of projects

  Frequent rotation of chairmanship, focal points and coordinators has also led to a lack of continuity in the focus and depth of some planned and ongoing projects.

ii) Issues raised as a result of the fieldwork for the project

As part of the project, fieldwork was carried out in Indonesia, Malaysia, the Philippines, Singapore and Lao PDR. Relevant officials and private sector representatives were interviewed by the consultants for their views and perspectives.

Problems and difficulties with current cooperation activities were revealed from the fieldwork carried out for the project. They overlap with the concerns raised above but also raise distinct others.

- Private sector involvement

  Some participants felt that ASEAN had not done enough to assist the private sector. ASEAN rules and regulations were not considered to be transparent and the private sector was often unaware of what ASEAN standards were and whether national governments had implemented them. Consultants were informed that there was a general sentiment in the private sector that ASEAN does not communicate its policies well and agreements effectively to the private sector.

- AFTA

  Some participants felt that the benefits of AFTA had been undermined by local barriers to trade and protectionist policies (such as price controls, local government taxation and tariffs on rice and sugar). Internal policies of member states were considered to be the major impediment to the free movement of goods and services throughout the region. There was also reference to the lack of accountability in the mechanisms for implementation of AFTA commitments, with deadlines being continually pushed back and products moved on to the Sensitive List.

[82] ASEAN Secretariat, Mid Term Review of the Ha Noi Plan of Action January 1999 – June 2001

- Levels of development

  It was noted at the interviews that although CLMV countries had been drawn into cooperation activities, they had not been able to reap significant benefits due to the differences in levels of development with the more advanced ASEAN economies. This was considered also to apply to AFTA, where not enough focus had been placed on efforts to build the capacity of the CLMV countries to assist them reach their full potential under the agreement.

- Sub -regional activities

  Several participants noted that there was significant overlap of activities at the ASEAN wide level with sub regional activities, such as BIMP-EAGA and the IMT and a lack of coordination between existing programs at both levels.

- ASEAN procedures

  Many participants noted that procedures for approval and funding of cooperation projects were problematic. For example, it was mentioned that regular projects have cumbersome processes of approval and funding constraints. Very few projects are endorsed as they require full consensus by all members. There is also a problem regarding the frequency of ASEAN meetings with members only meeting once a year. The structure of the Secretariat was thought to be adequate, but greater coordination was needed within the Secretariat itself and with other national secretariats. In terms of funding, some participants noted that R & D projects faced some difficulties due to ASEAN competition in some commodities; there also appeared to be a dependence on external sources.

4. REVIEW OF THE STRATEGIC PLAN OF ACTION - CURRENT STRATEGIC DIRECTION IN LIGHT OF REGIONAL AND GLOBAL TRENDS IN FOOD AND AGRICULTURE

a) Summary

Overall the current strategic thrusts of the SPA appear to be consistent with and compatible with trends and issues for the period 2005 – 2009, both at the global and regional level. In addition these also correlate closely with the strategic issues identified by the fieldwork for the project.

Although the strategic direction of the current SPA appears to fit with future trends and developments for 2005 – 2009, there also appear to be several new issues and developments which now fall within its purview.

A common response from the fieldwork was that although the strategic direction of the SPA remains relevant, it would benefit from a sharper focus on results-oriented activities. It showed belief in the need to deal with the differing levels of development of the CLMV countries and to advance difficult areas of trade liberalization in AFTA.

b) General issues for ASEAN food and agriculture – results of the fieldwork

i) Overview

Relevant officials and private sector representatives in Indonesia, Malaysia, the Philippines, Lao PDR and Singapore were interviewed by the consultants for their views and perspectives on the main strategic issues facing the food and agriculture sectors, and what ASEAN might do as part of its next SPA in order to meet these.

The main strategic issues identified by the fieldwork were food security, enhanced liberalization and market access, quarantine and food safety issues, harmonization of standards, technological research and development and agribusiness issues. A major concern was accommodating the differing levels of development among the ASEAN economies.

It was suggested that SPA should be more sharply focused on results-oriented activities, place greater emphasis on communication with the private sector and also cooperation with

regional activities. It was also considered to be in ASEAN's interest to develop common policy approaches for dealing with the political difficulties associated with further trade liberalization and for dealing with the needs of the CLMV economies.

Some suggested actions to address issues include harmonization of standards, accelerated liberalization under AFTA, private sector cooperation and technical cooperation for CLMV countries.

ii) Strategic issues and challenges facing ASEAN food and agriculture sectors 2005 - 2009

The main strategic issues that interviewees felt ASEAN were facing in the food and agriculture sectors are as follows:

- *Food security and poverty alleviation, including rice deficits and surpluses*

  This was an ongoing concern for ASEAN Member Countries that would need to be addressed.

- *Access to markets and trade liberalization:*

  It was noted there were existing barriers in the domestic economy (local content rules, high costs of credit, lack of investment and other government regulations) and well as barriers in overseas markets of major trading partners (US, EU) related to environment and food safety. Other concerns were Free Trade Agreements (FTAs) and how to deal with agriculture in the context of FTAs in the East Asian region. Competitiveness was also noted as an issue, and it was suggested that consideration be given to competitiveness in commodities other than rice and the adverse impact of domestic polices on competitiveness and business activities. The threat of China to competitiveness of ASEAN economies was also noted.

- *Quarantine and food safety issues*

  There were concerns about the control of disease epidemics throughout the region such as bird flu. Also important was the implementation of effective domestic systems, particularly in the lesser-developed ASEAN economies and the credibility of existing systems globally in terms of market access, mainly for the more advanced ASEAN economies.

- *Harmonization of ASEAN wide standards*

  Harmonization of ASEAN standards was considered to be a priority, particularly for SPS measures, for improvement of quarantine standards for CLMV countries tailored to development needs in those economies.

- *Technological developments to increase productivity, competitiveness and farm incomes*

  GMOs and consumer perceptions, food irradiation, food labeling and farmer training were noted.

- *Differing levels of development between ASEAN member economies,*

  It was pointed out that a major issue for ASEAN was the differential treatment and resources between the ASEAN member economies. Some countries remain concerned with lifting production to meet basic food needs, the other more developed economies are concerned with food safety and quality and consumer choice concerns for access to the global market.

- *Agribusiness, including supply chain/post harvest mainly for perishables*

  It was suggested that supply chain issues could be addressed such as joint logistics at the sub-regional level, for example, Indonesia and the Philippines in canned tuna exports.

- *Common international positions in international for**a** such as WTO, Codex etc*

iii) Suggested means for ASEAN to meet these challenges

Focus

It was noted that the future SPA would need to be proactive as well as reactive in that it preempt future trends in the agriculture and food sectors relevant to ASEAN. Activities also needed to be more focused and narrowed to results-oriented programs.

It was suggested that the next SPA should place greater emphasis on communication with the private sector and public awareness of ASEAN activities and also provide for wider and deeper cooperation between ministries and ASEC.

Closer linkage with sub regional activities for harmonization efforts would be desirable where sub regional groupings could work as effective testing grounds for delivering ASEAN activities on the ground.

It was suggested that the SPA should focus on building common policy approaches for both liberalizing agriculture and dealing with the political difficulties associated with this, and also for encompassing the differing levels of development of the CLMV countries.

For food security, there should be a greater focus on the external demand for food and external environment and consumption trends.

The SPA would also benefit from greater reliance on internally-sourced funds rather than dependence on external funding.

Actions and activities

Suggested actions and activities from the fieldwork responses that the SPA should focus on include:

- *Further liberalization*

  AFTA remains an effective tool for liberalization; however there would be benefits from accelerated timetables for tariff reductions and addressing non-tariff barriers. Greater freedom of movement of goods and services, and also the freer movement of labor could also be considered.

- *Harmonization of standards*

  SPA activities should focus on further ASEAN harmonization and development of ASEAN-wide standards and brands. This includes continuation of successful harmonization activities so far such as the IPM Centre and SEAFDEC and new activities, such as the pursuit of halal standards. ASEAN would also benefit from further coordination of SPS measures for example through a CODEX desk at the ASEAN secretariat and harmonization of standards relevant to intra-ASEAN trade, such as agreement on uniform testing regimes and a network of accredited laboratories.

- *Public sector involvement and cooperation*

  The SPA would benefit form extra public awareness campaigns and organized communication channels with the private sector and should develop initiatives to encourage the private sector to identify and invest in cooperation projects.

- *Sub regional cooperation*

  The SPA should draw upon sub regional cooperation and arrangements as a starting point for integration to facilitate the above. Each country should take a leading role in issues relevant to them e.g. Singapore with food quality and safety issues.

- *Differing levels of development*

  It was suggested that ASEAN might take a tiered approach corresponding to the differing levels of development of ASEAN members. A tiered approach could consider looking at general community advocacy, specific commitments and also general and technical cooperation.

Technical cooperation for CLMV countries was needed in fisheries, crops and irrigation, as well as bilateral aid programs for basic infrastructure (for example, public health laboratories). CLMV countries would also benefit from assistance for information, statistics and harmonization of standards for vaccination for livestock.

- *Agribusiness issues*

The SPA should include further activities to support agribusiness, such as those focused on linking producers and demand centers more effectively, encouraging retailers to source supplies direct from the producer to reduce spoilage, and food safety risks. Supply chain issues should also be addressed.

c) Current and future issues for ASEAN food and agriculture – results of the research projects

i) Overview

A broader question is whether the current strategic thrusts of the SPA remain relevant given the trends and developments in the agriculture and food sectors at both a global and regional level. Overall, the current strategic thrusts of the SPA appear to be consistent with, and compatible with, trends and issues for the period 2005 – 2009.

ii) Global drivers and trends in food and agriculture 2004 - 2009

Conclusions of the global review of prevailing and dominant issues in food and agriculture were:

1. Global demand for food will increase, driven by growth in developing countries;
2. Consumption will shift from cereals to meat as GDP rises in developing economies;
3. Further globalization of the food sectors will result in more developed consumer preferences and greater consumer specificity and the growth of processed foods. Retailing and distribution systems will increasingly shape food systems as per capita GDP rises;
4. Global trade liberalization is likely to be slow;
5. Technical standards for safety and environmental reasons will increase and impose new restrictions on market access;
6. Commodity prices are likely to rise;
7. The impact of technology on production, particularly in GMOs, will increase rapidly as research intensifies.

The question is whether or not the SPA's strategic direction is compatible with the global drivers and trends to sufficiently take them into account in the period 2005 – 2009. Compatibility is measured in terms of whether the strategic direction either encompasses such trends and issues (and is thus capable of addressing them), or whether trends and issues are likely to enhance the strategic goals.

Overall, the current strategic thrusts of the SPA appear to be consistent with, and compatible with, the global trends and issues for the period 2005 – 2009.

See Table 3.1below.

Table 3.1 – Compatibility of strategic thrusts of the SPA with global issues in food and agriculture

✓ Indicates compatibility between global drivers and strategic thrusts (*Source: ITS*)

Global drivers	Strategic thrusts of the SPA					
	Strengthening food security	**Enhancing international competitiveness**	**Joint approaches in international fora**	**Development and acceleration of new technologies**	**Enhancement private sector involvement**	**Sustainable utilization of resources**
Global growth in food demand	✓ As demand for food increases in ASEAN economies, food security remains an important issue			✓ The development and acceleration of new technologies will become increasingly important as demand for food increases		✓ As food demand and population increases, sustainable use of resources in ASEAN will become important
Consumption shifts from cereals to meats	✓ As demand for meat increases, food security will remain important	✓ International competitiveness is important to manage and take advantage of consumption shifts		✓ New technologies will be important to manage increased demand	✓ Private sector involvement is important as consumption shifts occur	
Greater consumer specificity and preferences, increases in food processing		✓ International competitiveness is important to manage and take advantage of changes in consumer preferences and food processing		✓ New technologies will be needed to ensure greater consumer preferences and demand for processing can be met	✓ Private sector and industry involvement is vital as consumer preferences change and processing increases	
Slow global trade liberalization		✓ The pace of agriculture liberalization in the WTO must be taken into account in terms of ASEAN international competitiveness	✓ Joint ASEAN approaches are vital to secure further liberalization and advantageous positions in international fora such as the WTO		✓ Private sector and industry involvement is necessary to manage, adjust to and accelerate liberalization	
Increased regulatory standards for food safety and environment		✓ The impact of increased regulatory standards on ASEAN international competitiveness must be considered and monitored	✓ Joint approaches in international fora are essential to manage and monitor regulatory developments			
Increase in commodity prices	✓ Increase in commodity prices will affect food security in the region					
Increased impact of technologies	✓ New technologies will assist ASEAN manage food security issues	✓ Technologies are vital to ensure international competitiveness in agriculture		✓ Increased technologies will continue to impact on ASEAN agriculture and food sectors	✓ Involvement of the private sector is vital for development and dissemination of technology	✓ Technology will assist with the management of resources in a sustainable way

iii) Regional changes and trends in food and agriculture 2004 – 2009

Conclusions of the synthesis report and country studies were:

1. Food and agriculture sectors remain important for ASEAN economies in terms of employment and GDP, although the importance of the sectors is declining relatively for the more advanced economies;
2. Significant barriers remain in ASEAN food and agriculture sectors, particularly non tariff barriers, and in the lesser developed economies. Improved production remains key for CLMV countries whilst global competitiveness is essential for the more advanced ASEAN economies;
3. Consumer demand and consumption patterns in ASEAN economies are largely consistent with global trends, characterized by shifts to meat products away from cereals for the more advanced economies, increased consumption of staples in the CLMV countries;
4. The pace of trade liberalization under AFTA has been slow for agriculture and is likely to continue to be so unless timetables are revised;
5. Agricultural policies of individual countries have focused on food security, poverty alleviation and enhanced international competitiveness;
6. ASEAN cooperation activities have primarily focused on standards harmonization, food security and technological development;
7. Food security remains an important issue for ASEAN economies, especially in relation to rice, with all but two economies net rice importers.

Overall, the current strategic direction of the current SPA remains consistent with the current changes and trends at a regional level.

See Table 3.2 below.

Table 3.2 – Compatibility of strategic thrusts of the SPA with regional trends and developments in food and agriculture

✓ Indicates compatibility between global drivers and strategic thrusts (*Source: ITS*)

Regional drivers	**Strategic thrusts of the SPA**					
	Strengthening food security	**Enhancing international competitiveness**	**Joint approaches international for a**	**Development and acceleration of new technologies**	**Enhancement private sector involvement**	**Sustainable use of resources**
Importance of food and agricultural sectors	✓ As agriculture remains an important source of employment and GDP, food security issues remain relevant	✓ International competitiveness is vital given the importance of agriculture in most ASEAN economies	✓ Common action on marketing among ASEAN members is desirable to expand agricultural exports.	✓ New technologies will be essential to ensure agriculture sectors can meet needs.	✓ Greater involvement of farmers and farm groups is necessary.	✓ Sustainable use of resources will remain important given the importance of agriculture to most ASEAN Countries
Trade barriers, among ASEAN members remain significant.		✓ Reducing trade barriers is vital for enhancing international competitiveness in advanced members, increased production more important for CLMV members.	✓ Joint approaches in international for a are important for addressing and managing liberalization			
Slow pace of liberalization of agriculture		✓ The slow pace agriculture liberalization means WTO will create little opening of markets in the review period. Liberalization through AFTA is slow. Individual ASEAN members should liberalize unilaterally or accelerate AFTA.	✓ Joint approaches are important for progress on global liberalization in agriculture			
Consumption shifts in line with global trends	✓ Consumption shifts will have implications for food security	✓ Consumption shifts will impact on international competitiveness		✓ New technologies will be important for addressing consumption shifts	✓ Greater private sector involvement necessary to ensures food chain adjusts	✓ Sustainable use of resources will need to be considered as consumption shifts occur
Agricultural policies for food security, competitiveness, poverty reduction	✓ Food security remains an important aspect of most agriculture policies	✓ Domestic agriculture policies will play an important role in fostering international competitiveness of ASEAN food and agriculture sectors			✓ Policies need to foster more foreign investment, particularly in distribution and retail	✓ Agriculture policies will increasingly address the sustainable use of resources in agriculture and food industries

Cooperation activities in standards harmonization, food security and technology development	✓ Cooperation activities will need to continue to address food security	✓ Cooperation activities have addressed international competitiveness and should continue to t do so	✓ Activities have made progress in developing joint international approaches and should continue to do so	✓ Activities have, and should continue to foster the development and acceleration of new technologies	✓ Activities have, and should continue to foster private sector involvement	✓ Activities should continue to address sustainable use of resources
Food security remains important	✓ Strengthening food security will remain important for ASEAN					

IV. CONCLUSIONS AND RECOMMENDATIONS FOR THE STRATEGIC DIRECTION OF ASEAN FOOD AND AGRICULTURE 2005-2010

1. CONCLUSIONS

The following conclusions are drawn by the consultants from the review of the SPA:

a) Assessment of the SPA 1999 - 2004

The overall assessment of the SPA 1999 – 2004 is that:

1. Significant and important activities have been undertaken and are continuing, specifically in relation to harmonization of standards, including SPS standards and food safety standards.
2. Some problems and issues exist in relation to current activities. These include:
    - overlap of activities with various ASEAN bodies;
    - delays in implementation, funding and other procedures;
    - inadequate private sector involvement;
    - inadequate communication of ASEAN agreements to national stakeholders;
    - reluctance to liberalize under AFTA;
    - overlap with sub-regional activities; and
    - insufficient accommodation of the needs of the lesser developed economies.

b) Features of the environment 2005 - 2010

The global and regional setting for the period 2004 – 2010 is shaped by the following features:

Global trends:

- Global growth in demand for food;
- Shifts in consumption – shifting to meat from cereals, increasing demand for processed food and greater influence of consumer tastes;
- Increasing influence on food systems of distribution and retailing;
- Slow pace of global liberalization of agriculture;
- Imposition of new restrictions on food trade, on food safety and environmental grounds;
- Increases in commodity prices;
- The rapid increase in the impact of technology.

Regional trends:

- Are largely consistent with global trends;
- Agriculture will remain important for most ASEAN economies in terms of output, exports and job creation;
- Consumer demand and consumption patterns will shift in line with global standards. The pace of liberalization under AFTA will be slow;
- Food security remains and important issue and a focus of domestic agricultural policies;

- Focus in CMLV economies on improving production, productivity and product quality;
- Highlight the increasing efficiency of supply chain (logistics).

c) Strategic considerations for the SPA 2005 - 2010

The strategic thrusts of the existing SPA are still relevant in light of trends and developments.

Some new or additional issues have emerged as important, which the next SPA should address. They are:

- Shifts in consumption – shifting to meat from cereals, increasing demand for processed food and greater influence of consumer tastes;
- Increasing influence on food systems of distribution and retailing;
- The rapid increase of the impact of technology;
- The need to cater for the different focus in CMLV economies.

2. RECOMMENDATIONS

The coverage of the existing SPA is of necessity very wide. That always entails a risk of dispersion of limited resources across too many activities. Coherence between activities and problems of management and overlap is another consequence. It is probably unavoidable.

The consultants recommend that planning for the next SPA focus on the strategic issues which are changing the environment rather than the detail of existing programs. With such a focus the prospects of available resources being directed to strategic issues will be enhanced.

The overall approach recommended to the SPA is:

1. Retain the strategic thrusts of the 1999 – 2004 SPA and continue with activities that are successful;
2. Within this context, place greater emphasis on several initiatives which variously intensify efforts to focus activities on the strategic thrusts. Some activities support one or more of the strategic thrusts. General recommendations are set out in summary first then specific initiatives are identified. There is a table at the end of this section of the report which categorizes the specific actions against the strategic thrusts.

a) General recommendations

o <u>Further liberalization</u>

ASEAN will have difficulty enhancing competitiveness and increasing production in its agricultural sector unless it further liberalizes agriculture. The initial focus should be on national reduction of trade barriers. This will be the most effective approach. Policies should also promote global liberalization through the WTO and regional liberalization through AFTA; ASEAN would benefit from acceleration of timetables in AFTA to open agricultural markets.

o <u>Continued development, and further harmonization of standards</u>

Differing standards across markets, particularly on food safety, hinder trade. To support exports, ASEAN members should continue to collaborate on common approaches to SPS standards. Capacity to implement SPS standards will support agricultural production in CLMV economies. Harmonization will also support cross border agricultural trade. Account will need to be taken of the differing levels of development among the ASEAN economies in developing ASEAN-wide standards.

- o Develop common ASEAN policies and strategies to advance agricultural interests

  This may require a broader understanding of the benefits of:

  - freer trade in ASEAN-wide markets;
  - the effectiveness of common fronts among ASEAN Governments to lobby for increased market access (eg the Philippines /Thai lobby against the EU on tuna), and;
  - technology exchange using pooled knowledge and resources.

  Lessons for CLMV countries should also be drawn from studying the experience of ASEAN-6 countries.

- o Expand sub-regional cooperation

  Drawing on experiences of cooperation at the sub regional level (BIMP-EAGA, IMT, Mekong Regional Commission) may provide valuable lessons to learn from and build on at the regional level.

- o Advance agribusiness by improving supply chains and logistics

  Changes in global patterns of consumption and the leading role of business in developing global systems of production in agribusiness require improved supply chain and logistics if business is to introduce leading edge systems and promote global competitiveness in ASEAN Countries.

- o Develop common positions in international fora

  Develop common positions in international forums such as WTO and Codex to strengthen regional approaches for facilitating trade.

- o Enhance research and development

  ASEAN will need to expand research and development to ensure agriculture and food sectors remain capable of supporting communities, contributing to growth and expanding trade. The capacity and needs of the CLMV countries needs to be taken in to account.

- o Increase private sector involvement and cooperation

  Agribusiness may be facilitated through various modalities including large estates, nucleus-out-growers, integrated operations, or out-sourced operations to provide incomes, jobs and exports for ASEAN.

  In the Philippines, the spillover (multiplier) effects of agribusiness are large. Agriculture comprises less than 20 percent of GDP, but the direct and indirect (input production and distribution, processing and logistics, etc.) accounts for at least 50 percent of GDP.

  1. Strengthen the role of the private sector - the private sector will thrive in an environment conducive to investments. This environment includes stable, consistent policies; less government interference in business; and engagement of the private sector in policy discussions. Moreover, the government can help by reducing the cost of doing business such as by building good infrastructure and tariff-neutral policies.

  2. Further involvement of the private sector in ASEAN public policy that will affect business. This can include

  - negotiating and facilitating market access;

- allowing for private sector representation (as observers) in top level ASEAN meetings, providing the enabling environment for investment and facilitating business contacts at the ASEAN and sub regional levels.

3. Enhance the marketing of ASEAN products (through cooperation) within the region and globally, focusing on areas of export interest.

b) Specific recommendations

Consistent with the suggestion that the strategic thrust of the next SPA take account of emerging issues and trends, the following specific recommendations are made.

Enhance liberalization in ASEAN

A number of steps are recommended:

- Undertake further liberalization of investment within ASEAN to attract foreign investment and technology;
- Undertake further trade liberalization to enhance the global competitiveness of agricultural production in the region. Undertake unilateral liberalization to improve competitiveness in each economy. Work collectively in the WTO to promote liberalization of agriculture in all countries. Revise AFTA timelines to advance regional liberalization;
- Liberalize regulation of services to capture the drivers of competitiveness in food systems in food retailing and distribution. As a first step, regulatory regimes affecting food retailing and distribution in ASEAN economies could be studied and assessed for their effectiveness in facilitating investment, fostering the private sector and promoting competitiveness in food and agriculture in ASEAN.

Enhance intra ASEAN co-operation

- Promote stronger cooperation between ASEAN farm and private enterprise in trade in agriculture products.

Successful examples of the benefits this can bring are illustrated in the text box below. Farmers associations could also be strengthened by developing structures to address cost, quality and reliability concerns. Farmers' associations can play a role by growing products and fresh produce for large firms under a contract arrangement. Within the domestic market, farmers' associations could be strengthened to enhance economies of scale. However, management, market and financial skills must also be addressed.

Box 4.1 – Facilitating cooperation in trade in agriculture products

The ASEAN is a global player in food and agriculture. It leads the world in rubber, palm oil, coconut oil, processed pineapples, prawns and shrimp, and seaweeds. In the process, it also leads in oleo-chemicals and carageenan. ASEAN is also a force to reckon with in fresh banana, banana chips, coffee, canned tuna, etc. There is room for joint actions in market access, logistics and R & D.

One of the good experiences is the lobby for lower tariffs in the EU for canned tuna from the ASEAN. The ASEAN (Thailand, the Philippines and Indonesia, in that order) supplies about 15 percent of EU imports from 44% in 1990. By contrast, the African, Caribbean and Pacific (ACP) countries had 29 percent in 1990 and about 35 percent today. The EU applies a 24% import duty on ASEAN canned tuna while ACP countries get zero duty for many years. This is undoubtedly discriminatory. The ASEAN led by the Philippines and Thailand with government and private sector cooperation lobbied hard for market access. In July 2002, ASEAN finally agreed to allow 25,000 tons of canned tuna from the ASEAN at 12% duty. This was "half victory" but victory nevertheless. This could not have been achieved by purely individual country lobbying.

Another positive experience is cited below (Box 2) on joint logistics between tuna canners in Bitung, Sulawesi (Indonesia) and General Santos (The Philippines). By pooling cargo, freight rates have been reduced to export markets.

Source: CFA 2004

- Develop multifaceted partnership programs between the CLMV and more advanced ASEAN economies to develop agriculture and food production in CLMV countries.

  Programs would focus on the development needs of the CLMV countries, for example improving national sanitary and phytosanitary standards, providing preferential access for exports and collaboration in development of agribusiness. The ASEAN Secretariat could also promote programs for foreign donors to undertake common work with CLMV countries.

- Enhance the marketing of ASEAN agricultural products:

  - ASEAN private companies should be encouraged to undertake contract growing with farmers of high value products and logistics can be consolidated, taking advantage of "time windows" of opportunities in each respective country and /or to third countries.

    This will be challenging. The key attributed of competitiveness must be addresses – cost, quality, reliability, product innovation and customer service.

  - Established ASEAN companies who have penetrated EU markets should be encouraged to actively participate with other farmers. These markets have high purchasing power but are highly quality conscious with excessive food safety and traceability standards. Newcomers may not have a chance. Another option is to encourage EU firms to outsource products (say organic coffee and rice).

<u>Expand sub-regional cooperation</u>

- Draw on positive experiences of sub regional cooperation of BIMP-EAGA, IMT and SIJORI to maximize opportunities for cooperation with sub-regional groupings and for enhancing approaches for regional cooperation.

  For example, under BIMP-EAGA seaweed development can be further enhanced in the sub-region, particularly Sulu and Tawi Tawi (Mindanao, the Philippines), North Sulawesi (Indonesia) and Sabah (Malaysia). The area accounts for 80 percent of the total supply of *euchema cottonii* seaweeds. The supply chain in the Philippine side is well-established with Zamboanga and Cebu City (the Philippines) as processing centers.

  Similarly, the tuna supply chain from fishing to canning and out-bound logistics is on the ground. Further examples of opportunities for further cooperation arising from sub regional groupings are noted in the Box below.

Box 4.2 – Opportunities for further cooperation through sub regional groupings – examples of BIMP-EAGA, IMT and SIJORI

BIMP-EAGA. The fishing access agreement between Indonesia and the Philippines is one of the good EAGA initiatives. This allows Philippine boats to fish in Indonesian waters for tuna. Another is the joint logistics among tuna canners in Bitung, Sulawesi, Indonesia and in General Santos, Mindanao, the Philippines. Tuna canners in North Sulawesi and Mindanao benefit from cheaper shipping rates by consolidating their shipments for onward shipment to overseas markets in General Santos City.

Other logistics routes are: Zamboanga (the Philippines) - Sandakan (East Malaysia); and Davao (the Philippines) – Manado (Indonesia). A key factor is the sustainability of the cargoes and passengers in these routes.

There will be proposed initial discussions soon between Malaysia and the Philippines in fisheries cooperation.

In the area of CIQS (customs, immigration, quarantine and security), the challenges are the need for in-country understanding of procedures given "too many actors at every port" as well as lack of information exchange among countries of individual country CIQS rules.

IMT (Indonesia, Malaysia, and Thailand). One on-going initiative is the investments by Malaysian firms in oil palm and rubber estates and out-growers in Indonesia. The two countries now control over three-fourths of world export. Joint research in these crops would also be a welcome idea.

SIJORI. The production and slaughter of animals in Riau (Indonesia) for shipment to Singapore is an existing activity. Johore State supplies banana and other fruits to Singapore. There is scope to study the production of high value crops such flowers and ornamentals in Riau and Johore for export out of Singapore to third countries. Cage culture for live fish sales can be studied for Riau with Singaporean investors.

Mekong River Basin. Tree crop (rubber and oil palm) expansion in CMLV countries, particularly in CML by ASEAN investors (Malaysia and Thailand) could be promising provided land access and tenure are clear

Source: CFA 2004

Advance agribusiness through improved supply chains and logistics

- A program of supply chain mapping and benchmarking should be initiated for selected commodities across a number of ASEAN Countries, especially for export-oriented products.
  The aim would be to identify cost and practice differences between different countries and develop programs for improved efficiencies and linkages along the supply chains. Reviews should be conducted of regulatory interventions in supply chains, including marketing controls, again on a comparative basis between different countries producing the same product.

  The aim would be to identify opportunities for improving efficiency. A key component of this should be to identify means of improving the capacity of farmers to develop supply chain initiatives. This can be through improved vertical coordination, group marketing and supply initiatives, cooperative associations and other initiatives.

  This review should also encompass mechanisms for improving private sector involvement in supply chain initiatives, such as through public-private infrastructure partnerships, and identifying and removing barriers to privet sector investment in agriculture and food production.

  - A review should be conducted of options for improving collaboration and cooperation in marketing products between ASEAN Countries, focusing on selected export-oriented products, and evaluating the practicalities of each option. Criteria should be developed for identifying suitable products and markets for such cooperative activity, as well as the range of mechanisms by which such cooperation should take place .e.g. ranging from technical collaboration, supply chain collaboration, collective branding and collective sales should all be assessed.

Advance internationally common ASEAN positions

- Develop coordinated ASEAN positions on food safety and environmental issues that will contest imposition of new trade barriers for ASEAN representatives to use in international forums.
- Ensure ASEAN representation in international bodies such as CODEX, the International Plant Protection Commission and the World Organization for Animal Health.

Expand research and development

- Take concrete action to establish or further advance national research and development programs in agriculture.
  - Undertake a stocktake of ASEAN agricultural and food R&D policies and programs.

  These reviews should be based on a common review format and should encompass an inventory identifying features such the aim and objectives of the programs, their expenditure, resourcing, intra-ASEAN information flows, private and public R&D collaboration and others.

  A review should include common approaches and divergences in such programs and policies as identified in the stock take.

- Undertake a comparative analysis of best-practice R&D programs internationally and the results compared with the stock take to identify potential improvements in ASEAN R&D.

International investigations should include R&D in advanced agricultural producing countries (e.g. Australia, USA) and also key developing countries (e.g. Brazil, China), and key best-practice criteria would include both quantitative and qualitative (institutional) characteristics.

Alternative R&D delivery models would be investigated and their suitability for ASEAN implementation. Models for intra-ASEAN R&D collaboration should be identified as part of this process, and alternative incentive systems for public-private sector R&D collaboration investigated. Further detail on benchmarks of R & D in ASEAN Countries follows at Box 4.3.

- Promote important technologies in the agricultural sector.
  - Accelerate establishment of a framework for management and regulation of GMO technology.

The feasibility of a common regulatory standard for release of GMOs in ASEAN Countries should be considered given the limited capacity of some ASEAN economies to manage technically complex issues.

- Make technology in agriculture more accessible and affordable through the following recommendations:
  - Encourage government-to-government cooperation in seed and planting materials exchange;
  - Develop cross border visits of farmers, entrepreneurs and farm technicians;
  - Enhance cross border investments under growers contract to supply raw materials, e.g. palm oil; and
  - Benchmark supply chain management of export products in search of best practices.

Box 4.3 – Benchmark of best R & D in ASEAN relevant to ASEAN food and agriculture

The benchmark countries in agriculture R & D in tropical Asia include Malaysia and Thailand. Malaysia's Rubber Research Institute (RRIM) and Palm Oil Research Institute (PORIM) are second to none in the world. Productive clones have bee produced and have found their way into many countries, i.e. RRIM 600. These elevated Malaysia in the cutting edge of varietals improvement and, in turn, made the country the global player in many ways. The research is funded from rubber cess and palm oil export tax. Thailand is a major shaper for tropical fruits (pineapple, durian, rambutan, longan, mangosteen, etc) as well as rice, rubber, tapioca and shrimp. R&D in Thailand is strongly supported by the government; for some products, by the private sector in others.

Privately-funded R & D has success in the Philippines with respect to Cavendish banana, pineapples, asparagus and solo papaya. The Philippines is a global player in banana and pineapples. Further, since 1997, the private sector-led Philippine Sugar Research Institute is active in R&D. It is instrumental in raising yields and has contributed to the "happy problem" of excess domestic supply in 2004. In hybrid rice, both the government (Philippine Rice Research Institute) and private companies are involved in seed production.

Source: CFA 200

.

Table 4.1 – Recommendations in accordance with strategic thrusts

Strategic thrust	General recommendations	Specific recommendations and suggested activities
Enhance international competitiveness	• Further liberalization • Continued development and further harmonization of standards • Develop common ASEAN policies and strategies to advance agricultural interests • Expand sub regional cooperation • Advance agribusiness by improving supply chains and logistics • Increase private sector involvement and cooperation	• Further liberalization of investment within ASEAN • Further trade liberalization – unilateral, through AFTA and WTO • Liberalize regulation of services – study regulatory regimes affecting food retailing and distribution • Promote cooperation between ASEAN farm and private enterprise in agricultural trade • Develop partnerships between CLMV and more advanced ASEAN economies to develop food and agriculture production • Enhance the marketing of ASEAN agriculture products – contract growing, farmer participation, outsourcing • Expand sub regional cooperation – draw on successful experiences in BIMPEAGA, IMT and SIJORI • Supply chain mapping and benchmarking for selected commodities – reviews of regulatory intervention in supply chains, review of options for improving collaboration and cooperation in marketing products between ASEAN Countries
Joint approaches in international fora	• Further liberalization • Continued development and further harmonization of standards • Develop common ASEAN policies and strategies to advance agricultural interests • Develop common positions in international fora	• Further trade liberalization – unilateral, through AFTA and WTO • Coordinated positions on food safety and environmental issues • Representation in international bodies –Codex, UPOV and OIE
Enhance private sector involvement	• Continued development and further harmonization of standards • Increase private sector involvement and cooperation	• Promote cooperation between ASEAN farm and private enterprise in agricultural trade • Enhance the marketing of ASEAN agriculture products – contract growing, farmer participation, outsourcing • Supply chain mapping and benchmarking for selected commodities – reviews of regulatory intervention in supply chains, review of options for improving collaboration and cooperation in marketing products between ASEAN Countries
Develop and accelerate new technologies	• Expand sub regional cooperation • Advance agribusiness by improving supply chains and logistics • Increase private sector involvement and cooperation	• Promote cooperation between ASEAN farm and private enterprise in agricultural trade • Develop partnerships between CLMV and more advanced ASEAN economies to develop food and agriculture production • Enhance the marketing of ASEAN agriculture products – contract growing, farmer participation, outsourcing • Supply chain mapping and benchmarking for selected commodities – reviews of regulatory intervention in supply chains, review of options for improving collaboration and cooperation in marketing products between ASEAN Countries • Advance national R & D in agriculture – stock-take of policies and programs, comparative analysis of best practice R & D • Promote important technologies in the agriculture sector – accelerate framework for management of GMOs • Make technology in agriculture accessible and affordable – encourage cooperation in seed and planting materials exchange, cross border visits of farmers, cross border investments under growers contract, benchmark supply chain management of export products
Strengthen food security	• Develop common ASEAN policies and strategies to advance agricultural interests	• Develop partnerships between CLMV and more advanced ASEAN economies to develop food and agriculture production
Sustainable use of resource		• Develop partnerships between CLMV and more advanced ASEAN economies to develop food and agriculture production

ANNEX 1 – COMMODITY PRICES 1992-2002 AND COMMODITY PRICE PROJECTIONS 2003-2015

Table A1.1 Commodity prices, in current and constant 1990 dollars, 1992-2002

CURRENT PRICES	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Coffee, robusta (US cents/kg)	94.0	115.7	262.0	277.1	180.6	173.6	181.9	148.9	91.3	60.7	66.2
Coconut Oil (US$/mt)	577.6	450.3	607.5	669.6	751.6	656.8	657.9	738.0	450.3	318.1	421.0
Palm Oil (US$/mt)	393.5	377.8	528.4	628.3	530.9	545.8	671.1	436.0	310.3	285.7	390.3
Maize (US$/mt)	104.2	102.1	107.6	123.5	165.8	117.1	102.0	90.2	88.5	89.6	99.3
Rice, Thailand, 5% (US$/mt)	268.2	235.4	267.6	321.0	338.9	303.5	304.2	248.4	202.4	172.8	191.9
Shrimp, Mexico (US cents/kg)	1,095.0	1,139.0	1,308.0	1,354.0	1,351.6	1,611.6	1,578.9	1,461.0	1,513.0	1,517.0	1,052.0
Sugar, world (US cents/kg)	20.0	22.1	26.7	29.3	26.4	25.1	19.7	13.8	18.0	19.0	15.2
Rubber, RSS1, Malaysia (US cents/kg)	86.2	83.1	112.6	158.0	139.4	101.8	70.9	62.0	69.1	60.0	77.1
Urea, E. Europe, bagged (US$/mt)	140.3	106.8	147.9	211.5	164.5	118.3	103.1	77.8	101.1	95.3	94.4

Table A1.1 Commodity prices, in current and constant 1990 dollars, 1992-2002 (Con't)

CONSTANT PRICES	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1990 Dollars											
Coffee, robusta (US cents /kg)	88.2	108.8	237.7	232.1	158.4	160.2	174.6	143.8	93.8	63.3	68.6
Coconut Oil (US$/mt)	541.6	423.4	551.2	560.8	659.3	606.1	631.5	712.6	462.7	331.5	436.5
Palm Oil (US$/mt)	369.0	355.3	479.5	526.2	465.8	503.6	644.1	421.0	318.8	297.7	404.6
Maize (US$/mt)	97.8	96.0	97.6	103.4	145.5	108.0	97.9	87.1	91.0	93.4	102.9
Rice, Thailand, 5% (US$/mt)	251.5	221.4	242.8	268.8	297.3	280.0	291.9	239.9	208.0	180.1	198.9
Shrimp, Mexico (US cents/kg)	1,027.0	1,071.0	1,186.0	1,134.0	1,183.6	1,487.0	1,515.4	1,410.0	1,554.0	1,581.0	1,090.0
Sugar, world (US cents/kg)	18.7	20.8	24.2	24.5	23.1	23.1	18.9	13.3	18.5	19.8	15.7
Rubber, RSS1, Malaysia (US cents/kg)	80.8	78.2	102.2	132.3	122.3	93.9	68.1	59.9	71.0	62.6	79.9
Urea, E. Europe, bagged (US$/mt)	131.6	100.4	134.2	177.1	187.5	127.9	98.9	75.1	103.9	99.3	97.8

Notes:

Coffee, ICO, International Coffee Organization indicator price, Robustas, average New York and Le Havre/Marseilles markets, ex-dock

Coconut oil (Philippines/Indonesian), bulk, c.i.f. Rotterdam

Palm oil (Malaysian), c.i.f. Rotterdam

Maize (US), no.2, yellow, f.o.b. US Gulf ports
Rice (Thai), 5% broken, WR milled, indicative price based on weekly surveys of export transactions (indicative survey price), government standard, f.o.b. Bangkok

Shrimp, (Mexican), frozen, white, No.1, shell-on headless, 26 to 30 count per pound, wholesale price at New York

Sugar (world), International Sugar Agreement (ISA) daily price, raw, f.o.b. and stowed at greater Caribbean ports
Rubber (Malaysian), RSS no.1, in bales, Malaysian Rubber Exchange & Licensing Board, midday buyers' asking price for prompt or 30 days delivery
Urea, (varying origins), bulk, spot, f.o.b. Eastern Europe

Sources: *Global Commodity Outlook November 1996 (for 1992-1995 data) and April 2000 (for 1996-1999 data); Global Economic Prospects 2003 (for 2000-2001 data) and 2004 (for 2002 data)*

Table A1.2 Commodity price projections, in current and constant 1990 dollars, 2003-2015

CURRENT PRICES	2003	2004	2005	2010	2015
Coffee, robusta (US cents/kg)	88.2	92.6	92.6	104.7	125.0
Coconut Oil (US$/mt)	442.0	460.0	470.0	500.0	530.0
Palm Oil (US$/mt)	425.0	415.0	415.0	420.0	445.0
Maize (US$/mt)	106.0	100.0	95.0	105.0	112.0
Rice, Thailand, 5% (US$/mt)	199.0	202.0	205.0	220.0	230.0
Shrimp, Mexico (US cents/kg)	1,200.0	1,275.0	1,350.0	1,550.0	1,650.0
Sugar, world (US cents/kg)	16.0	15.4	15.0	19.0	21.0
Rubber, RSS1, Malaysia (US cents/kg)	95.0	90.0	94.8	88.2	90.4
Urea, E. Europe, bagged (US$/mt)	130.0	128.0	126.7	125.0	130.0
CONSTANT PRICES	**2003**	**2004**	**2005**	**2010**	**2015**
1990 Dollars					
Coffee, robusta (US cents/kg)	91.2	96.1	94.6	102.4	116.9
Coconut Oil (US$/mt)	456.9	477.2	480.2	488.8	495.7
Palm Oil (US$/mt)	439.3	430.5	424.0	410.6	416.2
Maize (US$/mt)	109.6	103.8	97.1	102.6	104.8
Rice, Thailand, 5% (US$/mt)	205.7	209.6	209.5	215.1	215.1
Shrimp, Mexico (US cents/kg)	1,240.0	1,323.0	1,379.0	1,515.0	1,543.0
Sugar, world (US cents/kg)	16.5	16.0	15.3	18.6	19.6
Rubber, RSS1, Malaysia (US cents/kg)	98.2	93.4	96.9	86.2	84.6
Urea, E. Europe, bagged (US$/mt)	134.4	132.8	129.5	122.2	121.6

Notes:
Coffee: (ICO), International Coffee Organization indicator price, Robustas, average New York and Le Havre/Marseilles markets, ex-dock

Coconut oil (Philippines/Indonesian), bulk, c.i.f. Rotterdam

Palm oil (Malaysian), c.i.f. Rotterdam

Maize (US), no.2, yellow, f.o.b. US Gulf ports
Rice (Thai), 5% broken, WR milled, indicative price based on weekly surveys of export transactions (indicative survey price), government standard, f.o.b. Bangkok

Shrimp, (Mexican), frozen, white, No.1, shell-on headless, 26 to 30 count per pound, wholesale price at New York

Sugar (world), International Sugar Agreement (ISA) daily price, raw, f.o.b. and stowed at greater Caribbean ports
Rubber (Malaysian), RSS no.1, in bales, Malaysian Rubber Exchange & Licensing Board, midday buyers' asking price for prompt or 30 days delivery

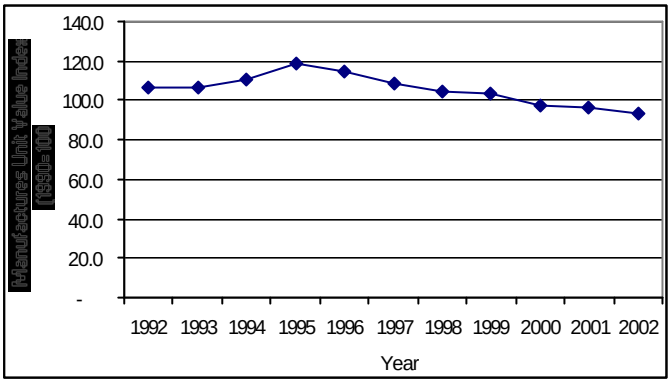
Urea, (varying origins), bulk, spot, f.o.b. Eastern Europe
Source : Global Economic Prospects 2004

The Manufactures Unit Value Index

The deflator used by the World Bank is the manufactures unit value (MUV) index (1990=100), which is defined as the "unit value index in US dollar terms of manufactures exported from the G-5 countries (France, Germany, Japan, UK and the US) weighted proportionally to the countries' exports to the developing countries" (Global Commodity Prospects, World Bank).

During the period 1992-2002, the MUV index (1990=100) dropped by 1.7% per year. There has been an upward trend in the index up to 1995. Declines were experienced starting 1996. According to World Bank projections, the index will increase in the long-term from 93 in 2002 to about 98 in 2005, 102 in 2010 and 107 in 2015.

Figure A1.1 Trends in Manufactures Value Index (1990=100), 1992-2002



Source: The World Bank -DPG

ANNEX 2 - THE IMPORTANCE OF FOOD AND AGRICULTURE IN ASEAN COUNTRIES

The data sourced in this section of the report and following use statistics as available. Whilst every effort has been made to ensure comparisons over consistent years, in some cases this was not possible due to a lack of available data.

I) INDONESIA

Labour-intensive agriculture plays a dominant role in the economy. In 2002, agriculture accounted for 17.5 percent of GDP[83] and provided work for around 40 percent of the active population[84] . In 2000 the agriculture sector grew by 1.9 percent in GDP terms. This declined to 1.7 percent in 2002.

Indonesia in 2000 was the world's largest producer of coconuts, the second largest producer of copra, palm kernels, palm oil and natural rubber and the third largest producer of rice[85]. The most important commodities produced in 2000 were, in metric tons, rice (51.8 million), cassava (16 million), maize (9.6 million), palm oil (4.2 million), copra (2.7 million) and sugarcane (2 million)[86].

II) MALAYSIA

In 2002, the contribution of agriculture to Malaysia's GDP was 9.1 percent. The sector grew in GDP terms by 2.0 percent in 2000 and by 0.3 percent in 2002. The agriculture sector employed 1.5 million workers in 2001, out of a workforce of 9.8 million people[87].

Malaysia's main agriculture products in 2000 included rubber, palm oil, cocoa, rice, vegetables, meat (poultry, pork, mutton and beef), fruit, pepper, tobacco and flowers. Major commodities produced in metric tons in 2002 were palm oil (58.4 million), rice (2.1 million), fish (including canned fish and frozen prawns 1.6 million), sugar (1.5 million), maize (700 thousand), rubber (700 thousand) and cocoa (48 thousand)[88].

III) THE PHILIPPINES

Agriculture as a share of GDP in 2002 was 14.7 percent. In 2002 the agriculture sector employed 11.3 million people out of a labor force of 33.6 million, almost 40 percent. The agriculture sector grew by 3.3 percent in 2002 in GDP terms, compared with 3.7 percent in 2001.

Major commodities produced in the Philippines in 2002 in metric tons were, sugar (27.2 million), coconuts (13.6 million), rice (13.2 million), bananas (5.2 million), corn (4.3 million), pig meat (1.6 million) and chicken (1.1 million)[89].

IV) THAILAND

In 2002, the share of agriculture in Thailand's GDP was 9.1 percent. This represented a slight decline from 1997, where it was 9.4 percent. In 2002 the agriculture sector employed 47.9 percent of the workforce. This figure has remained relatively unchanged since 1999[90].

Main commodities by production in metric tons in 2002-03 were[91] rice (27 million), indigenous chicken meat (1.3 million), rubber (2.8 million), cassava (18 million), sugar (74 million) indigenous pig meat (510 thousand) and maize (4.2 million).

[83] ADB Key Indicators Report 2003
[84] WTO Trade Policy Review for Indonesia 2003
[85] *Ibid*
[86] ADB Key Indicators Report 2003
[87] *Ibid*
[88] FAOSTAT 2000
[89] Philippines Bureau of Agricultural Statistics
[90] WTO Trade Policy Review for Thailand 2003
[91] National Statistical Office, Thailand

V) SINGAPORE

Singapore is a net importer of agriculture and food products. In 2001 agriculture comprised just 0.1 percent of GDP. Out of a labour force of 2.1 million, agriculture employed about 5,000 persons, or less than 2 percent of the labour force[92].

Agriculture's relatively small share in GDP and its importance for employment is partly explained by the fact that agricultural land in Singapore totals only about 1,600 hectares or 2 percent of total land area. Production is mainly confined to vegetables for local consumption and ornamental plants.

VI) BRUNEI DARUSSALAM

Brunei's agriculture sector is small, accounting for around 2 percent of GDP in 2000[93]. In 1995 (most recent figure available), agriculture, forestry and fishing accounted for 2.5 percent of employment, and 10 percent of the total labour force[94]. Agriculture grew by 2.3 percent in terms of real GDP growth between 1999 and 2000. Brunei's economy is dominated by the petroleum and gas sector which accounts for 30 percent of GDP.

Major commodities by production in metric tons in 2002 were poultry (13,700), vegetables (9.6 thousand), chicken eggs (5.8 thousand), dry beans (23.9 thousand) and fresh fruits (4.5 thousand).[95]

VII) VIET NAM

Agriculture is an important sector in the Viet-Namese economy. Its share of GDP in 2001 was 22.7 percent and in 2002, 23 percent. The sector grew 4.6 percent in 2000 and 4.1 percent in 2002. In 2000 the agriculture sector employed 24.4 million people, or over 62 percent of the Viet Namese labour force. In comparison, the manufacturing sector employed only 8 percent[96].

Key commodities by production in metric tons in 2001 were rice (34 million), sugar cane (16 million), fruits and vegetables (4.6 million), maize (2.3 million), pig meat (1.6 million), coffee (689 thousand) and rubber (331 thousand)[97].

VIII) LAO PDR

In 2002, agriculture was the most important sector in the Lao economy, accounting for 50.4 percent of GDP. The sector grew by 5 percent in 2002 after it experienced levels of growth of 7 percent in 1997 and 8.2 percent in 1999[98]. In 2001 agriculture employed 76% of the workforce[99].

The agriculture sector is based both on subsistence agriculture and commercial production, with the former providing the livelihood for the majority of farmers. Eighty five per cent of the labour force is employed in agriculture, most of whom are subsistence agricultural cultivators[100]. In 2003 rice was the predominant crop (2.5 million metric tonnes), followed by vegetables (800 thousand metric tonnes), tobacco leaves (28 thousand metric tonnes) and coffee (33 thousand metric tonnes) the latter mainly for export. Cattle and pig meat were also produced (22 thousand and 35 thousand metric tonnes respectively)[101].

IX) MYANMAR

In 2002 agriculture was by far the most important sector in the Burmese economy, accounting for 57.2 percent of GDP. In 2000 the agriculture sector grew by 11 percent, compared with 4.5 percent in 1998 and 3.7 percent in 1997. In 1995 (most recent figure

[92] ADB Key Indicators Report 2003
[93] *Ibid*
[94] WTO Trade Policy Review for Brunei 2001
[95] FAOSTAT 2004
[96] ADB Key Indicators Report 2003
[97] MARD Annual Report 2001
[98] ADB Key Indicators Report 2003
[99] FAO Country Profiles 2001
[100] Lao PDR Memorandum of Foreign Trade Regime
[101] FAO Country Profiles 2003

available) 11.27 million people out of a labour force of 17.59 million people employed in the Burmese economy (or 64 percent) were employed in by the agriculture sector[102].

Major agricultural commodities in 2002 in production in metric tonnes included rice (22 million), maize (650 million), groundnuts (650 million), sugar cane (6 million) and soybean (110 thousand)[103].

X) CAMBODIA

In 2002, the agriculture sector comprised 35.6 percent of the Cambodian economy as a share of GDP. The sector fell by -2.7 percent, despite a 5.5 percent growth in GDP, after experiencing positive growth rates in 2001 (2.2 percent) and 1999 (3.4 percent), although negative growth in 2000 (-1.5 percent). In 2000 the sector employed almost 3.9 million people out of a labour force of 5.4 million, or 72 percent of the labour force (both employed and unemployed)[104].

Crops grown both for food and industrial uses (such as jute and rubber) accounted for roughly 25 percent of GDP in 1995 (most recent figure available). Rice accounted for 90 percent of the cropped area (land suited for rice-based cropping is estimated at 2.6 million hectares, but only about 1.7 million hectare was planted in 1992-93), one-third of the total value of agricultural production and almost three quarters of caloric intake[105]. Major commodities by production in metric tons in 2001 were rice (3.75 million), maize (190 million), sugarcane (220 thousand), cassava (140 thousand), rubber (47 thousand) and soybean (39 thousand).

[102] ADB Key Indicators Report 2003
[103] FAOSTAT 2004
[104] ADB Key Indicators Report 2003
[105] Cambodia Memorandum of Foreign Trade Regime

ANNEX 3 - PATTERNS OF TRADE AND PROTECTION IN FOOD AND AGRICULTURE IN ASEAN COUNTRIES

I) INDONESIA

A. Trade in food and agriculture

Indonesia's balance of trade in 2001 was in surplus at US$ 25 billion.[106] Agriculture accounted for 3.6 percent of exports. Indonesia's food and agriculture trade balance in 2001 was US$ 502 million[107]. Exports were dominated by petroleum and plywood as well as rubber, shrimp, palm oil and coffee. Agricultural imports accounted for about 11 percent of total imports[108].

The most important exports of agricultural and food products (in US$ value) in 2002 were[109] fixed vegetable oils, mainly palm oil (2.5 billion), rubber (1.3 billion) crustaceans and mollusks, mainly shrimps (944 million), cocoa (666 million), fish (370 million), coffee (239 million), species (190 million), tobacco (171 million), fruits and nuts (131 million), tea and mate(107 million) and animal feed (106 million). Exports of milk powder and sugar confectionery were also significant (at 56 and 60 million respectively). Indonesia's main agricultural imports were wheat (614 million), animal feed (508 million) oil seeds (344 million) rice (342 million) and sugar (228 million)[110].

B. Levels of tariff protection

WTO

The average level of applied tariff protection for the agriculture sector has been reduced to 8.4 percent, although certain peak rates and tariff ranges remain[111]. Bound MFN rates are set at a simple average of 47.3 percent, which provides authorities with a great deal of scope to increase applied tariffs within bindings. The WTO Secretariat notes that during 2002, the authorities considered raising applied rates on strategic commodities such as rice, wheat, soy-bean and fruit, although it is unclear whether they did so or not[112].

Applied MFN rates for the most traded agriculture and food products range between 0 percent and 15 percent. The highest rates were applied in some fish products and tobacco. Most fall around the 5 percent range. A specific tariff rate of at RP 430/kg has been applied to rice and wheat since 2000. In the food sector, average tariffs are higher with those for food, beverages and tobacco remaining above average. In food manufacturing, tariffs average between 4.4 percent and 9.8 percent (depending on the level of processing of the food product). For food products, the average is between 3.4 percent and 4.7 percent. Indonesia also has tariff quota commitments for milk and cream and its products (in quota bound rate of 40 percent, applied MFN rate 5 percent) and rice (in quota bound rate of 90 percent, applied MFN rate of RP 430/kg).

AFTA

Not all tariff lines are listed for commitments, but those listed for the top ten exported products are on the "normal track" for reductions in protection. CEPT 2002 tariff rates range from 0 to 25 percent, with the higher rates applied in some fruit and nut products. CEPT rates for 2003 for listed products fall to the range between 0 and 5 percent. Rice is excluded from AFTA commitments. Coffee is listed as sensitive with a tariff rate of 10/T $220.

Levels of tariff protection for main exports and imports for 2002 are noted in Annex 1.

C. Non tariff protection

Import restrictions

Import restrictions and licensing apply to agricultural products. Special import licenses apply to sensitive products, such as rice, sugar, corn and soybeans, and are granted on the basis

[106] ADB Key Indicators 2003
[107] excluding fish an fisheries products. Agricultrual trade balance including fish and fisheries products was US$ 1.7 billion.
[108] FAO Country Profiles 2001
[109] UN COMTRADE data 2002
[110] UN COMTRADE data 2002
[111] WTO Trade Policy Review for Indonesia 2003
[112] *Ibid*

of domestic need. Non automatic licenses also enforce import controls, including embargoes mainly on health, quarantine, environmental and security grounds. The WTO Secretariat has noted that product coverage of import restrictions is unclear, and the licensing regime remains opaque. Import restrictions and special licensing requirements seem to have been imposed or maintained on meat and poultry products, cloves, alcoholic beverages and artificial sweeteners. Bans for sanitary reasons have affected imports of chicken and fresh milk

The restrictiveness of non automatic import licensing is accompanied by exclusive import rights accorded to domestic producers of certain sensitive agricultural products such as rice, cloves, alcoholic beverages, and sugar[113]. Since May 2002, rice importation has been carried out solely by importers registered with the Ministry of Trade and Industry with special import licenses.

Indonesia also maintains non-discriminatory standards, generally aligned with international norms. Mandatory standards apply to fertilizer and to sugar, with most others voluntary. New labeling rules for imports of GM products were introduced in 2001.

Controls on exports

Only registered and approved exporters can sell restricted exports. Controls include bans, quotas, licensing and "supervision". According to the WTO Secretariat, these are applied widely to promote higher value added activities, to upgrade export quality, and to ensure adequate domestic supplies of essential products at reasonable prices, as well as in accordance with international commitments[114]. Currently Indonesia bans exports of certain live fishery products, rubber of low quality and some rubber materials. Export approval requirements also apply for "supervised products" including certain live bovine animals, live fish, and palm nuts and kernels. Regulated exports through licensing and quotas include manioc destined for the EU, coffee and rubber.[115]

The WTO also reports that *ad valorem* taxes to promote downstream processing and higher value products have been rationalized. Coverage has been reduced from twelve to four commodity groups (including palm oil) and rates ranging from 10 percent to 40 percent have been reduced to 1 percent, 3 percent and 15 percent.

In order to protect consumers, price controls have been retained on sensitive items such as rice. Market price support for rice allows floor producer prices to be set up to 30 percent above production costs, thus domestic prices of rice were some 20 percent to 30 percent above world levels in 2002. Whilst the government rice import monopoly (BULOG) was eliminated in 1999, it continues to intervene in the market to stabilize domestic prices[116].

II) MALAYSIA

A. Trade in food and agriculture

In 2003 Malaysia's trade balance was in deficit at US$ -304 million[117]. Total trade in agriculture and food products in 2002 amounted to US$ 12.4 billion excluding fish and fish products.

Malaysia's agricultural trade balance was US$ 1.5 billion[118].

The share of agriculture exports of total exports in 2002 was 5.4 percent, having declined from 10.9 percent in 1999 and 13 percent in 1992. The share of agriculture imports as of total imports remained relatively stable over this period at 6.3 percent.

The top ten agriculture and food exports for Malaysia in 2002 (in US$ value terms) were[119] vegetable oils, principally palm oil (fixed vegetable oils were 3.6 billion, and processed animal and vegetable oils were 944 million), rubber (655 million), crustaceans and molluscs (230

[113] WTO Trade Policy Review for Indonesia 2003
[114] *Ibid*
[115] *Ibid*
[116] *Ibid*
[117] ADB Key Indicators Report 2003
[118] Agricultural products including fish and fisheries products, FAOSTAT 2001
[119] UN COMTRADE data 2002

million), tobacco (209 million), cocoa (204 million), animal feed (141 million), cereals (131 million), margarine (119 million), sugar (107 million) and live animals (102 million). Major imports were[120] certain edible products (293 million), milk powder (285 million), natural rubber (279 million) sugar (including molasses and honey – at 278 million) and vegetables (272 million).

B. Levels of tariff protection

WTO

Average tariff rates were generally low across the board[121]. Although the average bound rate for agriculture products in 2001 was 11.8 percent, the average applied rate was 3.5 percent.

Applied MFN rates for the most traded agriculture products range between 0 percent and 20 percent, with some products such as cocoa set at 15 to 30 percent. Beverages and tobacco products remain highly protected (Average applied tariffs are set at about 10 percent. A tariff of 5 percent + RM50 applies to tobacco raw and wastes[122]) whilst least protected products include animals and animal products, vegetable products, and animal and vegetable fats and oils (with average applied tariffs of below 5 percent).

AFTA

As for Indonesia, not all products are subject to tariff reductions under AFTA. For those products noted above that were listed, tariff rates were lower than MFN rates and ranged between 0 and 20 percent for 2002, with most set at 0 percent. Edible products, vegetables, animal feed and cocoa were subject to highest rates of products considered. Most products were listed as subject to "normal track", except for tobacco which is listed as "sensitive", some live animal products and some vegetable products. Rubber, some cocoa products and margarine products were listed on the "fast track". Rice in 2002 was also listed as "sensitive".

Listed MFN and AFTA rates for the most traded agricultural products in 2002 are listed in Annex 1.

Average MFN and AFTA tariff rates by listed product were available for 2001. They are depicted below.

Table A3.1 Average MFN and AFTA tariff rates by listed product for Malaysia

Product	Average MFN rate 2001 %	Average AFTA rate 2001 %
Live animals	0	0
Fish and crustaceans	3.1	1.5
Coffee, tea and mate	2.7	0.9
Cereals	0	0
Animals and vegetable fats	2.6	1.7
Sugar and sugar confectionary	1.9	1.3
Cocoa and cocoa preparations	17.7	3.8
Miscellaneous vegetable preparations	10.45	4.1
Residue and animal fodder	0	0
Tobaccos and manufactured products	5	5.0

WTO Secretariat Table
Source: WTO Trade Policy Review for Malaysia 2001

[120] *Ibid*
[121] WTO Trade Policy Review for Malaysia 2001
[122] *Ibid*

C. Non tariff protection

Import restrictions

Apart from import prohibitions implemented for national security, religious and environmental reasons, various non-tariff border measures barriers are also used as instruments of Malaysia's trade and development policy. Malaysia also uses import licensing measures on a discretionary basis to regulate import flows with a view to developing certain important infant and strategic industries and promoting greater forward and backward lnkages to achieve certain socio-economic objectives[123]. Licensing requirements are most pervasive in animals and animal products and vegetable products. Several tariff lines for agricultural products are subject to import licensing. For example, local importers of palm oil and other selected palm products must be licensed by the Malaysian Palm Oil Board, while exporters of natural rubber, pepper, pineapple must register with relevant license-issuing agencies[124].

Controls on exports

Some items, such as selected palm oil products, are subject to export duties. Specific export duties on palm oil products are levied at rates that vary directly with the value per tonne of the exported product. Other products subject to export duties include selected fish products, bird's eggs, avocados, certain citrus fruits, semi-processed palm oil. In addition, exports of palm oil, palm kernel oil and rubber from Sabah and Sarawak are subject to a duty rate of 30 percent. Rubber produced in Malaysia is also subject to a research cess at the rate of RM 26.5 per tonne and a development/replanting cess at the rate of RM 9.9210 per tonne[125].

A few products are also subject to prohibitions, restraints and licensing requirements as noted above. Licensing requirements were most pervasive in the agriculture sector in the case of animal and animal products[126].

III) THE PHILIPPINES

A. Trade in food and agriculture

The trade balance of the Philippines in 2003 was in surplus at US$ 3.7 billion.[127] In 2002 agricultural exports reached US$ 1.8 billion, accounting for 5 percent of the country's total exports. Agricultural imports totaled US$ 2.8 billion during the same year, representing almost 8 percent of the value of total imports. Overall the country posted a deficit of 1 billion in agricultural trade in 2002.

In 2002 the top ten agricultural exports for the Philippines in US$ value terms were[128] fruits and nuts, with bananas the most important fruit (472 million), vegetable oils (352 million), crustaceans and molluscs (210 million), preserved and prepared fruit (150 million), fish (116 million) and fruit and vegetable juices (55 million). Of these the main commodity exports were coconut oil, bananas, shrimps and prawns, desiccated coconuts and canned tuna.

The main agricultural imports for the Philippines in 2000 (by US$ value) were[129] wheat (486 million), animal feed (355 million), milk powder (306 million) and edible products (254 million).

B. Levels of tariff protection

WTO

In 1999, the applied simple average tariff for agricultural products was 16.6 percent. Applied rates were highest in meat and meat products (about 35 percent), preparations of meat, fish and crustaceans (about 33 percent) and sugar and sugar confectionary (about 30 percent) as well as live animals (27 percent) and cereals (about 22 percent)[130].

Applied MFN rates for the most traded products were relatively low, ranging between 3 and 10 percent, with the exception of certain edible products where the tariff ranged between 3

[123] WTO Trade Policy Review for Malaysia
[124] *Ibid*
[125] *Ibid*
[126] *Ibid*
[127] *Ibid*
[128] UN COMTRADE data 2002
[129] *Ibid*
[130] WTO Trade Policy Review for the Philippines 1999

and 55 percent, live animals for which tariffs were up to 45 percent, meat up to 60 percent and maize up to 65 percent. Tariffs on rice were set at 50 percent.

AFTA

Almost all products noted above that were listed as subject to CEPT commitments are placed on the "normal track", with the exception of rice which is listed as "sensitive". CEPT 2002 rates generally range between 3 and 5 percent, although some edible products are subject to tariffs of up to 20 percent. Higher tariffs apply to listed live animal products (up to 40 percent). Some meat products and rice were not subject to commitments. CEPT 2003 rates were slightly lower, with most products subject to tariff rates of between 3 and 5 percent, although for some live animals tariffs are still in the range of 3 – 30 percent.

A summary of MFN and AFTA tariff rates for the top ten exports and imports for 2002 for the Philippines is listed at Annex 1.

C. Non tariff protection

Import restrictions

Most quantitative restrictions have been abolished in the Philippines, with the notable exception of rice, which remains state traded by the National Food Authority (NFA). Other quantitative restrictions, including import prohibitions and import licensing, are maintained for national security and similar objectives. For example, imports of packaged food products require registration with the Bureau of Food and Drugs (BFAD). Importation of meat and meat products must be accompanied by an SPS or Veterinary Quantitative Clearance certificate issue by the Department of Agriculture (DA). The importation of other agriculture products requires an SPS Certificate issued by the DA, Bureau of Plant Industry, for plants and plant products, or by the DA, Bureau of Fisheries and Aquatic Resources, for fish and fish products. Failure to meet the requirements may result in confiscation of the products by the BFAD.

Complying with WTO commitments to tariffy quantitative import restrictions, tariff quotas were implemented in 1995 for 15 groups of agricultural products including coffee, corn, meat, potatoes and sugar. Very high out of quota duties, administered through a complex system protect sensitive products such as rice and corn however for some products the out of quota tariff rate is the only applicable duty. Tariff quotas are expected to be abolished in 2004.

Controls on exports

Exports are allowed without restriction except for certain products classified as "regulated" for reasons of national interest and international agreements, or "prohibited " for environmental reasons or to conserve depletable raw materials. The regulated and prohibited export products require export clearance from appropriate government agencies prior to filing an export declaration and shipment. Exports classified as prohibited may not be exported except for scientific or testing purposes[131]. Products requiring prior export approval include all plants capable of harboring pests, animals, animal products and animal effects, sugar and molasses and coffee.

IV) THAILAND

A. Trade in food and agriculture

In 2003 Thailand was a net exporter, with a trade balance of US$ 2 billion. The share of agriculture in Thailand's total exports however has declined since 1999 (when it was 20 percent) to 18.5 percent in 2001. The share of agriculture in overall imports has remained almost unchanged at 7.9 percent[132]. Thailand's agricultural trade balance in 2001 was US$ 4.5 billion[133].

In 2002 Thailand's top ten exports by US$ value in the food and agriculture sectors were[134] fish and shellfish (2 billion), crustaceans and mollusks, principally shrimp (1.6 billion), rice (1.57 billion), rubber (1.3 billion), sugar (765 million), meat other than fish (596 million),

[131] WTO Trade Policy Review for the Philippines 1999
[132] WTO Trade Policy Review for Thailand 2003
[133] Including fisheries and fishery products it was US$ 7.5 billion. FAOSTAT 2001
[134] UN COMTRADE data 2002

vegetables (381 million), fruit and preserved preparations (375 million), other edible products (346 million) and animal feed (272 million). Thailand's main agricultural imports in 2002 were[135] fish (672 million), animal feed (571 million), oil seeds (296 million) and milk powder (264 million).

B. Levels of tariff protection

WTO

The simple average bound tariff rate in agriculture products in 2002 was 34.4 percent and in 2003, 33.1 percent. The average applied rate was 26 percent and 25 percent respectively[136] for all specific tariff rates which is much higher than the average for industrial products (12.9 percent in 2003). Agricultural products with the highest simple average tariffs in 2003 were vegetable products (32 percent), prepared food (27 percent), fats and oils (22 percent) and live animal products (17 percent)[137].

Applied rates for agricultural raw materials range between 0 and 60 percent. Average tariff rates for food products range from 15.2 percent to 27.6 percent (depending on the degree of processing) and applied rates range between 0 and 140 percent. For food manufacturing, average rates fall between 21 and 25 percent, and applied rates range between 0 and 60 percent (again, depending on the degree of processing).

They are extracted below in Table A3.2.

Table A3.2 Average and applied MFN tariff rates for Thailand 2003

Product and processing	Average tariff 2003 %	Range for applied tariff 2003 %
Agriculture – raw materials	20.9t	0-60
Food products - first stage of processing - semi-processed - fully processed	 15.2 25.2 27.6	 0-42 1-65 0.9-140.3
Food and manufacturing - first stage of processing - semi-processed - fully processed	 25.6 21.1 25.5	 0-45 20-30 1-60

WTO Secretariat Table
Source: WTO Trade Policy Review for Thailand 2003

Applied MFN rates for the most traded agriculture and food products range between 5 and 60 percent. Most products are subject to tariff rates of between 5 to 30 percent with higher tariff rates applied for vegetables, for fruit and fruit preparations, animal feed, alcoholic beverages, oil seeds and cereals. Meat was also subject to tariffs of between 30 and 60 percent.

In addition, certain product specific surcharges apply to some products. For example, a surcharge is levied on out of quota imports of corn and certain fish meals[138]. Some products are also subject to tariff quotas although ASEAN imports are exempt from such unless they are excluded from the AFTA scheme. Since 1996, for example, all importers of soybean face an in- quota rate of 5 percent, subject to future changes. Tariff quotas also apply for dried longans, copra, milk and cream potatoes, onions, coconut, coffee, pepper, rice, maize, palm oil, coconut oil, cane sugar and un-manufactured tobacco[139].

AFTA

All top ten agriculture and food exports and imports, where listed as subject to CEPT commitments, were placed on the normal track. CEPT 2002 rates were mostly 5 percent, although some live animals and milk powder were listed as subject to lower rates.

[135] *Ibid*
[136] Trade Policy Review for Thailand 2003
[137] *Ibid*
[138] *Ibid*
[139] *Ibid*

Alcoholic beverages were subject to rates of up to 20 percent. CEPT rates for 2003 are similar.

MFN rates and CEPT rates are summarized at Annex 1.

C. Non tariff protection

Import restrictions

Import licensing for various items remains opaque and appears in some cases to be equivalent to quantitative restrictions. Most import licensing requirements are for national security, health and environment reasons. A number of other non tariff border measures remain for other reasons, for example to protect infant industries[140].

Agriculture and fisheries products subject to import licensing include yellow fin tuna, milk and cream (including powder), various vegetables (potatoes, onion, garlic), coconut, coffee, tea and pepper, maize, rice, soybeans, copra, palm oil and its fractions, coconut oil, fish meal and oil cake residues. The government has the legislative power to "absolutely" conditionally" prohibit imports subject to licensing[141]. In the latter case, those requiring non-automatic licensing are allowed if certain conditions are satisfied. Certain laws also stipulate various other import restrictions[142]. The Board of Investment is authorized to request the Ministry of Commerce to ban imports of goods competing with those in produced by a domestic industry if the Board is of the view that other forms of protection are not sufficient to assist the industry[143].

Controls on exports

Certain agriculture products are subject to export taxes which consist mainly of applied and statutory rates. Both rice and rubber have statutory rates set for export taxes at 10 percent and 40 percent respectively, however the applied rate is 0 percent[144].

Some other agriculture products are subject to export licensing requirements. Relevant products include tuna in airtight containers (exports must be a member of the Thai Food Processor Association), sugar (automatic licensing, exporters must be registered with the Ministry of Industry), canned pineapple and concentrated pineapple juice (exporters must be a member of the Thai Food Processors Association or the Thai Pineapple Industry), oil cake from ground nut oil and oil cake from soybean oil (both for which exports are generally not allowed). The WTO Secretariat reports that such measures are in place for economic, quality, health and safety purposes[145].

V) SINGAPORE

A. Trade in food and agriculture

In 2001, Singapore's trade balance was in deficit at $US -1.2 million. Agriculture exports accounted for just 2.2 percent of total exports and imports of agriculture and food products accounted for 3.3 percent of total imports[146]. Singapore's agricultural trade balance in 2001 was US$ -1.4 billion[147].

Singapore's main food and agriculture exports[148] in 2002 (in US$ value) included tobacco (60 million), alcoholic beverages (35 million), edible products (24 million), fish (17 million), spices (16 million) and rubber (15 million). Ornamental fish dominated exports of fish. The main imported products in 2002 were[149] tobacco (445 million), alcoholic beverages (397 million), fruits and nuts (261 million), edible products (238 million), meat (235 million), milk powder (205 million) and vegetables (196 million).

[140] WTO Trade Policy Review for Thailand 2003
[141] Export and Import Act B.E 2522 (1979)
[142] Investment Promotion Act
[143] WTO Trade Policy Review for Thailand 2003
[144] *Ibid*
[145] *Ibid*
[146] FAO Country Profiles, 2001 d
[147] including fish and fisheries products, *Ibid*
[148] UN COMTRADE data 2002
[149] *Ibid*

Major agricultural production items in 2001 in metric tonnes were hen's eggs (16 thousand), indigenous chicken meat (2.5 thousand), other eggs (1.2 thousand) and vegetables (5 thousand).

B. Levels of tariff protection

Singapore's agriculture sector is largely unprotected. Singapore has bound nearly 100 percent of tariffs in the agriculture sector. Bound MFN tariff rates for 2000 are set at an average of 15.4 percent in agriculture, and industrial products at 7.4 percent. By 2005, when Uruguay Round commitments are expected to be fully implemented, the average tariff rate in agriculture is expected to be 9.6 percent and in industrial products, 6.2 percent[150]. Applied MFN rates for all the above products are low, most at 0 percent.

Zero tariff duties also apply to all these products under AFTA subject to the normal track, where listed. Similarly, zero tariff duties apply on live animals, meat, rice and maize.

MFN and AFTA tariff rates are summarized at Annex 1.

C. Non tariff protection

Import restrictions

Singapore maintains both automatic and non-automatic import licensing for environmental and health and safety reasons. Import permits are required for all imports except up to ten litres of alcohol and two kilograms of tobacco per persons arriving in Singapore, petroleum less than 10 litres and dutiable goods discharged from a vessel directly into a free trade zone removed by an authority administering a free trade zone[151].

For imports of food products, importers are required to be registered with or licensed by the Primary Production Department in the Ministry of National Development, and to be registered under the Business Registration Act or incorporated under the Companies Act. Documentation required when applying for an import permit includes bills of lading and invoices, in addition to health certificates for fresh fruit and vegetables imported from South America. All imported consignments may be subject to testing and inspection by the Department. In the case of meat imports and high-risk seafood, including frozen oysters, cockle meat, cooked prawn/shrimp and crab meat, all consignments are regularly subject to testing and inspection before sale is permitted in Singapore[152].

A non-automatic licensing regime is maintained for rice to ensure a consistent and adequate stockpile for domestic consumption[153].

Controls on exports

Excise taxes are levied on a number of agricultural and food products, including alcoholic beverages.

VI) BRUNEI DARUSSALAM

A. Trade in food and agriculture

In 2002 Brunei had a total trade surplus of 0.7 billion[154]. Agriculture accounted for approximately 0.5 percent of merchandise exports, with mining accounting for the bulk (88.7 percent). Brunei's agricultural trade balance was US$ -188 million[155].

The largest exports of food and agriculture products for Brunei in 2002 (by $US value) were[156] hides and skins (calf skins – 487 thousand) crustaceans and molluscs (422 thousand), chocolate and cocoa preparations (234 thousand), non alcoholic beverages (150 thousand) and beef (fresh, chilled and frozen – 145 thousand). Most of the country's beef comes from a cattle ranch in Australia which is owned by the government of Brunei[157].

[150] WTO Trade Policy Review for Singapore 2000
[151] WTO Trade Policy Review for Singapore
[152] *Ibid*
[153] *Ibid*
[154] *Ibid*
[155] FAOSTAT 2001
[156] UN COMTRADE data 2002
[157] WTO Trade Policy Review for Brunei Darussalam 2001

Brunei imports around 80 percent of its domestic agricultural requirements. At almost 17 percent, agriculture accounts for an increasing share of imports, the majority consisting of food imports[158]. The main agriculture and food imports by US$ value in 2000 were edible products (21 million), cereals, flour and starch (18 million), live animals except fish (15 million), fruits and nuts (14.8 million), milk powder (13.8 million), tobacco (13.4 million) and rice (13 million).

Major production items in metric tonnes in 2003 were indigenous chicken meat (13 thousand), indigenous cattle meat (3 thousand), hens eggs (5 .8 thousand), vegetables (10 thousand) and fresh fruit (3.5 thousand)[159].

B. Levels of tariff protection

WTO

The current applied simple average MFN tariff rate is low, at 0.4 percent for agriculture, forestry and fishing. Tariff rates range from 0 percent to 5 percent for agricultural products[160]. Tea and coffee are subject to specific import duties for which ad-valorem equivalents are not available and therefore not included in this overall tariff average. However, the bound tariff for agriculture is considerably higher than the applied rates, with most of the latter at 0 percent[161].

Applied and bound tariffs for relevant product groupings are below.

Table A3.3 Applied and bound MFN tariffs for Brunei Darussalam, 2000

Product category	Applied MFN tariffs 2000 %		MFN Bound rates %	
	Simple average	Range	Simple average	Range
Agriculture, forestry and fishing	0.4	0-20	25.5	20-50
Agriculture and livestock production	0	0-0	26.4	20-50
Manufacturing	3.3	0-200	24.8	20-50
Food products	0	0	23.0	20-50
Fish products	0	0	20.9	20-30
Manufactured vegetable and animal oils	0	0	20.0	20-20
Cocoa, chocolate and sugar confectionary	0	0	20.0	20-20

WTO Secretariat Table
Source: WTO Trade Policy Review for Brunei Darussalam, 2001

AFTA

Most agricultural products are subject to rates of 0 percent under AFTA, with the exception of some edible products which are subject to a 5 percent rate. Listed products are subject to the "normal tack" for tariff reduction commitments. Products excluded from the CEPT reductions include tea, coffee, tobacco and alcohol, which have specific rates of duty.

Applied MFN rates and AFTA commitments are illustrated in Annex 1.

C. Non tariff protection

Import restrictions

Certain products are subject to import restrictions for the purpose of maintaining food supplies. These include rice, sugar and salt. For example, rice appears to be subject to an import monopoly and is bought mostly from Thailand by the Department of Information Technology and State stores in the Ministry of Finance under a government to government contract which is renewed on an annual basis. More generally, import permits are required for some products such as plants, animals, birds, fish, salt, rice and sugar. Permits are

[158] *Ibid*
[159] FAO Country Profiles, 2003
[160] WTO Trade Policy Review for Brunei
[161] *Ibid*

available from the relevant Ministries and Departments of the government of Brunei. In some cases (as for plants, animals, animal products and fish) import licenses must also be accompanied by sanitary or phytosanitary certificates from the exporting country.

Other products subject to import restrictions include beef, poultry, alcoholic beverages, plants and live animals. Beef and poultry imports are "monitored to avoid excess supply in the local market", whereby the volume of required imports is determined on the basis of local demand for the products and local production in Brunei[162]. In addition, imports of meat and poultry products are subject to halal requirements and may only be sourced from government approved abattoirs[163]. Import restrictions and/or bans on alcoholic beverages and meat are in force on religious grounds[164]. Imports of alcoholic beverages are allowed through a license issues by the Controller: non Muslim tourists aged 17 or over may import alcohol products in quantities of up to 12 cans and 2 bottles.

Other restrictions are aimed at ensuring products meet phytosanitary requirements. For example, all imported eggs must be stamped to distinguish them from the local product and to ensure conformity with the sanitary and food safety requirements of the Veterinary Authority and Ministry of Health. Imports of salt, sugar and rice paddy are also restricted to maintain security of supplies and for price stability as well as to ensure long term sustainable supplies and market stability.

Export controls

Although there are few impediments to exports and there are no export taxes, a few agricultural products are subject to export restrictions. These restrictions are maintained to ensure the security of domestic supplies. They apply to oil palm, rice and sugar. In the case of sugar, prices for consumers are subject to ceilings.

VII) VIET NAM

A. Trade in food and agriculture

Viet Nam's balance of trade in 2003 was in surplus at US$ 160 million, after reaching levels of 289 million in 2002 and 473 million in 2001[165]. Viet Nam's agricultural trade balance was US$ 2.7 billion[166]. Export value of agricultural products in 2002 was US$ 2 billion and seafood was an additional US$ 2 billion. Together they accounted for 26 percent of total exports. Total agricultural imports were 1.7 billion and accounted for 10.6 percent of imports.[167]

The main agriculture and food exports in 2001 in US$ value terms were rice (624 million), coffee (391 million), rubber (165 million), milk and dairy (163 million), cashew nuts (152 million), pepper (91 million), tea (78 million), fresh fruits (58 million), cassava (39.6 million) and pig meat (35.7 million)[168].

Main imports were milk and dairy (207 million), oil cake (from soybean – 103 million), wheat (99 million), tobacco (97 million), animal feed (42 million), cane sugar (24.6 million), flours, meals and pellets (22.6 million), cashew nuts (20.8 million) and vegetable oil (20.1 million)[169].

B. Levels of tariff protection

MFN commitments

Although Viet Nam is not yet a member of the WTO, it released an MFN tariff schedule under Decisions 110/2003/QD-BTC dated 22 July 2003 listing 10,721 items for tariff reductions. The schedule was submitted to Viet Nam's Working Party in October 2003 as the basis for market access negotiations as part of Viet Nam's accession to the WTO[170].

[162] DFAT AgriFood Globalisation, Subsistence to Supermarket series Volume IV
[163] *Ibid*
[164] under the Customs Prohibitions and Restriction of imports and exports Amended Order 1990.
[165] ADB Key Indicators Report 2003
[166] Including fish and fisheries products, FAOSTAT 2001
[167] Viet Nam World Development Report 2003
[168] MARD Annual Report 2001
[169] *Ibid*
[170] Viet Nam Ministry of Trade, 2002 Government of Viet Nam 1998, and Dao Huy Giam 1999

Under the schedule the average applied tariff rate for agricultural products is 29.3 percent compared with 17 percent for non-agricultural goods. Agricultural products subject to the highest rates of between 40 percent and 50 percent include fresh fruit, rice, vegetable oil, refined sugar, some processed products such as tea and coffee and products made from cereals. Fresh and frozen meats milk and fresh vegetables are subject to tariff rates between 15 percent and 30 percent. Other live animals, livestock products, maize, wheat and sugar cane are subject to the lowest rates at 1 percent to 10 percent[171].

The average rate of protection in agriculture in 2002 was 54.1 percent. The effective rate of protection[172] in agriculture in 2002 was 7.4 percent compared with 16.4 percent in mining and 96 percent in manufacturing.

See Table A3.4 below.

Table A3.4 Effective rates of protection for Viet Nam 1997 and 2002

Sector	Effective rate of protection %	
	1997	2002
Agriculture	7.7	7.4
Mining	6.1	16.4
Manufacturing	121.5	96.0
Average (simple)	59.5	54.1
Tradables	72.2	58.5

World Bank, Asian Development Bank Table
Source: Viet Nam World Development Report 2003

MFN rates for goods imported from countries having MFN status in trade relations with Viet Nam, for the most traded products in 2001 range between 0 and 50 percent. Most products are subject to rates of up to 50 percent.

AFTA

Under AFTA, Viet Nam has made commitments which will reduce most tariff rates on exported products to between 5 and 10 percent by 2006. Under CEPT for 2002, rates range between 0 and 20 percent. Most products fall within the range of 10-20 percent. Most listed products are included on the normal track however some fruits and nuts are listed on the exclusion list. Notably Viet Nam has chosen not to undertake any commitments with respect to some tariff lines within the above products grouping. Imports such as fruits and vegetables, meat, cashew nuts and pepper were subject to CEPT rates of between 3 and 20 percent in 2002, falling to between 0 percent and 5 percent by 2006. Some meat products were on the sensitive list and not subject to reduction commitments.

A summary of applied MFN rates and AFTA commitments for the noted products is at Annex 1.

C. Non tariff protection

Import restrictions

Viet Nam is currently in the process of reversing certain import and export restrictions as part of the process of accession to the WTO. Some measures currently in place may need to be changed or removed in order for Viet Nam's trade regime to be made WTO consistent.

There is currently a prohibition only on imports of tobacco, namely cigarettes. The ban has been justified by Viet Nam on the basis of health grounds, although may have implications for WTO rules as local production of cigarettes are not similarly banned[173].

[171] *Ibid*
[172] The effective rate of protection is defined as the percentage change in producers value-added over the level that would have prevailed in the absence of trade barriers, including quantitative restrictions. The table reports simple averages in per cent. Source: Viet Nam World Development Report 2003.
[173] *Ibid*

Export quotas apply to certain products. Up to 2001, the government maintained an export quota system for rice imports; however this was abolished under Article 6 of the aforementioned Decision. Currently an import quota is set for sugar which will be maintained until 2005. The import quota is set with consideration to local production capacity, annual sugarcane outputs and domestic demand for sugar as well as for the purpose of ensuring consumption of entire outputs and covering farm production costs. In addition, importers of sugar also need to obtain a discretionary import license from the Ministry of Trade[174].

Some agricultural products are also subject to licensing requirements of line Ministries. It appears that this operates as an automatic licensing system which is based on technical criteria and which regulates the nature of the products usage[175].

VIII) MYANMAR

A. Trade in food and agriculture

Myanmar's trade balance in 2002 was in deficit at -249 million. Total agricultural exports in 2002 were US$ 450 million and imports US$ 290 million. As shares of total exports, agriculture accounted for 17 percent. Agriculture's share in total imports was 10 percent. Myanmar's trade balance in agriculture was US$ 121.8 million[176].

Main agriculture and food exports in 2002 were dried vegetables, mainly beans (278.7 million), crustaceans (132.5 million), rice (42.2 million) and fish (22.5 million)[177]. Palm oil was also an important export in 2000 at 11 million[178].

Major agriculture imports in 2002 were palm oils and its fractions (51 million), milk and cream, including evaporated milk (31 million), tobacco (19 million), cigars and cigarettes (18 million), margarine (18 million) and alcoholic beverages (14 million)[179].

B. Levels of tariff protection

Applied MFN tariff rates for the exported products range between 0 and 15 percent. Tariffs on dried vegetables and live animals are at zero. Tariffs for other products range between 10 and 15 percent. Tariffs on sugar are set higher at up to 20 percent. For food and agriculture imports, tariffs are slightly higher, set between 1 percent and 40 percent, the latter applicable to alcoholic beverages.

Under AFTA, Myanmar has made some commitments to reduce tariffs by 2006. Some of the products are on the exclusion list (dried vegetables, dried fruit, some coffee products, some sugar, rice and oil of palm, cigars and alcoholic beverages) for which no commitments have been made. Several other products are listed on the sensitive list (some coffee products, some sugar and maize). For the few exported products on the normal track, tariffs range between 0 and 10 percent in 2002 and are to be reduced to between 0 and 5 percent by 2006. Some imported products such as palm oil and margarine are listed on the "fast track" for AFTA tariff reductions.

A summary of the levels of protection is at Annex 1.

IX) LAO PDR

A. Trade in food and agriculture

In 2000, Laos had an agricultural trade balance of US$ -42.6 million. Agricultural exports were US$ 36.3 million and agricultural imports were US$ 78.9 million. Agricultural exports and imports comprised 11 percent and 18 percent of total exports and imports respectively[180]. The trade balance in agriculture in 2001 was US$ -41.1 million[181].

The main agricultural exports in 2000 in US$ value terms (excluding forestry) were coffee (18.7 million), cattle (6.5 million) and buffaloes (6 million). Together these three commodities

[174] *Ibid*
[175] *Ibid*
[176] FAOSTAT 2001
[177] UNCTAD/WTO 2002
[178] FAOSTAT 2000
[179] UNCTAD/WTO 2002
[180] FAOSTAT 2000, World Bank World Development Indicators 2000
[181] FAOSTAT 2001

accounted for over 85 percent of agriculture exports, with coffee accounting for almost 52 percent. Other important exports were pigs (3.2 million), groundnuts (900 thousand), hides (300 thousand), fruits (200 thousand), beer barley (200 thousand), sesame seeds (200 thousand) and soybeans (100 thousand)[182].

The main agriculture and food imports in 2000 were cigarettes (14.7 million), alcoholic beverages (12.3 million), non-alcoholic beverages (10.9 million), refined sugar (5 million), pastry (4.7 million), food preparations (4.2 million), whole condensed milk (4 million), rice milled (3.8 million), sugar confectionary (3.1 million) and food wastes (2.6 million)[183].

B. Levels of tariff protection

MFN commitments

Although Lao PDR is not yet a member of the WTO (but is currently in the process of acceding) MFN applied tariff rates on the above range between 5 and 40 percent, with the majority of lines set at 20 percent or less. The simple average of import tariffs on agricultural products in 18.7 percent (excludes processed foodstuffs). The highest rates across all agricultural products apply to vegetables, mineral water, beans, tea and coffee (up to 40 percent), as well as beef and sheep meat, fresh fruit, copra oil, sausages, sugar confectionary and wine (up to 30 percent).[184]

For the most traded products the highest tariff rates were consistent with this, applicable to coffee, fruit, alcoholic and non-alcoholic beverages and cigars (up to 40 percent). Lower rates applied for beer of barley, sesame seeds and animal feed (up to 5 percent), with products such as groundnuts, hides, soybeans and sugar confectionary falling somewhere in between (up to 20 percent).

AFTA

Laos has made some, but not many commitments under AFTA to reduce its tariffs with ASEAN members for the noted products. Commitments include reducing the tariff applicable to coffee to between 25 and 30 percent by 2002 and to 5 percent by 2006. Tariffs for gums and resins are to be reduced from 15 percent in 2002 to 3 percent by 2006. Live bovine animals are excluded from AFTA commitments, as are non-alcoholic beverages, cane and beet sugar, cigars, breads and milk and cream - some of the major imports.

A summary of the main exports and tariff levels is at Annex 1.

C. Non tariff protection

Import restrictions

Agricultural products are subject to the same import licensing requirements as other imported products which require registration to engage in importing (and exporting). Businesses which trade are required to register as import and export companies. Registration is covered by Ministerial Decree and certain regulations[185]. Entities wishing to engage in importing are required to apply for registration at the Department of Internal Trade at the Ministry of Commerce and Tourism and meet the requisite criteria for registration[186].

Some agricultural products are banned under Notification No. 870/MOC. These include chillies, aubergines, tomatoes, bananas, lemons and some other fruits.

Special restrictions apply to the importation of rice. The government retains the right to apply quotas for food security purposes, notably when necessary to support the minimum farm gate prices set by the Lao PDR in order to maintain the country's productive capacity of rice. Quantitative restrictions may be applied on a case by case basis for food security reasons[187].

There are no tariff quotas.

[182] *Ibid*
[183] *Ibid*
[184] Lao PDR Memorandum on the Foreign Trade Regime
[185] Ministerial Decree Authorization of Import and Export Business No 462/MOC of 8 December 1993, complemented by the Business Law (Law No. 3/NA of 18 July 1994) and regulations in Notification 750/MOC of 6 August 1996 pursuant to the Business Law.
[186] Lao PDR Memorandum of the Foreign Trade Regime
[187] *Ibid*

Controls on exports

There are no prohibitions or restrictions on exports of agricultural products other than an export tax of 5 percent on coffee beans and livestock. With respect to the export of rice, the right to apply controls is reserved for food security purposes. Export licenses are also required for all products, except for exports of garments and products on the AFTA Inclusion List. In addition, the export of live animals and animal skins products require the prior approval of the Ministry of Agriculture and Forestry[188].

X) CAMBODIA

A. Trade in food and agriculture

Cambodia's trade balance in 2002 was in deficit at $US -220 million[189]. Agriculture exports in 2002 were US$ 50 million and agricultural imports US$ 275 million, each accounting for 2.9 percent and 15 percent of total exports and imports respectively.

Main agricultural exports in 2001 were (in US$ value), rubber (18 million), rice (4.6 million), crustaceans (5.9 million), freshwater diadrom (9.8 million) and fish (9 million). Main imports of food and agricultural products in 2002 were cigars and cigarettes (98 million), cane or beet sugar (42 million), non-alcoholic beverages (18 million) and non-alcoholic beverages (15 million)[190].

B. Levels of tariff protection

Cambodia has made some commitments to reduce tariffs under AFTA however rice, crustaceans, cigars, cane and beet sugar and non-alcoholic beverages remain excluded from such commitments. For live fish, some products are on the Sensitive List. Reduction commitments reduce the tariff, where included on the normal track, from up to 10 percent in 2002 to up to 7 percent by 2006.

A summary of commitments is noted at Annex 1.

C. Non tariff protection

There are registration requirements that apply to all commercial enterprises operating in Cambodia. These are governed by the Law on Commercial Regulations and the Commercial Register, enacted by the National Assembly on 3 May 1995. Foreign enterprises (enterprises that are less than 51 percent Cambodian owned) have an additional requirement to register with the Council for Development of Cambodia. They also have two limitations on the scope of their activities. First, they may only engage in import or export activities as required by their investment and production activities. Secondly they are not authorized to engage in import or export trading activities, that is to import or export solely for the purpose of reselling goods without transformation. Foreign enterprises are also prohibited from owning, selling or buying land or real estate[191].

Import restrictions

There are no quantitative restrictions on imports into Cambodia. Import licensing requirements cover only a small range of products and do not apply to agricultural products.

Several categories of imported goods however are subject to excise taxes. These include soft drinks, beer, wine and spirits and cigarettes and other tobacco products (all subject to a tax of 10 percent).[192]

Controls on exports

Several items are subject to export duties. These include pure bred bovine animals and swine, live fish, prepared fish and fish products, live crustaceans and molluscs (and products thereof) and natural rubber (all subject to an export tariff of 10 percent). There are no quantitative restrictions, with the exception of rice and timber. A special Inter-Ministerial Working Group on exports of rice was set up by the Government in 1995 to monitor the situation regarding aggregate domestic production and consumption of rice as a food staple

[188] *Ibid*
[189] ADB Key Indicators Report 2003
[190] UNCTAD/WTO 2002
[191] Cambodia Memorandum on the Foreign Trade Regime
[192] *Ibid*

for the population. The Working Group also reports on estimates of rice exports and market access conditions for Cambodian rice exports. It reports to the government and may provide recommendations for quantity limits on rice[193].

Exports of rice are also subject to non-automatic licensing: an exporter is granted a license by the Ministry of Commerce to export not more than 3,000 tons of rice which is valid for two months.

There are no export credits, export credit guarantees or insurance programs for agricultural products.

[193] *Ibid*

ANNEX 4– LEVELS OF TARIFF PROTECTION UNDER WTO AND AFTA IN ASEAN MEMBER ECONOMIES FOR THE MOST TRADED FOOD AND AGRICULTURE PRODUCTS

Key

HS	Harmonized System of Tariff Classification
SITC	System of International Tariff Classification
AFTA	ASEAN Free Trade Area
CEPT	Common Effective Preferential Tariff rate %
N	Normal Track
S	Sensitive List
F	Fast Track
nc	No commitment listed
E	Exclusion List
WTO	World Trade Organization
MFN	Most Favoured Nation Tariff rate %
PR	powder
RP	Indonesian rupiah
RM	Malaysian ringgit
chld	chilled
excl	excluding
frsh	fresh
nes	not elsewhere classified
veg	vegetable

I) INDONESIA

Table A4.1 Indonesia - Top 10 agriculture and food exports by value, 2002

Product by tariff classification					WTO Commitments	AFTA Commitments		
Rank	**Commodity**	**HS code**	**SITC code**	**Value US$ '000**	**MFN tariff rates**	**Indicator**	**CEPT 2002**	**CEPT 2003**
1	Fixed vegetable oils	1507,1511,1513,1515	422	2,511,306	0 to 10	F	0 to 5	0 to 5
2	Natural rubber	4001	231	1,038,387	5	F/N	5	0 to 5
3	Crustaceans/mollusks	0306, 0307	36	944,512	5	N	5	5
4	Cocoa	18	72	666,930				
5	Fish live/fresh/chilled/frozen	0301 - 0304	34	370,288	0-15	N	0-5	0-5
6	Coffee/coffee substitute	09, 0901	71	239,635	S	$110/T - $220/T		
7	Spices	09,	75	190,194	5	N	5	0-5
8	Tobacco/manufactured	24	122	171,197	5 to 15	N	0 to 5	0 to 5
9	Fruit/nuts/fresh/dried	08,	57	131,652	5	N	5 to 25	0 to 5
10	Tea and mate	0902, 0903	74	107,466	5	N	5	5

ITS Table
Source: UNCOMTRADE data 2002

Table A4.2 Indonesia - Top 10 agriculture and food imports by value, 2002

Product by tariff classification					WTO Commitments	AFTA commitments		
Rank	Commodity	HS code	SITC code	Value $US '000	MFN tariff level	Indicator	CEPT 2002	CEPT 2003
1	Wheat/Meslin	1001	41	614,448	0 to 5	N	0 to 5	0 to 5
2	Animal Feed ex unml cer	2308	81	508,653	5	N	0 to 5	0 to 5
3	Oil Seeds - Soft Oil	1207	222	344,797	5	N	5	5
4	Rice	1006	42	342,527	RP 430/kg	S	nc	nc
5	Sugar/Molasses/Honey	17	61	228,487	5	N	5	0
6	Fruit/Nuts, Fresh/Dried	08	57	214,127	5	N	5 to 25	0 to 5
7	Milk PR excl Butter/Cheese	040210	22	212,398	5	N	5	0
8	Maize except Sweet Corn	1005	44	137,982	0	N	0	0
9	Tobacco, Raw and Wastes	2401	121	103,970	5	N	5	0 to 5
10	Tobacco, Manufactured	2402,03	122	93,773	5 to 15	N	0 to 5	0 to 5

ITS Table
Source: UNCOMTRADE data 2002

II) MALAYSIA

Table A4.3 Malaysia - Top 10 agriculture and food exports by value, 2002

Product by tariff classification					WTO Commitments	AFTA commitments		
Rank	Commodity	HS code	SITC code	Value US$ '000	MFN tariff level	Indicator	CEPT 2002	CEPT 2003
1	Fixed vegetable oils, not soft	1507,1511,1513,1515	422	3,681,254	0 to 5	F	0 to 5	0 to 5
2	Animal and vegetable oils, processed	1518	431	944,079	0 to 10	F	0 to 5	0 to 5
3	Natural rubber/latex	4001	231	655,775	0	F	0	0
4	Edible products n.e.s	21	98	230,446	0 to 20	N	0 to 8	0 to 5
5	crustaceans/mollusks etc	0306, 0307	36	226,826	0 to 20	N	0	0
6	tobacco/manufactured	24	122	209,187	5 + RM50	S	nc	nc
7	cocoa	18	72	204,998	15-30	F/N	0 to 5	0 to 5
8	animal feed ex unml cer	2308	81	141,240	0	N	0	0
9	cereal etc flours/starch	1101-1109	48	131,393	0	N	0	0
10	margarine/shortening	1517	91	119,480	0 to 10	F/N	0 to 10	0 to 5
11	sugar/molasses/honey	1703	61	107,205	0	N	0	0
12	live animals except fish	01	1	102,403	0	N/S	nc to 0	nc to 0

ITS Table, Source: UNCOMTRADE data 2002

Table A4.4 Malaysia Top 10 agriculture and food imports by value, 2002

Product by tariff classification					WTO Commitments	AFTA commitments		
Rank	Commodity	HS code	SITC code	Value US$ '000	MFN tariff level	Indicator	CEPT 2002	CEPT 2003
1	Edible Products NES	21	98	293,925	0 to 20	N	0 to 8	0 to 5
2	Milk PR exc Butter/Cheese	040210	22	285,962	0	N	0	0
3	Natural Rubber/Latex/ETC	4001	231	279,896	0	F	0	0
4	Sugar/Mollasses/Honey	17	61	278,964	0	N	0	0
5	Vegetables, frsh/chld/dried	07	54	272,516	0 to 20	N/S	0 to 6	0 to 5
6	Animal Feed ex unml cer	2308	81	264,164	0	N	0	0
7	Maize except Sweet Cord	1005	44	262,862	0	N	0	0
8	Fish,Live/frsh/chld/froz	0306, 0307	34	212,401	0 to 20	N	0 to 6	0 to 5
9	Wheat/Meslin	1001	41	201,901	0	N	0	0
10	Tobacco, Raw and Wastes	2401	121	199,592	5 +RM50	S	nc	nc

ITS Table Source: UNCOMTRADE data 2002

III) THE PHILIPPINES

Table A4.5 Philippines - Top 10 agriculture and food exports by value, 2002

Product by tariff classification					WTO Commitments	AFTA commitments		
Rank	Commodity	HS code	SITC code	Value US$ '000	MFN tariff rates	Indicator	CEPT 2002	CEPT 2003
1	Fruit/nuts, Fresh/dried	08	57	472,024	3 to 10	N	3 to 5	3 to 5
2	Fixed vegetable oils, not soft	1507,1511, 1513, 1515	422	352,742	3 to 10	F/N	3 to 10	3 to 5
3	Crustaceans/mollusks	0306, 0307	36	210,043	3 to 10	N	3 to 5	3 to 5
4	Fruit/preserved, fruit/preps	2001-1008	58	150,038	7 to 10	N	5	5
5	Fish/shellfish, prep/pres	03	37	116,073	3 to 10	N	3 to 5	3 to 5
6	Fish, live/fresh/chilled/frozen	03	34	83,379	3 to 10	N	3 to 5	3 to 5
7	Edible products n.e.s	21	98	56,021	3 to 55	N	3 to 20	3 to 5
8	Fruit/veg juices	2009	59	55,428	3	N	3 to 5	3 to 5
9	Milk powder/ excl butter, cheese	040210	22	48,512	3	N	3	3
10	Sugar/molasses/honey	1703	61	46,500	3	N	3	3
11	Animal feed ex unml cer	2308	81	30,988	3	N	3	3

ITS Table
Source: UNCOMTRADE data 2002

Table A4.6 Philippines - Top 10 agriculture and food imports by value, 2002

Product by tariff classification					WTO Commitments	AFTA commitments		
Rank	Commodity	HS code	SITC code	Value US$ '000	MFN tariff level	Indicator	CEPT 2002	CEPT 2003
1	Wheat/Meslin	1001	41	486,728	3 to 7	N	3 to 10	3 to 5
2	Animal Feed ex unml cer	2308	81	355,219	3	N	3	3
3	Milk PR exc Butter/Cheese	040210	22	306,164	3	N	3	3
4	Edible Products NES	21	98	254,199	3 to 55	N	3 to 20	3 to 5
5	Rice	1006	42	211,763	50	S	nc	nc
6	Tobacco, Manufactured	24	122	114,411	3 to 7	N	3 to 5	3 to 5
7	Oil Seeds ETC - Soft Oil	1207	222	103,666	3 to 10	N	3	3
8	Beef, Fresh Chilld/Frozn	0201	11	82,570	10	N	10	5
9	Tobacco, Raw and Wastes	2401	121	70,925	7	N	3 to 5	3 to 5
10	Sugar/Molasses/Honey	17	61	57,725	3	N	3	3

ITS Table
Source: UNCOMTRADE data 2002

IV) THAILAND

Table A4.7 Thailand - Top 10 agriculture and food exports by value, 2001

Product by tariff classification					WTO Commitments	AFTA commitments		
Rank	Commodity	HS code	SITC code	Value US$ '000	MFN tariff rates	Indicator	CEPT 2002	CEPT 2003
1	Fish/shellfish, prep/pres	0301-0306	37	2011904	5 to 30	N	5	5
2	Crustaceans, mollusks etc	0306-0307	36	1603906	5	N	5	5
3	Rice	1006	42	1578180	?	N	5	5
4	Natural rubber/latex	4101	231	1321163	0 to 50	N	0 to 5	0 to 5
5	Sugar/molasses/honey	1703	61	765183	33.5 to 42.5	N	5	5
6	Meat nes fresh/child/frzn	0202-0207	12	596159	32 to 60	N	nc	5
7	Fish, live/fresh/child/frzn	0301-0307	34	383326	5 to 30	N	5	5
8	Vegetables, fresh/chilled/frozen	07	54	381538	33 to 60	N	5	5
9	Fruit preserved/ fruit preps	2001-2008	58	375316	60	N	5	5
10	Edible products nes	21	98	346208	17.5 to 30	N	5	5
11	Animal feed ex unml cer	2308	81	272,083	25.7 to 49.6	N	5	5

ITS Table
Source: UNCOMTRADE data 2001

Table A4.8 Thailand - Top 10 agriculture and food imports by value, 2001

Product by tariff classification					WTO Commitments	AFTA commitments		
Rank	**Commodity**	**HS code**	**SITC code**	**Value US$ '000**	**MFN tariff level**	**Indicator**	**CEPT 2002**	**CEPT 2003**
1	Fish, Live/frsh/chld/froz	0306, 0307	34	672,203	5 to 3	N	5	5
2	Animal Feed ex unml cer	2308	81	571,041	25.7 to 49	N	5	5
3	Oil Seeds ETC - Soft Oil	1207	222	296,591	5 to 42	N	5	5
4	Milk PR exc Butter/Cheese	040210	22	264,025	5	N	2.5	2.5
5	Crustaceans Molluscs etc	0306, 0307	36	258,578	5	N	5	5
6	Edible Products NES	21	98	201,517	17.5 to 30	N	5	5
7	Hide/Skin (Ex Fur) Raw	4101	211	192,107	0 to 5	N	0 to 5	0 to 5
8	Wheat/Meslin	1001	41	135,448	?	N	5	5
9	Alcoholic Beverages	2203-2209	112	102,036	54.6 to 60	N	5 to 20	5
10	Cereal etc Flour, Starch	1101, 1109	48	73,495	32.6	N	5	5

ITS Table
Source: UNCOMTRADE data 2001

V) SINGAPORE

Table A4.9 Singapore - Top 10 agriculture and food exports by value, 2002

Product by tariff classification					WTO Commitments	AFTA commitments		
Rank	**Commodity**	**HS code**	**SITC code**	**Value US$ '000**	**MFN tariff level**	**Indicator**	**CEPT 2002**	**CEPT 2003**
1	Tobacco, manufactured	24	122	606132	0	N	0	0
2	Alcoholic beverages	2203, 2208	112	359471	0	N	0	0
3	Edible products nes	21	98	246735	0	N	0	0
4	Fish live/fresh/chld/frozen	0301-0304	34	178339	0	N	0	0
5	Spices	09	75	160278	0	N	0	0
6	Natural rubber/latex	4101	231	159419	0	N	0	0
7	Milk powder excl butter and cheese	040210	22	147912	0	N	0	0
8	Cocoa	18	72	114818	0	N	0	0
9	Coffee/coffee substitute	09, 0901	71	110808	0	N	0	0
10	Cereal ect flour/starch	1101-1109	48	76766	0	N	0	0

ITS Table
Source: UNCOMTRADE data 2002

Table A4.10 Singapore - Top 10 agriculture and food imports by value, 2002

Product by tariff classification					WTO commitments	AFTA commitments		
Rank	Commodity	HS code	SITC code	Value US$ '000	MFN tariff level	Indicator	CEPT 2002	CEPT 2003
1	Tobacco, Manufactured	24	122	445,816	0	N	0	0
2	Alcoholic Beverages	2203,2209	112	397,431	0	N	0	0
3	Fruit/Nuts, Fresh/Dried	8	57	261,482	0	N	0	0
4	Edible Products N.E.S	21	98	238,849	0	N	0	0
5	Meat NES, Fresh/chld/froz	0202, 0207	12	235,688	0	N	0	0
6	Milk PR exc butter/cheese	040210	22	205,088	0	N	0	0
7	Vegetables, frsh/chld/dried	7	54	196,911	0	N		0
8	Fish,Live/frsh/chld/froz	0301, 0307	34	180,693	0	N	0	0
9	Crustaceans Molluscs etc	0306, 0307	36	146,166	0	N	0	0
10	Cereal etc Flour, Starch	1101, 1109	48	141,007	0	N	0	0

ITS Table
Source: UNCOMTRADE data 2002

VI) BRUNEI DARUSSALAM

Table A4.11 Brunei Darussalam- Top agriculture and food exports by value, 2002

Product by tariff classification					WTO Commitments	AFTA commitments		
Rank	Commodity	HS code	SITC code	Value US$ '000	MFN tariff level	Indicator	CEPT 2002	CEPT 2003
1	Hides and skins	4101	211	487	0	F	0	0
2	Crustaceans/mollusks	0306, 0307	36	422	0	N	0	0
3	Chocolate/cocoa preps	1806	73	234	0	N	0	0
4	Beverage non alcoholic	2201-2202, 2209	111	150	0	N	0	0
5	Beef, fresh/chilled frozen	0201	11	145	0	N	0	0
6	Live animals except fish	01	1	111	0	N	0	0
7	Edible products nes	21	198	79	0 to 5	N	0 to 5	0 to 5
8	Fish, live/fresh. Chilled/frozen	0301-0304	34	36	0	N	0	0
9	Meat/offal preserved nes	02	111	150	0	N	0	0

ITS Table
Source: UNCOMTRADE data 2002

Table A4.12 Brunei Darussalam- Top 10 agriculture and food imports by value, 2002

Product by tariff classification					WTO Commitments	AFTA commitments		
Rank	Commodity	HS code	SITC code	Value US$ '000	MFN tariff levels	Indicator	CEPT 2002	CEPT 2003
1	Edible Products N.E.S	21	98	21,072	0 to 5	N	0 to 5	0 to 5
2	Cereal etc Flour, Starch	1101,1109	48	18,376	0	N	0	0
3	Live animals except fish	01	1	15,132	0	N	0	0
4	Fruit/Nuts, Fresh/Dried	08	57	14,836	0	N	0	0
5	Milk PR excl butter/cheese	040210	22	13,862	0	N	0	0
6	Tobacco, Manufactured	24	122	13,418	0 to $60.00/kg	G/N	nc to 0	nc to 0
7	Rice	1006	42	13,241	0	N	0	0
8	Animal Feed ex unml cer	2308	81	12,578	0	N	0	0
9	Fruit/Veg Juices	2009	59	11,957	0	N	0	0
10	Vegetables, frsh/chld/dried	07	54	10,595	0	N	0	0
11	Maize except Sweet Corn	1005	44	470	0	N	0	0
12	Sugar/molasses/honey	17	61	2,051	0	N	0	0

ITS Table
Source: UNCOMTRADE data 2002

VII) VIET NAM

Table A4.13 Viet Nam - Top 10 agriculture and food exports by value, 2001

Product by tariff classification				MFN Commitments	AFTA commitments					
Rank	Commodity	HS code	Value US$ '000	MFN tariff level	Indicator	CEPT 2002	CEPT 2003	CEPT 2004	CEPT 2005	CEPT 2006
1	Crustaceans/mollusks etc	0306, 0307	1,407,116	0 to 30	N	0 to 10	0 to 5	0 to 5	0 to 5	0 to 5
2	Rice	1006	623,500	40	N	20	20	15	10	5
3	Coffee/coffee substitute	09, 0901	391,464	20 to 50	N	10 to 15	5 to 15	5 to 10	5 to 10	5
4	Fish, fresh/chilled/frozen	0302-0304	249,836	30	N	10	5	5	5	5
5	Natural rubber	4101	165,971	3	N	3	3	3	3	3
6	Milk and dairy	0401, 0402	163,479	30	N	10	5	5	5	5
7	Cashew nuts	20	152,000	50	N/E	nc to 20	nc to 20	nc to 15	nc to 10	nc to 5
8	Pepper	0904	91,000	30	N	10	5	5	5	5
9	Tea	0902	78,000	50	N	20	20	15	10	5
10	Fresh fruit	0810	58,000	40	20	20	15	10	5	5

ITS Table
Source: Viet Nam Ministry of Agriculture and Rural Development , Annual Report 2001

Table A4.14 Viet Nam - Top agriculture and food imports 2001 by value

Product by tariff classification				MFN commitments	AFTA commitments					
Rank	**Commodity**	**HS code**	**Value US$ 000**	**MFN tariff level**	**Indicator**	**CEPT 2002**	**CEPT 2003**	**CEPT 2004**	**CEPT 2005**	**CEPT 2006**
1	Milk and dairy	04	207,000	5 to 30	E/N	nc to 20	nc to 15	nc to 15	nc to 10	nc to 5
2	Oil cake (from soybean)	2304	103,000	-	N	0	5	5	5	5
3	Wheat	1001	99,000	0 to 5	N	0 to 5	0	0	0	0
4	Tobacco	2410	97,000	?	G	nc				
5	Animal feed	2308	42,000	10	N	5	5	5	5	5
6	Cane sugar	1701	24,600	30 to 35	S/N	20	20	15	10	5
7	Flours, meal and pellets	1103	22,600	10	N	10	5	5	5	5
8	Cashew nuts	0801	20,800	30 to 40	N	15	10	10	10	5
9	Vegetable oil	1515	20,100	5 to 40	E/N	5	5	5	5	5

ITS Table
Source: Viet Nam Ministry of Agriculture and Rural Development , Annual Report 2001

VIII) MYANMAR

Table A4.15 Myanmar - Top 10 agriculture and food exports by value 2002

Product by tariff classification				MFN commitments	AFTA commitments					
Rank	**Commodity**	**HS code**	**Value US$ 000**	**MFN tariff le vel**	**Indicator**	**CEPT 2002**	**CEPT 2003**	**CEPT 2004**	**CEPT 2005**	**CEPT 2006**
1	Dried vegetables, shelled	0713	278,700	0	E	nc	nc	nc	nc	nc
2	Crustaceans	0306	132,500	10	N	0 to 10	0 to 5	0 to 5	0 to 5	0 to 5
3	Rice	1006	107,390	0	S	0 to 5	nc	nc	nc	nc
4	Fish, frozen, whole	0303	22,500	10	N	5	5	5	5	5
5	Live bovine animal	0102	15,000	0	N	0	0	0	0	0
6	Maize	1006	11,887	0 to 5	S	nc	nc	nc	nc	nc
7	Onions, garlic and leeks, fresh or chilled	0703	11,000	0.5 to 1.5	N	0.5 to 1.5	0.5 to 1.5	0.5 to 1.5	0.5 to 1.5	0.5 to 1.5
8	Dried Fruit	0813	8,000	15	E	nc	nc	nc	nc	nc
9	Fish, fresh, whole	0302	7,500	10	N	5	5	5	5	5
10	Sugar and Honey	17	3,986	0.5 to 20	S/E	nc	nc	nc	nc	nc

ITS Table
Source: UNCTAD/WTO data 2002, FAOSTAT 2002

Table A4.16 Myanmar - Top agriculture and food imports by value 2002

Product by tariff classification				MFN commitments	AFTA commitments					
Rank	**Commodity**	**HS code**	**Value US$ 000**	**MFN tariff level**	**Indicator**	**CEPT 2002**	**CEPT 2003**	**CEPT 2004**	**CEPT 2005**	**CEPT 2006**
1	Palm Oil & its fraction	1511	51	1	F	1	1	1	1	1
2	Milk and cream, concentrated or sweetened	0402	31	1 to 3	N	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3
3	Pipe, chewing & snuff tobaccos	2403	19	30	E	nc	nc	nc	nc	nc
4	Margarine	1517	18	3 to 10	F	3 to 5	3 to 5	3 to 5	3 to 5	3 to 5
5	Cigars, cheroots, cigarillos & cigarettes	2402	18	30	E	nc	nc	nc	nc	nc
6	Spirit, liqueurs, other spirit beverages, alcoholic preparation	2208	14	40	E	nc	nc	nc	nc	nc

ITS Table
Source: UNCTAD/WTO data 2002, FAOSTAT 2002

IX) LAO PDR

Table A4.17 Lao PDR - Top agriculture and food exports by value, 2002

Product by tariff classification				MFN Commitments	AFTA commitments					
Rank	**Commodity**	**HS code**	**Value US$ 000**	**MFN tariff level**	**Indicator**	**CEPT 2002**	**CEPT 2003**	**CEPT 2004**	**CEPT 2005**	**CEPT 2006**
1	Coffee	0901	18,700	40	N	25 to 30	20	10 to 15	5 to 10	5
2	Cattle	0102	6,500	5 to 10	E/S	nc	nc	nc	nc	nc
3	Buffalo	0106	6,000	10	S	nc	nc	nc	nc	nc
4	Pigs	0103	3,200	5 to 10	E/S	nc	nc	nc	nc	nc
5	Ground nuts	1202	900	20	E	nc	nc	nc	nc	nc
6	Hides	4101	300	20	N	18	15	10	5	5
7	Fruit not elsewhere classified	08	200	30 to 40	N/E/S	15	10	8	5	3
8	Beer of barley	1003	200	5	N	5	5	5	3	2
9	Sesame seeds	0909	200	5	N	5	5	5	3	2
10	Soybeans	1201	100	20	N	15	12	8	5	3

ITS Table, Source: UNCTAD/WTO data 2002, FAOSTAT 2002

Table A4.18 Lao PDR - Top agriculture and food imports by value 2002

Product by tariff classification				WTO commitments	AFTA commitments					
Rank	**Commodity**	**HS code**	**Value US$ 000**	**MFN tariff level**	**Indicator**	**CEPT 2002**	**CEPT 2003**	**CEPT 2004**	**CEPT 2005**	**CEPT 2006**
1	Cigars, cheroots, cigarillos & cigarettes	2402	14,700	40	E	nc	nc	nc	nc	nc
2	Alcoholic beverages	2203-2208	12,300	30 to 40	nc	nc	nc	nc	nc	nc
3	Non-alcoholic beverages (exl. Water, fruit or vegetable juice)	2201-2202	10,900	10 to 40	E	nc	nc	nc	nc	nc
3	Refined sugar	1702	5,000	10	N	7	6	5	4	3
4	Pastry	1905	4,700	30	E	nc	nc	nc	nc	nc
5	Food preparations NES	21064	4,200	?	nc	nc	nc	nc	nc	nc
6	Whole condensed milk	040299	4,000	5	E	nc	nc	nc	nc	nc
7	Rice, milled	100630	3,800	5	E	nc	nc	nc	nc	nc
8	Sugar confectionary	1704	3,100	30	N	15-20	10 to 15	8 to 10	5	3
9	Food wastes	23	2,600	5	nc to 5	nc to 5	nc to 5	nc to5	nc to 5	nc to 5

ITS Table, Source: UNCTAD/WTO data 2002, FAOSTAT 2002

X) CAMBODIA

Table A4.19 Cambodia - Top agriculture and food exports by value 2001

Product by tariff classification				WTO Commitments	AFTA commitments					
Rank	**Commodity**	**HS code**	**Value US$ 000**	**MFN tariff level**	**Indicator**	**CEPT 2002**	**CEPT 2003**	**CEPT 2004**	**CEPT 2005**	**CEPT 2006**
1	Rubber	4001	28,258	7	F	7	5	5	5	5
2	Fish	0310-0304	9,000	15	E/N/S	10	10	10	7	7
3	Crustaceans	0306	5,900	15	E	nc	nc	nc	nc	nc
4	Cattle hides	4101	1,912	15	E	nc	nc	nc	nc	nc
5	Rice	1006	1,691	0 to 7	E	nc	nc	nc	nc	nc
6	Cattle	0102	1,561	0 to 15	N	0 to 10	0 to 10	0 to 10	0 to 7	0 to 5
7	Cigarettes		650	7 to 50	E	nc	nc	nc	nc	nc
8	Buffaloes	0106	281	0 to 15	E	nc	nc	nc	nc	nc
9	Tobacco leaves		274	15	E	nc	nc	nc	nc	nc

ITS Table
Source: World Bank 2002, FAOSTAT 2002

Table A4.20 Cambodia - Top agriculture and food imports 2002 by value

Product by tariff classification				MFN commitments	AFTA commitments					
Rank	**Commodity**	**HS code**	**Value US$ 000**	**MFN tariff level**	**Indicator**	**CEPT 2002**	**CEPT 2003**	**CEPT 2004**	**CEPT 2005**	**CEPT 2006**
1	Cigarettes	2402	109,629	7 to 50	E	nc	nc	nc	nc	nc
2	Refined sugar	1702	28,181	7 to 35	E	nc	nc	nc	nc	nc
3	Alcoholic beverages	2203-2208	19,577	35 to 50	G	nc	nc	nc	nc	nc
4	Non Alcoholic beverages	2210-2202	12,985	35	E	nc	nc	nc	nc	nc
5	Paddy rice, milled	100630	11,015	7	E	nc	nc	nc	nc	nc
6	Prepared Food nes	2106	10,752	7 to 35	E	nc	nc	nc	nc	nc
7	Tobacco leaves	2401	9,202	15	E	nc	nc	nc	nc	nc
8	Whole milk, evaporated	040299	7,872	35	E	nc	nc	nc	nc	nc
9	Tobacco products nes	2403	6,927	50	E	nc	nc	nc	nc	nc
10	Pastry	1905	6,334	7	E	nc	nc	nc	nc	nc

ITS Table
Source: World Bank 2002, FAOSTAT 2002

ANNEX 5 – DEMAND AND CONSUMPTION PATTERNS BY COUNTRY

I) INDONESIA

Demand

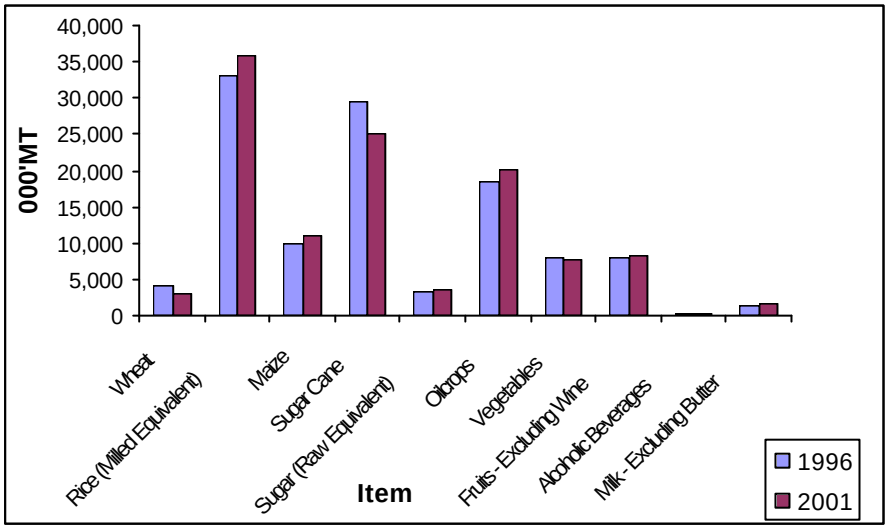
Indonesia's population in 2003 was 234.9 million. GDP expressed in purchasing power parity terms was US$714.2 billion or US$3,100 per capita. Growth in 2002 was 3.7 percent.

In 2002 Indonesia's food product imports for 2002 were US$ 3.3 billion, of which 30 percent were products imported as processed food and beverages.

Consumption

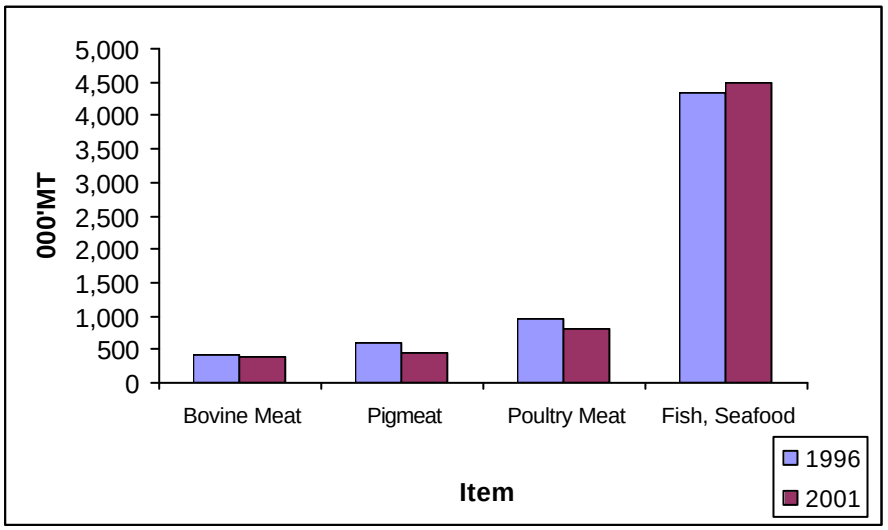
Major crop items consumed in 2001 were rice, maize, sugarcane and oil crops[194]. The amount of rice and oil crops consumed increased from 1996. There were no considerable changes in the consumption of vegetables, fruits and refined sugars between 1996 and 2001 levels.

Figure A5.1 Domestic supply of key crops and processed food items for Indonesia 1996 & 2001



ITS Chart, Source: Food balance sheets for Indonesia, FAOSTAT 1996 and 2001

Figure A5.2 Domestic supply of key meat and fisheries items for Indonesia 1996&2001



ITS Chart, Source: Food balance sheets for Indonesia, FAOSTAT 1996 and 2001

Consumption of meat products were dominated by fish and seafood followed by poultry meat in both 1996 and 2001.

[194] It should be noted that use of sugar cane and oil crop tonnage must be carefully analysed as only about 10% is recovered as sugar in the former and 20-23% as oil for palm fruit and 12% for fresh coconuts.

II) MALAYSIA

Demand

Malaysia has a population of around 24.5 million people and is one of the most developed nations in Southeast Asia. The strong economic growth in the late 1980's and early 1990's has contributed to major changes in consumer purchases and consumption patterns. GDP was US$198.4 billion in 2002 or US$ 8,800 per capita in purchasing power parity terms. The Malaysian economy is predicted to grow between 5.5 percent and 6 percent in 2004.

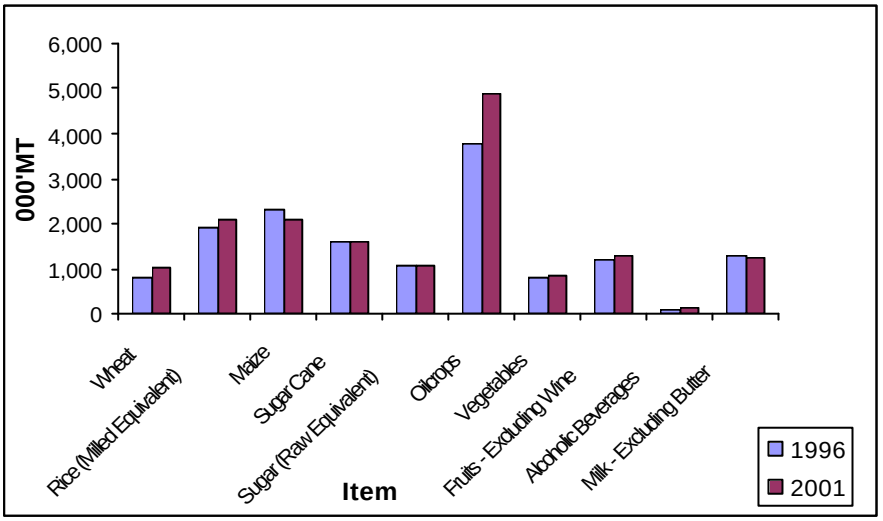
The Malaysian food distribution and retailing system is the most advanced in ASEAN after Singapore and more advanced than in Thailand. The market for imported food and beverages also continues to be liberalized. Tariffs are low for most food products (0-20 percent).

The United States Department of Agriculture records strong growth in Malaysian demand in a range of food products, notably, poultry (mainly frozen) with three year annual growth of over 20 percent, snacks (cereal and potato based) with three year annual growth of around 11 percent, and dried fruits with three year annual growth of around 9 percent.

Consumption

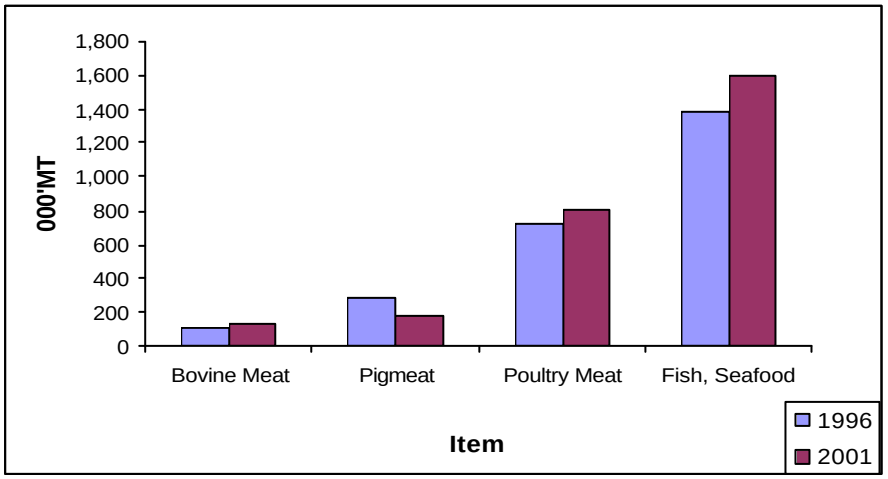
Apparent consumption of rice, maize and oil crops was significant in metric tonnes and increased between 1996 ad 2001. There were no significant changes in the consumption of sugar, vegetables, milk or rice.

Figure A5.3 Domestic supply of key crops and processed food items for Malaysia 1996, 2001



ITS Chart, Source: Food balance sheets for Malaysia, FAOSTAT 1996 and 2001

Figure A5.4 Domestic supply of key meat and fisheries items for Malaysia 1996, 2001



ITS Chart, Source: Food balance sheets for Malaysia FAOSTAT 1996 and 2001

Consumption of meat products was dominated by fish and seafood and poultry meat, which also grew over the same period, although consumption in metric tonnes remained lower than consumption of most crop items, with the exception of wheat.

III) THE PHILIPPINES

Demand

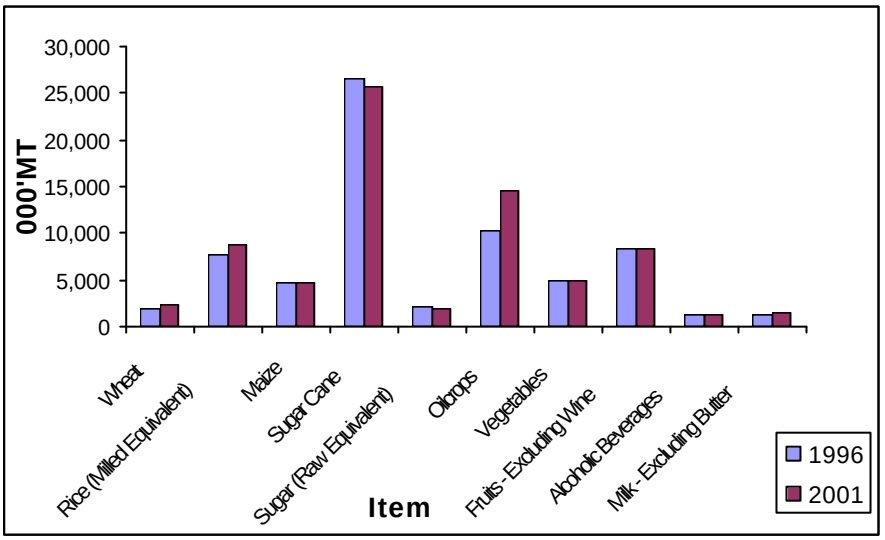
The Philippines' population in 2003 was 84.6 million. GDP was US$ 379.7 billion or US$4,600 per capita in purchasing power parity terms. In 2002 GDP growth was 4.4 percent.

In 2001, total Philippine imports of consumer foods jumped 5 percent to a record US$ 1.1 billion. While the Philippine economy is largely agrarian, moderate growth in demand for imported food is expected to continue due to high population growth, low agricultural productivity, and poor infrastructure that hamper Philippine competitiveness in markets for both processed foods and raw commodities.

Consumption

Apparent consumption was dominated in 2001 by rice, maize, fruits and oil crops[195]. There were no significant changes except for increases in levels of consumption of the latter in 2001 compared with 1996 levels.

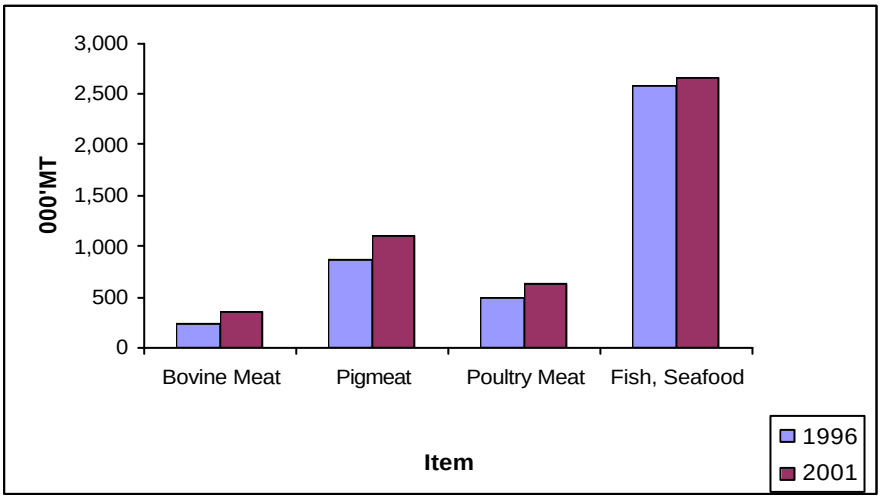
Figure A5.5 Domestic supply of key crops&processed food items for the Philippines 1996, 2001



ITS Chart, Source: Food balance sheets for the Philippines FAOSTAT 1996 and 2001

Consumption of meat products was greatest for fish and seafood, followed by pig meat. Levels of both pig and poultry meat increased in 2001 from 1996 levels.

Figure A5.6 Domestic supply of key meat and fisheries items for the Philippines 1996, 2001



ITS Chart, Source: Food balance sheets for the Philippines FAOSTAT 1996 and 2001

[195] The conversion of fresh coconut to oil is only about 12%

IV) THAILAND

Demand

Thailand's population was 64.3 million in 2002. GDP was US$ 445.8 billion in 2002 or US$ 7,000 per head in purchasing power parity terms. GDP growth was 5.3 percent in 2002.

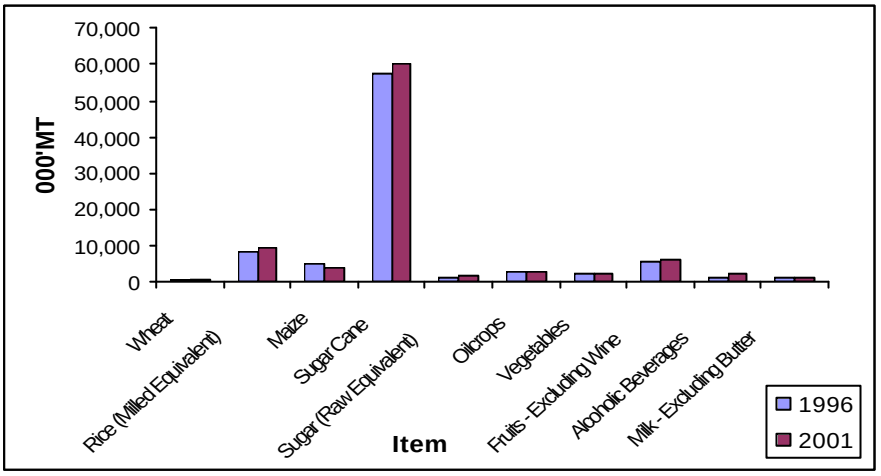
Growth in Thailand's retail food sector is driven by the aggressive expansion of multinational retailers, especially in the hypermarket segment which continued with accelerating growth up until 2003. The growth of retail trade is attributable to the higher purchasing power of households as a result of the general economic recovery, better employment conditions, low inflation, and low interest rates. In 2002 per capita income was US$ 1,992, the percentage of disposable income spent on food was 33.6 percent, and the percentage of disposable income spent on eating out was 7.7 percent.

Demand for raw food materials is driven by Thailand's large and growing food processing sector. Thailand is one of the top food-exporting countries in the world. Raw inputs to the food processing sector are primarily supplied by Thai companies; however the import market for these ingredients has been growing steadily, with imports worth approximately over US$ 1 billion annually. The growth in demand for raw materials is due to the increased localized production of processed products that are in high demand and are expensive to ship long distances. High investment in capital equipment, improvements in food technology, more stringent sanitary requirements, marketing innovations, and Thai exports of finished food products all have contributed to the increasing demand for food ingredients.

Consumption

Apparent consumption is dominated by rice, maize, fruits and oil crops[196].

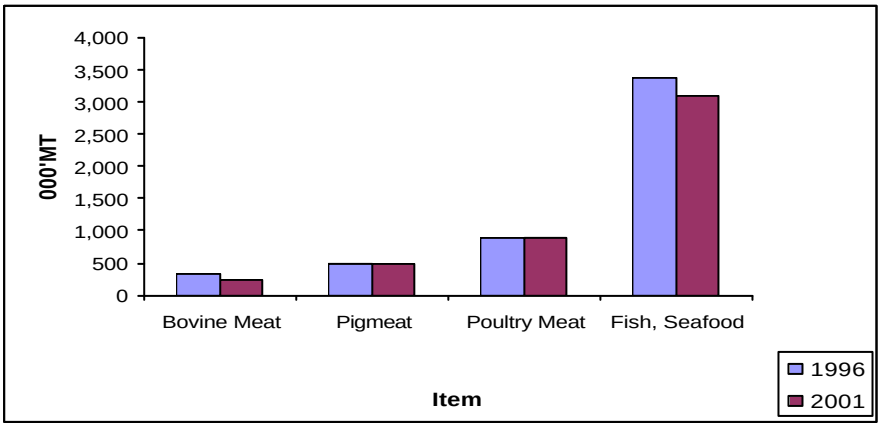
Figure A5.7 Domestic supply of key crops and processed food items for Thailand 1996, 2001



ITS Chart, Source: Food balance sheets for Thailand FAOSTAT 1996 and 2001

Consumption of meat products was also dominated by fish and seafood, followed by poultry meat and pig meat.

Figure A5.8 Domestic supply of key meat and fisheries items for Thailand 1996, 2001



ITS Chart, Source: Food balance sheets for Thailand FAOSTAT 1996 and 2001

[196] Conversion of sugar cane to sugar is only about 10%

V) SINGAPORE

Singapore has around 4.5 million people and the second highest per capita income in Asia. It has no tariffs on any food products except on alcoholic beverages. In Singapore in 2002 food retail sales totaled US$ 2.7 billion. GDP was US$ 112.4 billion in 2002 or US$ 25,200 per capita in purchasing power parity terms. GDP growth in 2002 was 2.2 percent.

Singapore's food retailing system is the most advanced of all ASEAN economies. Its processing sector however, is very limited and the major food manufacturers are those in beer, non- alcoholic beverages, snack foods, fish processing and ethnic food activities. As Singapore has no crop or livestock production, practically all food ingredients are imported from a wide range of countries worldwide. The total sales turnover of all food manufacturers in 2000 was US$1.92 billion, out of which about 45 percent was re-exported.

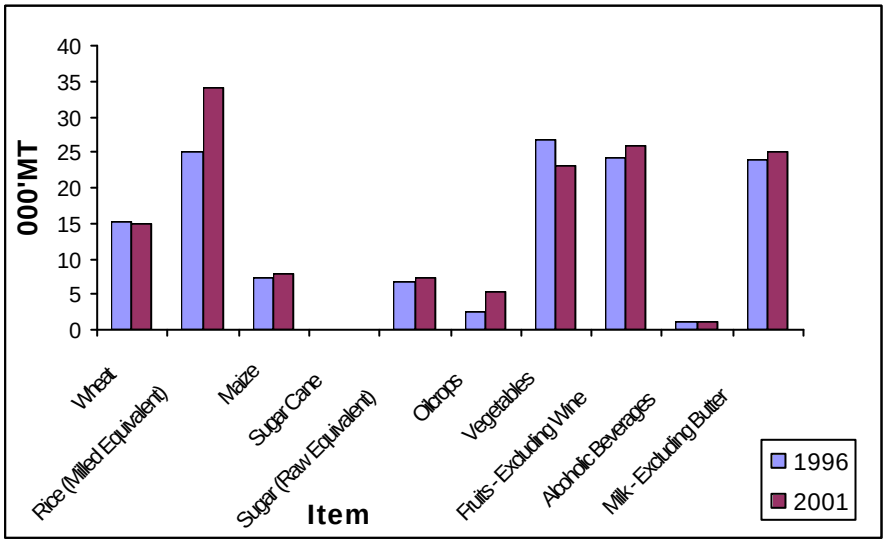
No consistent data on apparent consumption and trends in Singapore was available.

VI) BRUNEI DARUSSALAM

Brunei's population numbers around 350 thousand. GDP was US$ 6.5 billion in 2002 or US$18,600 per capita in purchasing power parity terms. GDP growth was 2 percent.

The main crops products consumed in 2001 (in metric tonnes) were rice, vegetables and fruits as well as wheat and maize. Apparent consumption of milk products was also significant. Levels of consumption of rice in 2001 increased from 1996 levels.

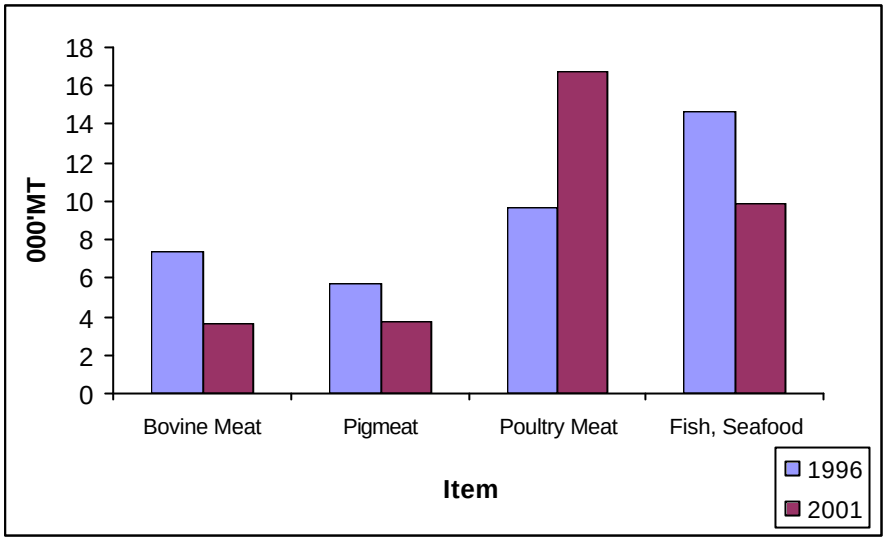
Figure A5.9 Domestic supply of key crops and processed food items for Brunei Darussalam 1996 and 2001



ITS Chart
Source: Food balance sheets for Brunei Darussalam FAOSTAT 1996 and 2001

Most consumed products in metric tonnes in 2001 for meat products were poultry meat, which increased from 1996 levels, followed by fish and seafood. Bovine meat and pig meat were also important.

Figure A5.10 Domestic supply of key meat & fisheries items for Brunei Darussalam 1996, 2001



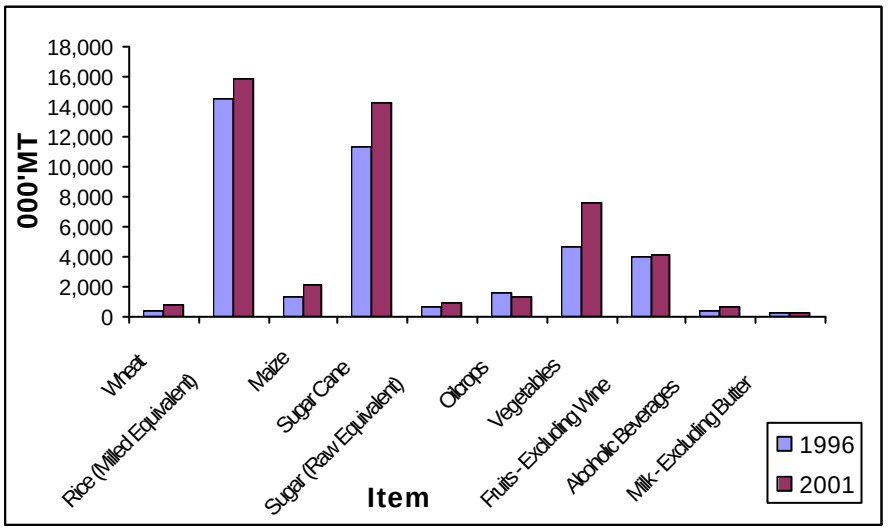
ITS Chart
Source: Food balance sheets for Brunei Darussalam FAOSTAT 1996 and 2001

VII) VIET NAM

Viet Nam's population in 2003 was 81.6 million. GDP in purchasing power parity terms was equal to US$183.8 billion or US$ 2,300 (2002 estimate). GDP growth was estimated at 7 percent in 2002.

Apparent consumption was greatest for of rice, sugar, fruits and vegetables in both 1996 and 2001.

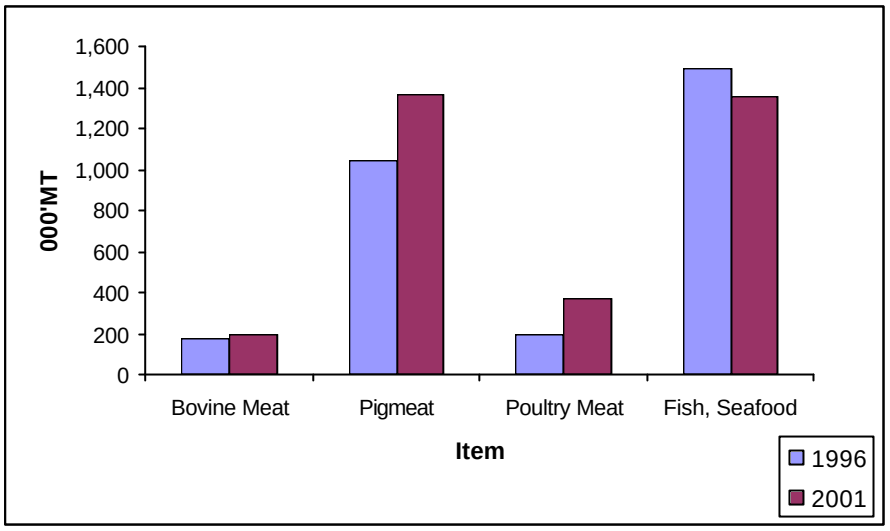
Figure A5.11 Domestic supply of key crops & processed food items for Viet Nam 1996 and 2001



ITS Chart
Source: Food balance sheets for Viet Nam FAOSTAT 1996 and 2001

Fish and seafood recorded the greatest levels of consumption, although pig meat was also consumed with levels increasing from 1996. Consumption of poultry meat also increased from 1996.

Figure A5.12 Domestic supply of key meat and fisheries items for Viet Nam 1996 and 2001



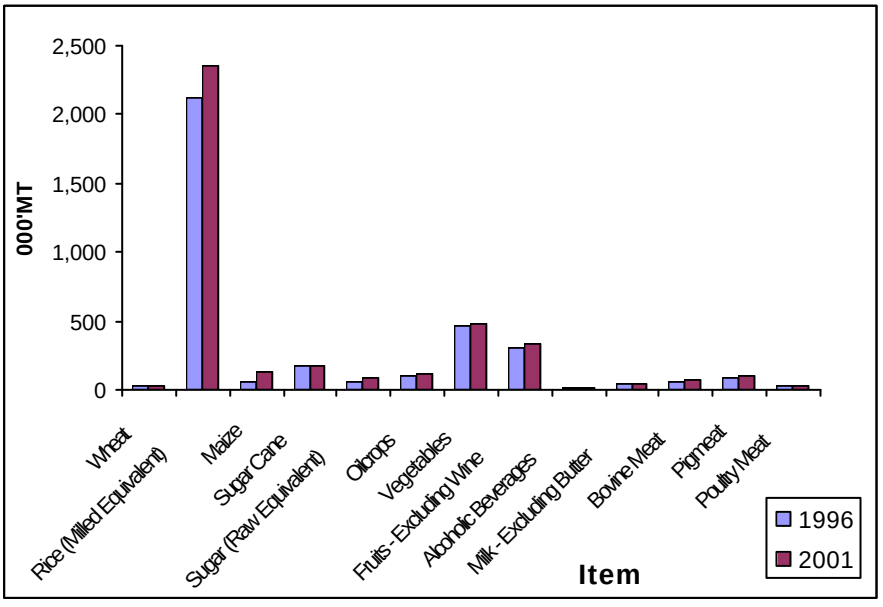
ITS Chart
Source: Food balance sheets for Viet Nam FAOSTAT 1996 and 2001

VIII) CAMBODIA

Cambodia's population was 13.1 million in 2002. The country's GDP in purchasing power parity terms was US$ 20.42 billion or US$ 1,600 per capita (2002 estimate). GDP growth was estimated at 4.5 percent per annum in 2002.

Apparent consumption is dominated by rice, vegetables and fruits. Consumption for meat and fish products is at much lower levels, but has increased since 1996.

Figure A5.13 Domestic supply of key food and agriculture items for Cambodia, 1996 and 2001



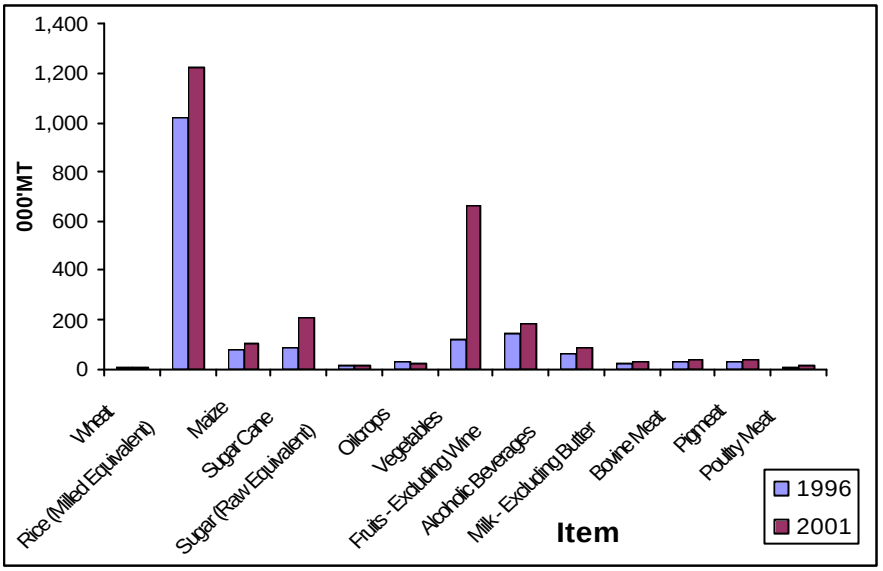
ITS Chart
Source: Food balance sheets for Cambodia FAOSTAT 1996 and 2001

IX) LAO PDR

Laos' population was 5.9 million in 2003. The country's GDP in purchasing power parity terms was US$ 10.4 billion, or US$ 1,800 per capita (2002 estimate). GDP growth was estimated at 5.7 percent per annum in 2002.

The apparent consumption situation and trends shows relatively high amounts of rice consumed, as well as vegetables, sugar and fruits. Alcoholic beverages were also significant. As for consumption of meat, levels were lower than for crops and processed crop products, but increased in 2001 from 1996.

Figure A5.14 Domestic supply of key food and agriculture items for Laos, 1996 and 2001



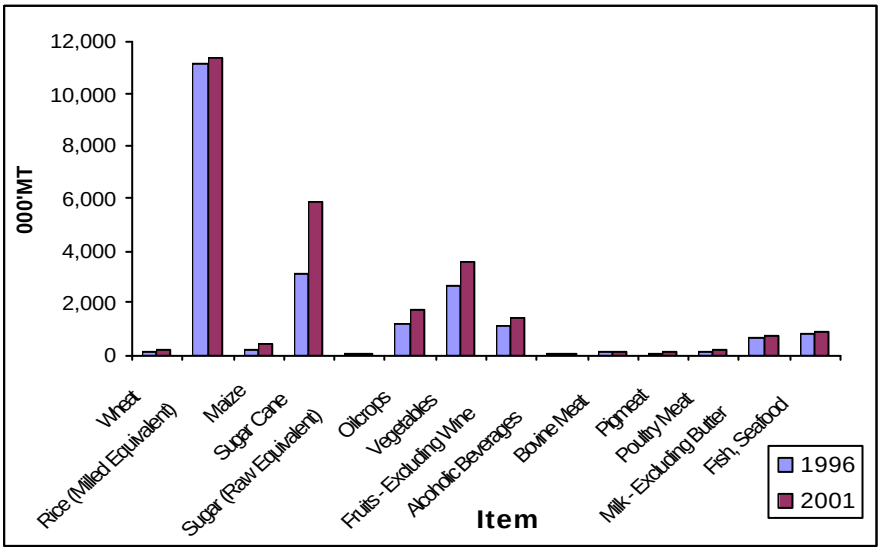
ITS Chart, Source: Food balance sheets for Lao PDR FAOSTAT 1996 and 2001

X) MYANMAR

Myanmar's population in 2002 was 48 million. The country's GDP in purchasing power parity terms was US$ 1,700 per capita in purchasing power parity terms (2002 estimate). GDP growth was estimated at 5.3 percent per annum in 2002.

Apparent consumption was dominated by rice, sugar cane[197], fruits and vegetables, although oil crops were also consumed. Milk products also featured in apparent consumption, as did fish and seafood. Figure 15 on consumption in Myanmar follows.

Figure A5.15 Domestic supply of key food and agriculture items for Myanmar, 1996 and 2001



Source: Food balance sheets for Myanmar FAOSTAT 1996 and 2001

[197] The conversion of sugarcane to sugar is only about 10%.

ANNEX 6 – OVERVIEW OF KEY AGRICULTURAL POLICIES BY COUNTRY

I) INDONESIA

Due to the economic crisis of 1997 and 1998, Indonesia accelerated economic reforms as matter of urgency. The removal of trade restrictions was at the heart of the recent reform process, although some restrictions have been reintroduced since then. Indonesia deregulated trade in most agricultural products (except rice) and sharply lowered tariffs[198].

In the agriculture sector, Indonesia' longstanding policy objective has been to foster food production in order to meet the demands of a growing population, and to achieve self sufficiency in the main staple foods, especially rice. The strategy for enhancing food outputs has been aimed at:

- Increasing farm accessibility and productivity;
- Reducing farming risks;
- Developing appropriate modern farming practices and sustainable farming systems;
- Augmenting participation by farmers; and
- Enhancing equity both in the distribution of income earning opportunities and in access to an adequate supply of food[199].

Under the Guidelines for National Development 1999-2004 (GBHN) agricultural business development has a strategic position in the economic development of Indonesia through the strengthening of food security based on diversified food commodities, local culture and institutions and the acceleration of rural development within the context of empowering the rural population, especially farmers and fishermen[200].

Since 1989 an export enhancement program and several self/reliance sufficiency programs have been launched. The *Gema PaLagung 2001* was aimed at increasing rice, soybean and maize production to attain self sufficiency by 2001; the *Gema Proteina* 2001 was to increase animal protein production by the same year and the *Gema Horitina* 2003 to increase national production of tropical horticulture by 2003. The aim of the *Protekan 2003* was to raise the export value of fishery products to US$ 10 billion by 2003[201].

II) MALAYSIA

The Third National Agricultural Policy (NAP) sets out the strategic directions for agricultural and forestry development of Malaysia to the year 2010. NAP focuses on new approaches to increase productivity and competitiveness, deepen linkages with other sectors, venture into new frontier areas as well as conserve and utilize natural resources on a sustainable basis.

The policy thrusts, strategies and implementation mechanisms aim to address national concerns on agriculture development and the whole economy. Specifically, they are centered on food security, productivity, inflation, private sector investment in agriculture, enhancement of exports, and conservation and sustainable use of natural resources. Human resource development (HRD) is also a feature.

Strategies for enhancing food security and combating inflation focus on increasing domestic food production, strategic sourcing of essential food products and improving marketing efficiency. Strategies for increasing productivity focus on promoting new products and future industries, maximizing land resources use, and increasing farm income. Mechanisms for the evolution of agriculture and forestry policies involve the establishment of agro-technology parks, establishment of incubation centers, land bank/land leases and promotion of private

[198] DFAT, Subsistence to Supermarket II Series 2002
[199] WTO Trade Policy Review of Indonesia
[200] *Ibid*
[201] *Ibid*

sector investment in agriculture. The strategies for enhancing agricultural exports focus on developing Malaysia as an international halal food hub, pursuing market access, improving direct marketing of export products and positioning Malaysia as a major regional distribution center for tropical floriculture products and aquarium fish. Human resource development activities focus on the provision of more skilled workers in emerging areas.

Specific policy directions have been established for paddy rice, livestock, fisheries, fruits and vegetables. Strategies identified with the Second Industrial Master Plan 1996-2005, deal with oil palm, rubber and cocoa. They provide for support in incentives, infrastructure, R&D, support services and HRD to encourage development in industrial crops, forestry and wood-based products. The thrust of development is focused on restructuring and modernizing the industry to enhance its global competitiveness.

III) THE PHILIPPINES

The Medium-Term Philippine Development Plan (MTPDP) 2001-2004 is the country's main planning document. Spearheaded by National Economic and Development Authority, the MTPDP exemplifies the antipoverty and overall development framework of the administration. The Plan seeks to expand and equalize access to economic and social opportunities, inculcate receptivity to change, and promote personal responsibility.

A major focus is on agriculture and fisheries modernization with social equity. To address poverty, which is mainly a rural phenomenon; the government aims to pursue a comprehensive rural development strategy based on productivity improvements, agrarian reform industrialization and sustainable development, consistent with the Agriculture and Fisheries Modernization Act (AFMA). The MTPDP is updated every time there is a change in the country's leadership.

AFMA serves as the country's blueprint for agriculture modernization and rural development. It prescribes urgent and related measures for modernization with emphasis on enhancing profitability and improving competitiveness. It defines the necessary policy environment and deliberate public investment stream that will transform the rural economy into one that is modern, science and technology-based, more integrated into the national and international markets.

To implement AFMA, the government is pursuing the *Ginintuang Masaganang Ani – GMA ("Golden Bountiful Harvest")* as its banner program for agricultural development. The major thrusts of the program are food security and poverty alleviation. It also encompasses priority programs focus on rice, corn, sugarcane, coconut, high value commercial crops, livestock and fisheries.

IV) THAILAND

A range of Thai agricultural policies have currently been identified as the focus of interest both domestically and globally. These include policies relating to bio-technology; agriculture, trade and the environment; food safety; traceability, risk management and communication. The Thai Government believes that existing WTO provisions adequately address environmental concerns related to trade.

The Thai Government has targeted 2004 as the year to focus on improving standards for food safety. Particular areas of focus are monitoring farming and food processing, certifying farms and food processing plants, and setting up quarantine points along borders. Policies relating to traceability, risk management and communication on food safety are still in relative infancy in Thailand. However the Thai Industrial Standard Institute is conducting research into the areas of pre-marketing control; pots-marketing monitoring and surveillance, establishing a traceability system.

The Government also has a development strategy for the agriculture sector which focuses on generating employment for rural households, especially those that lack income stability. The Government intends to induce employment generation through investments in natural resource conservation, special agro-economic zones, and non-farm rural activities. The Government's agriculture sector objectives are currently embodied in a framework for

restructuring the agriculture sector approved by the Cabinet in May 1998. The twin objectives of sustaining agricultural growth and enhancing export competitiveness are underpinned by the policy measures under the Agriculture Sector Reform Program[202]. Areas of strategic focus include community-based rural development; rehabilitation of rural areas and poverty reduction; and river basin environment and natural resources management.

V) SINGAPORE

Singapore's agriculture sector is small, relatively insignificant in terms of its contribution to GDP and quite liberalized. As a result, Singapore's polices for the services and manufacturing sectors have taken priority given their relative importance to employment and the economy.

Singapore's underlying economic strategy has been to provide an environment conducive to business, with competitive prices and tax incentives, and more importantly, underpinned by political stability, social cohesion, stable financial systems and transparent legal and corporate frameworks. In response to the Asian currency crisis, Singapore has taken a proactive stance to declines in output and productivity in the long run. Six strategic responses were noted, including ensuring the framework for economic activity continues to function effectively, diversifying exports out of the region; specify steps to improve competitiveness including reductions on taxes and overall costs of production and capacity building and market diversification[203].

Because of the limited amount of land devoted to agriculture, Singapore has concentrated on productivity improvements to increase output. Land use for farming is managed by the Primary Production Department (PDD) in the Ministry of National Development and has been allocated mainly to six agrotechnology parks covering 1,465 hectares.

As rice is a staple food for Singaporeans and there is no domestic production, the Singapore government has also sought to ensure that supplies are sufficient to meet consumer demand. All rice imports are subject to non automatic licensing for food security reasons.

Like agriculture, fish farming in Singapore is managed by the PDD under the fisheries act of 1966. Commercial fishing is regulated through licenses issued by the PDD.

VI) BRUNEI DARUSSALAM

Brunei's agricultural polices aim to increase the importance of the agricultural sector to move towards self-sufficiency through food security measures and through the pursuit of the welfare of farmers community.

The government has also identified issues and strategies to be addressed in the sector such as ensuring and adequate supply of safe and high quality food; maximizing land utilization; strengthening competitiveness; enhancing private sector investment in agriculture sector; transforming small-scale farms into commercialized farms; and ensuring sustainable agriculture development. In the meantime, agricultural policies are mainly focused on promoting integrated or mixed farming in agriculture, spurring market-oriented production and enhancing production of quality and safe agricultural products. Other strategies focus on import substitution for self-sufficiency in the production of some agricultural commodities such as poultry and vegetables.

Under Brunei's 8th National Development Plan in Agriculture (2001-2005), agriculture projects under its Rural Agricultural Development Programs focus on the development of the crop industry, development of poultry and livestock industry, agricultural research and development, and development in rural agriculture.

VII) VIET NAM[204]

The recently completed Comprehensive Poverty Reduction and Growth Strategy translates a vision of transition for Viet Nam towards a market economy with socialist orientation into

[202] ADB Country Assistance Plans, Thailand, Part III. Sector Strategies
[203] WTO, Trade Policy Review of Singapore
[204] Project VIE/95/024, UNDP and the Government of Switzerland

concrete public actions[205]. It commits Viet Nam to full openness to the global economy over the coming decade, and the creation of a level playing field between the public and private sectors, emphasizing that the transition should be pro-poor and give strong emphasis to poverty reduction and social equity. It involves all the relevant agencies and sectors in the economy.

Polices in the agriculture sectors thus far have been influenced by a revitalization of agriculture polices, the shift from collectivization to land-use rights of farmers, opening of market opportunities to farmers and conferment of rights in agricultural production and trade. Polices have focused on the agricultural sector generally and have also been targeted at directly promoting agricultural production.

The main polices relate to land use, tax policy, investments in the agricultural sector, development of rural credit networks, liberalization of trade policies and development of a nation- wide agricultural extension system.

The reform process will continue as Viet Nam looks towards accession to the WTO.

VIII) CAMBODIA

Cambodia's agricultural sector development policy is based on two related objectives: ensuing food security for all citizens of the nation and achieving sustained growth in agricultural production, processing and marketing.

The principal objective of the Government of Cambodia is to achieve development with equity and social justice through sustainable economic growth, human resources development and sustainable use of the country's natural resources. Priority is given to poverty reduction and to improving the welfare of the population through programs to increase agricultural production and rural development.

The strategic framework of the Ministry of Agriculture, Fisheries and Forestries focuses on the following components:

- Maintenance of an appropriate macroeconomic framework and a favorable agricultural policy and institutional environment;
- Accelerated and sustainable irrigation development;
- Development of highly productive and diversified farming systems;
- Accelerated program for land titling and land distribution;
- Strengthening essential agricultural support services;
- Provision of essential social services and public goods;
- Expansion of livestock production with emphasis on animal health services, nutrition, and range management;
- Improved management of appropriate technologies for rice-fish farming and aquaculture; and
- Direct support and protection to the poor through targeted programs.

IX) LAO PDR

The 1996 – 2000 Lao Social Development Plan lays down the Government's objectives for the period. The development strategy sets out five general guidelines:

- Continued promotion of the market oriented economy;
- Development of the agriculture, industrial and service sectors;
- Development of regional economic structure;
- Concentration on rural development;

[205] Viet Nam Development Report 2003

- Expansion of external economic cooperation.

For the development of the agriculture sector, production in all areas is to be fostered. For food and agriculture, six main programs have been identified. The first is food production and the aim is the increased production of rice. In 1997 and 1998 a major program was undertaken to expand irrigation and infrastructure to expand the production of rice in the Lao PDR. A second program is to stabilize and reduce the incidence of shifting cultivation. The third program is to enhance commercial production. The Lao PDR Memorandum on Foreign Trade submitted to the WTO[206] notes that of particular interest is the promotion of food products for export, including vegetables, livestock and commercial crops such as coffee. The fourth program is related to the development of irrigation systems. The fifth program concerns agriculture and forestry research. The sixth program is aimed at human resource development in this area.

The Memorandum reports[207] that the Plan has generally been followed. In the agriculture sector, major expenditure has been undertaken to expand irrigation and to improve rice production, with the aim of achieving self sufficiency in rice production. Output of cash crops such as coffee, sesame seeds and tobacco has also continued to increase.

X) MYANMAR

The government's policy objectives to boost agricultural production include development of land resources for agricultural expansion, provision of adequate irrigation water for agricultural purposes, support for agricultural mechanization, accelerated transfer of improved new technologies and development and utilization of high yielding quality seeds.

Several major activities have been initiated by the government. These include launching High Technology Rice Production Townships, High Technology Demonstration Plots Bio-fertilizer Production and Utilization, Integrated Pest Management, Model Mechanized Farming Villages and Post Harvest Technology

Myanmar remains committed to the achievement of food security for all. Accordingly policies are laid down to formulate the short-term and long-term plans, aiming at eradicating poverty, improving physical and financial access to enable sustainable food security, reinforcing the productive capacity of the farmers, (including vulnerable and disadvantaged groups) and for combating any environmental threat to food security.

With a view to improve the agriculture sector and to uplift the national economy, Myanmar's agriculture policy was established in 1992. It focuses on:

- production of food crops and industrial crops with no restriction;
- production of industrial and plantation crops on a commercial scale;
- expansion of agriculture production in cultivable waste land for private investors and farmers;
- participation of the private sector in the distribution of farm machinery and other farm inputs; and
- utilization of agriculturally unproductive lands for other production programs.

The objectives of the policy are to achieve surplus in paddy production, to be self sufficient in edible oil production and to increase the production and export of pulses and industrial crops. In the process of implementing the agricultural policy, Myanmar has five strategic approaches which include development of new agricultural land, provision and adoption of agricultural machineries, provision of irrigation water, development and adoption of modern agro-technology, and development and utilization of modern crop varieties.

Myanmar has also developed policies to address poverty eradication which include initiatives such as providing land ownership to the growers of perennial crops.

[206] Lao PDR Memorandum oven foreign trade regime
[207] *Ibid*

ANNEX 7 – MATRIX OF ACTIVITES AND ACTION PROGRAMS AGAINST STRATEGIC THRUSTS

Strategic thrust	Main Action Programmes	Activities undertaken
Strengthening food security arrangements in the region;	Strengthening of ASEAN food security statistical database. Development of a Common Framework to Analyze and Review Regional Food Trade Policies in the Light of the AFTA to Enhance Intra-ASEAN Food Trade Strengthening the Food Marketing System of Agricultural Cooperatives for Enhancing Food Security in ASEAN Study on Long-term Supply and Demand Prospects of Major Food Commodities (rice, corn, soybean, sugar, pulses and oilseeds) in ASEAN Establishment of a Regional Food Security Information System for ASEAN Review of the Agreement on the ASEAN Food Security Reserve	The Agreement on the ASEAN Food Security Reserves The Agreement on ASEAN Emergency Rice Reserves Establishment of the Food Security Reserve Board to provide supervision and coordination in the implementation of the ASEAN food security reserve, The Pilot Project on East Asian Emergency Rice Reserve (EARR) The ASEAN Food Security Information System (AFSIS)
Enhancement of international competitiveness of ASEAN food and agricultural products/commodities;	Monitoring of the implementation of the CEPT Scheme for AFTA for agricultural and forest products Intensification of cooperation in production and processing technology development and transfer and enhancement of development, harmonization and adoption of quality standards for products. For example, through: o The development and adoption of quality assurance systems for selected tropical fruits which re traded. o Implementation of ASEAN guidelines on halal food for both intra and extra AASEN trade o Harmonization of phytosanitary measures for crop products o Harmonization of MRLs of commonly used pesticides for vegetables that are widely traded o Harmonization of regulations for agricultural products derived from biotechnology o Establishment of an accreditation scheme for establishments involved in the production of livestock and livestock products that are widely traded between ASEAN Member Countries o Harmonization of fisheries sanitary measures among ASEAN Member Countries. o Harmonization of regulations for agricultural products derived from biotechnology.	ASEAN Animal Health Trust Fund ASEAN Technical Working Group on agricultural research and development. • Activities aim to improve the knowledge flow and exchange of information on agriculture R&D in ASEAN. Strategic alliances among agricultural cooperative organizations for data and information exchange, • agricultural production, dairy farming, coconut by-product industry, organics fertilizer, agro tourism, beef farming and the cooperative productivity enhancement program. ASEAN Halal food program • currently working an Accreditation scheme for the halal food establishment. ASEAN Framework Agreement on Facilitation of Goods in Transit Harmonization of Pesticide MRLs Pesticides database Standards in the Livestock industry • standards for vaccines use in the livestock industry • procedures and guidelines related to vaccine productions which are published for the livestock industry in the region. • criteria for accreditation for livestock establishment for chick and duck eggs,

	Conduct of study to strengthen competitiveness of ASEAN food, agricultural (and forest) products in international markets.	cattle and buffalo for slaughter and poultry for breeding. Guidelines in the Fisheries sector • Manual on Good Shrimp Farm Management Practices and the harmonization of hatchery production of tiger prawns in ASEAN. • Adopted the "Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals and the Beijing Consensus and Implementation Strategy". SPS measures on crops, fisheries and livestock products • Protocol 8 provides for harmonization and simplification of custom procedures, the establishment of a customs transit system, establishment of SPS measures to facilitate the movement of goods and ensure their compliance with relevant laws and regulations. • continued to work on harmonization of testing and quarantine producers for groupers in the area of aquaculture development.
Enhancement of ASEAN cooperation and joint approaches on international and regional issues;	Identification of emerging issues and problems affecting trade in ASEAN products and formulate joint strategies/positions to enhance ASEAN's competitive posture and to sustain the expansion of ASEAN's exports to international markets Coordinating and strengthening joint positions in international and regional organizations such as WTO, FAO, APEC, Codex and ASEAN dialogue partners;	Regular consultations with the AEM and the SEOM to enhance coordination of ASEAN positions during dialogues with trading patterns such s Australia, the US and the EU. Task force established to formulate common ASEAN positions in CODEX Committees and the Codex Commission. Work on a Uniform Commodity Contract by using a simplified and standard agreement.
Development and acceleration of transfer and adoption of new technologies;	Conduct of collaborative research to develop new/ improved technology in agricultural production, post harvest and processing activities and sharing of research results and available technology. Strengthening programmes in agricultural (and agro-forestry) technology transfer, training and extension to increase productivity of food, agriculture (and agro-forestry). Empowering agricultural rural communities through enhanced human resource development.	Quality assurance system for fresh and minimally processed A SEAN fruits (QASAF), Collaboration in food handling (through the ASEAN halal food program noted above), Public awareness program on GMOS Production of various manuals on shrimps farming and livestock Collaborative projects with SEAFDEC Agreement to establish an ASEAN technical working group on agricultural Research and Development. Formal cooperation with the network of Aqua culture centre in Asia and the Pacific (NNACA) in doer to promote the application of appropriate technologies for sustainable aquaculture development and aquatic resources management. • includes harmonization of fisheries SPS measures and strengthening of national and regional capacities to control aquatic animal disease. Integrated Pest Management (IPM) on fruits and vegetables carried out by ASEAN Member Countries. Guidelines on the Risk Assessment of Agriculture-related to Genetically Modified Organisms

Enhancement of private sector involvement;	Collaboration in the establishment of a networking system to promote investment and joint venture opportunities in ASEAN. Establishment of strategic alliances among the private sector. Continuous consultation with the private sector at all meetings of working groups, SOM-AMAF and AMAF, particularly with regard to trade issues in international and regional fora. Promotion of Private Sector Investment in ASEAN	R & D and promotional activities in agriculture and forestry products scheme Strategic alliances among agricultural cooperatives in ASEAN. • includes data and information exchange, agricultural production and marketing, dairy farming, agro-tourism, beef farming and cooperative productivity enhancement programs. Strategic alliances through information exchange among agricultural cooperatives have been published online.
Management, sustainable utilization and conservation of natural resources.	Establishment of an information network for the sharing of information, such as inventory of resources on species and genetic diversity. Development of an ASEAN framework pertaining to safeguard and accessibility to genetic materials and other biological resources Promotion of sustainable development through natural resources management Coordination of Common Position on Selected Environmental and Conservation Issues Related to Trade in ASEAN Agricultural and Forest Products	Resolution for Sustainable Fisheries for Food Security for the ASEAN region. • plan of action of sustainable fisheries for food security set up to give effect to the agreement.

ANNEX 8 – ABOUT THE AUTHORS

The project ***A Background Paper for the Strategic Plan of Action on ASEAN Cooperation in Food and Agriculture (2005 – 2010)*** was jointly managed and conducted by the International Trade Strategies Pty Ltd and the Center for Food and Agri-Business of the University of Asia and the Pacific. **International Trade Strategies** is a consultancy based in Melbourne, Australia. Its core business activities comprise international trade consulting, development assistance, environmental policy consulting and strategy and communication. **The Center for Food and Agri Business (CFA**) is the agri-food research and instruction arm of the University of Asia and the Pacific (UA&P) School of Management. It has been at the forefront of food and agribusiness research since 1983. It conducts industry, policy and strategic studies geared at enhancing the agri-food sector's competitiveness.

The ITS CFA Team was lead by ITS Managing Director, Mr. Alan Oxley, and CFA Executive Director, Dr Rolando Dy.

Prior to establishing ITS, **Alan Oxley** was Australia's Ambassador to the GATT (now WTO) and was instrumental in setting up the Cairns Group of Agricultural exporters. Mr. Oxley is also Chairman of the Australian APEC Study Centre, one of Australia's research think tanks on trade and economic issues, based at Monash University in Melbourne.

Dr. Rolando Dy has specialist qualifications in agriculture, agri-food business, agrarian reform and contract farming. He has a Ph.D. in development management (majoring in economics) and a Masters of Science in industrial economics. Before being appointed Director of the CFA, he served previously as Director for the Institute for Agribusiness Development and Policy and also as head of the Agribusiness Unit at the Center for Research and Communication. He is currently Chair of the Secretary's Technical Advisory Group for the Department of Agriculture in the Philippines.

Mr. Oxley and Dr. Dy were supported by a research team led by ITS associate consultant, **Dr. Selwyn Heilbron** and research teams in Melbourne and the Philippines. Dr Heilbron is a senior business economist with special expertise in international and Australian agribusiness industries. He has served as Research Consultant with the World Bank, Washington DC, Senior Economist with the Department of Trade, Canberra, and as Manager (Planning) and Chief Economist of Elders Agribusiness, Melbourne.

Dr. Heilbron was supported by lead ITS researcher and manager for the project, **Ms. Kristen Osborne,** who has expertise in researching and analyzing trade trends, barriers and regulatory controls on trade as they relate to food and agriculture and expertise in WTO agreements and trade policy relating to standards and non tariff control on trade. **Mr. Steven Macmillan** of ITS also provided research for the project. He is familiar with and experienced at researching and analyzing industry and international trade trends and issues in the food and agricultural sector, including research on trade barriers, market access and competitiveness issues in agricultural markets.

The CFA research team comprised **Ms. Florence E Mojica** and **Mr. Senen U Reyes**, senior agribusiness and management specialists at the CFA who have extensive expertise and experience conducting economic, strategic, industry and financial analyses in the food and agriculture sectors. **Ms. Marie Annette S. Galvez** and **Miss Ditas R. Macabasco**, who both have Masters Degrees in agricultural economics and expertise in research and analysis in food and agribusiness, were also an integral part of the team.

REFERENCES

Asian Development Bank (2002), *Country assistance plan for Thailand, part III. Sector strategies*, available at www.adb.org

Asian Development Bank (2003), *Key indicators report*, Asian Development Bank, Manila

Asian Development Bank, ANZDEC and International Food Policy Research Institute (2000), *Viet Nam Agricultural Sector Program, Phase 1 technical report*, Asian Development Bank, Manila

Auffret, Philippe (2003), *Trade reform in Viet Nam: opportunities with emerging challenges,* Policy Research Working Paper, WPS3076, World Bank, Washington DC

Australian APEC Study Centre (2003), *European unilateralism: environmental trade barriers and the rising threat to prosperity through trade*, Monash University, Melbourne

Australian Department of Foreign Affairs and Trade (2002), *Agrifood globalization and Asia, Volume II: Changing agrifood distribution in Asia*, Subsistence to Supermarket II Series, Department of Foreign Affairs and Trade, Canberra

Australian Department of Foreign Affairs and Trade (2002), *Agrifood globalization and Asia Volume IV: Asia and the agrifood trade framework*, Subsistence to Supermarket II Series, Department of Foreign Affairs and Trade, Canberra

Ben-David, D. and Winters, Alan (2000), *Trade, income disparity and poverty*, World Trade Organization, Geneva

Cambodia Development Research Institute (2001), *Food security in an Asian transitional economy: the Cambodian experience,* CDRI, Phnom Penh

de Haen, H. and Konandreas, P. (1998) *Is freer agricultural trade harmful for national food security? The case of least developed and net food-importing developing countries*, Food and Agriculture Organization of the United Nations, Rome

Dy, Rolando (2003), "Asian agriculture and agribusiness: a study of changing competitive advantage," *Food and agri business monitor*. Volume XIX, No. 11

Eisuke, Sakakibara B. & Yamakawa, Sharon (2003), *Regional integration in East Asia: challenges and opportunities - Part II : Trade, finance and integration*, Policy Research Working Paper, WPS3079, World Bank, Washington DC

Food and Agriculture Organisation of the United Nations (2000), *Agriculture, trade and food security: issues and options in the WTO negotiations from the perspective of developing countries. Report and papers of an FAO symposium held at Geneva on 23-24 September 1999*, FAO, Rome

Food and Agriculture Organization of the United Nations (1999), "Assessment of the impact of the Uruguay Round on agricultural markets"*. FAO Committee on Commodity Problems 62nd Session, Rome 12-15 January*, FAO, Rome

Food and Agriculture Organization of the United Nations (2000), "Issues and Options in the Forthcoming WTO Negotiations From the Perspective of Developing Countries," *Symposium on Agriculture, Trade and Food Security, Geneva September 1999,* FAO, Rome

Food and Agriculture Organization of the United Nations (2001), *Country profiles 2001* at www.fao.org

Food and Agriculture Organization of the United Nations (2003), *Integrated natural resources management to enhance food security, environment and natural resources*, Working Paper no. 16, FAO, Rome

Food and Agriculture Organization of the United Nations (2003), "Some trade policy issues relating to trends in agricultural imports in the context of food security"*, FAO Committee on Commodity Problems 64th Session, Rome 18-21 March,* FAO, Rome

Food and Agriculture Organization of the United Nations (2003), *Project on livestock industrialization, trade and social-health-environment impacts in developing countries*, FAO, Rome

Food and Agriculture Organization of the United Nations (2003), *The State of food insecurity in the world 2003*, Food and Agriculture Organization, Rome

Food and Agriculture Organization of the United Nations. Agricultural and Development Economics Division (ESA) (2003), "Food security module Indonesia", *FAO International Conference on the Roles of Agriculture in Developing Countries, 20-22 October, Rome*, FAO, Rome

Food and Agriculture Service Online (2003) *Thailand: hot topics in the tropics: Thai agriculture*, GAIN Report TH3039, United States Department of Agriculture, Washington DC available at http://www.fas.usda.gov/gainfiles/200304/145885140.pdf

Foreign Agriculture Service Online (2003) *Thailand: key issues facing U.S. food and agricultural exports to Thailand*, GAIN Report TH3054, United States Department of Agriculture, Washington DC, available at http://www.fas.usda.gov/gainfiles/200305/145885544.pdf

Friedenberg, Steven G., Jordan, Charles & Mohindra, Vivek (2004) "Easing coffee farmers' woes." *The McKinsey Quarterly*, Number 2

Fukase, Emiko & Martin, Will (2001), *Free trade area membership as a stepping stone to development : the case of ASEAN*, World Bank, Washington DC

Gehlhar, Mark and Coyle, William (2001), "Global food consumption and impacts on trade patterns" in Regmi, Anita (ed.) *Changing structure of global food consumption and trade (WRS- 01-1),* United States Department of Agriculture. Economic Research Service. Market and Trade Economics Division, Washington DC

Gill, G., Farrington, J., Anderson, E., Luttrell C., Conway, T., Saxena, N.C. and Slater, R. (2003) *Food security and the millennium development goal on hunger in Asia*, Overseas Development Institute, London

Goletti, Francesco, Minot, Nicholas and Berry, Philippe (2001) *Marketing constraints on rice exports from Viet Nam*, IFPRI, Washington DC

Hannesson, Rognvaldur (2001), *Effects of liberalizing trade in fish: Fishing services and investment in fishing vessels*, Organization for Economic Cooperation and Development, Paris

Ingco, Merlinda D. (1997) *Has agricultural trade liberalization improved welfare in the least-developed countries? Yes*, World Bank, Washington DC

Institute for Southeast Asian Studies (2004), *Regional outlook: Southeast Asia 2004-2005.* ISEAS, Singapore

International Food Policy Research Institute (2002) *Achieving sustainable food security for all by 2020: Priorities and responsibilities*, IFPRI, Washington DC

International Monetary Fund (2000), *Lao People's Democratic Republic: Recent economic developments*, IMF Staff Country Report No.00/03, IMF, Washington DC

Konandreas, P. and Greenfield, J. (1998), "Policy options for developing countries to support food security in the post Uruguay Round period," *Canadian Journal of Development Studies* 19: 141-159

Kristensen, Joern (2001) "Food security and development in the Lower Mekong River Basin: A challenge for the Mekong River Commission" Paper delivered to *Asia and Pacific Forum on Poverty: Reforming policies and institutions for poverty reduction Manila 5-9 February,* Asian Development Bank, Manila

Larson, Donald F. & Plessmann, Frank (2002), *Do farmers choose to be inefficient? Evidence from Bicol, Philippines*, Policy Research Working Paper, WPS2787, World Bank, Washington DC

Messerlin, Patrick (2003), *Agriculture in the Doha agenda*, Policy Research Working Paper, WPS 3009, World Bank, Washington DC

Morrison, J.A. & Pearce, R. (2000), *The impact of further trade liberalization on the food security situation in developing countries*, Organisation for Economic Cooperation and Development, Paris

Mundlack, Yair, Larson, Donald F. & Butzer, Rita (2002), *Determinants of agricultural growth in Indonesia, the Philippines and Thailand*, Policy Research Working Paper, WPS2803, World Bank, Washington DC

Organisation for Economic Cooperation and Development (2001), *The Uruguay Round Agreement on Agriculture: The policy concerns of emerging and transition economies*, OECD, Paris

Organisation for Economic Cooperation and Development (2003), *Accessing agricultural biotechnology in emerging economies*, OECD, Paris

Organisation for Economic Cooperation and Development (2003), *OECD agricultural outlook: 2003/2008*, OECD, Paris

Organisation for Economic Cooperation and Development (2003), *The development dimension of trade and environment: case studies on environmental requirements and market access*, OECD, Paris

Organisation for Economic Cooperation and Development. Directorate for Food, Agriculture and Fisheries (2003), *Agro-food products and technical barriers to trade: a survey of issues and concerns raised in the WTO's TBT Committee*, OECD, Paris

Organization for Economic Cooperation and Development (2001), *Direct investments in the fishing industry*, OECD, Paris

Philippines Institute for Development Studies (1992) *ASEAN economic cooperation 1992-03*, PIDS/ASEAN Secretariat, Manila

Podbury, T & Roberts, I. (2003), *Opening agricultural markets through tariff cuts in the WTO*, Australian Bureau of Agriculture and Resource Economics, Canberra

Reyes, Senen (2003), "Slipping Into a Healthier Vegetable Oils Industry," *Food and Agri Business Monitor*, Volume XIX, No. 9

Roberts, D. and Unnevehr, L. (2003), *Resolving trade disputes arising from trends in food safety regulation: the role of the multilateral governance framework*, United States Department of Agriculture. Economic Research Service, Washington DC

Rosegrant, Mark W., Paisner, Michael S., Meije, Siet & Witcover, Julie,(2001), *2020 global food outlook: trends, alternatives, and choices*, International Food Policy Research Institute, Washington DC

Schmitz, Andrew (2003), *Commodity outlook 2003: US and world sugar markets*, University of Florida. Institute of Food and Agricultural Sciences, Gainsville, Florida

The Cartagena Protocol on Biosafety to the Convention on Biological Diversity, available at www.unep.org

The Economist, December 4, 1993

The Ministry of Agriculture and Rural Development Viet Nam (2001), *Annual report: Viet Namese agriculture* , MARD, Hanoi

The Ministry of Agriculture and Rural Development, Viet Nam & Food and Agriculture Organization of the United Nations (2000), *The Competitiveness of the agricultural sector of Viet Nam: A Preliminary analysis in the context of ASEAN and the AFTA. Technical Cooperation Project*, MARD, Hanoi

United Nations (2002), *Natural resource aspects of sustainable development in Myanmar agriculture*, UN Department of Economic and Social Affairs, Division of Sustainable Development, available at www.un.org/esa/agenda21/natlinfo/countr/myanmar/natur.htm.

United Nations Conference on Trade and Development (2000), "Economic growth and social trends" in *The Least developed countries report 2000*, available at www.unctad.org/en/docs/ldc00_part1.en.pdf

United Nations Development Program (1999), *Assessment of the conformity of Viet Nam's agricultural policies with regulations of regional and multilateral agreements*, UNDP, New York

United Nations, World Bank, International Monetary Fund (2003), "Medium-term projections for agricultural commodities", *FAO Committee on Commodity Problems 64th Session, Rome, 18 - 21 March,* FAO, Rome

United States Department of Agriculture. Economic Research Service (2003), *Food security assessment, GFA – 14*, USDA, Washington DC

United States Viet Nam Trade Council (2003), *Sanitary and Phytosanitary Study Mission, Trade Law Exchange and Partnership Program*, United States Agency for International Development, Washington DC

US Department of Agriculture. Economic Research Service (1999), *Agricultural outlook*, December

US Department of Agriculture. Foreign Agricultural Service, *Oil seeds: World market and trade*. Various issues

Van Der Walle, Dominique & Cratty, Dorothy Jean (2003), *Is the emerging non-farm market economy the route out of poverty in Viet Nam?* , Policy Research Working Paper, WPS2950, World Bank, Washington DC

Viet Nam Ministry of Trade (2002), *Overview of Viet Nam's non-tariff barriers*, MOT, Hanoi

Viet Nam. Ministry of Agriculture and Rural Development (1999), *Overview of the agricultural sector in Viet Nam: Implications for the WTO Agreement on Agriculture*, Project VIE/95/024 funded by UNDP and the Government of Switzerland, UNDP, Hanoi

Watkins, Kevin (1997), *Globalization and liberalization: Implications for poverty, distribution and inequality*, UNDP Occasional Paper 32, UNDP, New York available at http://www.undp.org/hdro/papers/ocpapers/oc32a.htm

Wilson, John S. & Otsuki, Tsunehiro (2001), *Global trade and food safety - winners and losers in a fragmented system*, Policy Research Working Paper, WPS 2689, World Bank, Washington DC

Wilson, John S. (2002), *Liberalizing trade in agriculture: developing countries in Asia and the post-Doha agenda*, Policy Research Working Paper, WPS 2804, World Bank, Washington DC

World Bank (1996 and 2000), *Global commodity outlook*, November 1996 and April 2000, World Bank, Washington DC

World Bank (2000), *Trade blocs*, Policy Research Report, World Bank, Washington DC

World Bank (2001), *Free trade area membership as a stepping stone to development : the case of ASEAN*, World Bank, Washington DC

World Bank (2002), *Agriculture, trade, and the WTO: creating a trading environment for development*, World Bank, Washington DC

World Bank (2002), *Philippines - Diversified farm income and market development project*, Project Information Document, Report PID11477, World Bank, Washington DC

World Bank (2003 and 2004), *Global economic prospects*, World Bank, Washington DC

World Bank (2003), *Indonesia - Second agricultural research management project*, Vol. 1 of 1, Implementation Completion Report, Report No. 25940, World Bank, Washington DC

World Bank (2003), *Lao PDR economic monitor*, World Bank, Vientiane

World Bank (2003), *Towards a private sector led growth strategy for Cambodia*, Report prepared by Global Development Solutions, June, World Bank, Phnom Penh

World Bank see also Wilson, John S., Messerlin, Patrick, Larson Donald F., Mundlack, Yair, Auffret, Philippe, Van Der Walle, Dominique, Eisuke, Sakakibara B., Fukase, Emiko, Ingco, Merlinda?????

World Bank, ADB (2003), *Viet Nam - delivering on its promise*, World Development Report 2003, World Bank, Washington DC

World Health Organization, Food and Agriculture Organisation of the United Nations (2002), *Diet, nutrition and the prevention of chronic diseases: report of a Joint WHO/FAO Expert Consultation, Geneva, 28 January – 1 February*, WHO Technical Series 916, WHO, Geneva

World Trade Organization (1999), *Accession of Cambodia, Memorandum on the Foreign Trade Regime (WT/ACC/KHM/2)*, WTO, Geneva

World Trade Organization (1999), *Symposium on Agriculture, Trade and Food Security: Synthesis of Case Studies" X3065/E, September* WTO, Geneva

World Trade Organization (1999), *Trade policy review for the Philippines: Report by the Secretariat, (WT/TPR/S/59)*, WTO, Geneva

World Trade Organization (2000), *Trade policy review for Singapore: Report by the Secretariat (WT/TPR/S/67),* WTO, Geneva

World Trade Organization (2001), *Accession of the Lao People's Democratic Republic, Memorandum of the Foreign Trade Regime (WT/ACC/LAO/3),* WTO, Geneva

World Trade Organization (2001), *Trade policy review for Brunei Darussalam: Report by the Secretariat, (WT/TPR/S/84),* WTO, Geneva

World Trade Organization (2001), *Trade policy review for Malaysia: Report by the Secretariat (WT/TPR/S/92*), WTO, Geneva

World Trade Organization (2003), *Trade policy review for Indonesia: Report by the Secretariat (WT/TPR/S/117)*, WTO, Geneva

World Trade Organization (2003), *Trade policy review for Thailand: Report by the Secretariat (WT/TPR/S/123)*, WTO, Geneva

Zink, Don L. (1997), "The impact of consumer demands and trends on food processing", *Emerging infectious diseases*, Vol 3, No 4, October-December

SOURCES OF STATISTICS

Asian Development Bank (2003) Key Indicators Report, www.adb.org

Economic Research Service (ERS), United States Department of Agriculture, www.usda.gov

Food and Agriculture Organization of the United Nations data 1999 – 2003 sourced from FAOSTAT Agriculture and Fisheries, www.fao.org

Food and Agriculture Organization of the United Nations, Country Profiles 2001 at www.fao.org

Food and Agriculture Organization of the United Nations, Food Balance Sheets 1996 and 2001 at www.fao.org

Food and Agriculture Service Online, United States Department of Agriculture, www.fas.usda.gov

International Food and Policy Research Institute (IFPRI) www.ifpri.org

United Nations international trade data 2001 – 2003, sourced from COMTRADE data, www.intracen.org

United Nations trade data 2001 – 2003, sourced from COMTRADE data, www.un.org

Viet Nam Ministry of Agriculture and Rural Development, Annual Report 2001

World Bank Development Indicators 2001, 2002 at www.worldbank.org

World Trade Organization Trade Policy Reviews (as noted above), www.wto.org

World Trade Organization, WTO Trade Statistics 2002, at www.wto.org

United Nations Conference on Trade and Development (2003), UNCTAD TRAINS (Trade Analysis on Information Systems), found at http://www.r0.unctad.org/trains/

ASEAN SECRETARIAT INTERNAL DOCUMENTS

Agreement on the ASEAN Food Security Reserve, New York, 4 October, 1979

ASEAN Framework Agreement on the Facilitation of Goods in Transit, 1998

ASEAN Secretariat (2004), "Agriculture, Areas of Cooperation, Part II. Major Achievements", at www.aseansec.org

ASEAN Secretariat (2004), "Agriculture, Areas of Cooperation, Pat I. Status Report", at www.aseansec.org

ASEAN Secretariat (2004), "ASEAN Free Trade Area (AFTA): An update", at www.aseansec.org

ASEAN Secretariat (2004), "Food Agriculture and Forestry" at www.aseansec.org

ASEAN Secretariat Discussion Paper Revision 2, 1 December 2003, Preparations for the Vientiane Action Plan (VAP) 2004- 2010

ASEAN Secretariat, Identifying Key Strategic Concerns for VAP, A synthesis paper, not dated

ASEAN Secretariat, Mid Term Review of the Ha Noi Plan of Action (January 1999 – June 2001), not dated

ASEAN Secretariat, Review of the Hanoi Plan of Action, Enhance Food Security and Global Competitiveness of ASEAN's Food, Agriculture and Forestry Sector, not dated

ASEAN Vision 2020, 1997Strategic Plan of Action on ASEAN Cooperation in Food, Agriculture and Forestry 1999 - 2004

Declaration of ASEAN Concord II (Bali Concorde II), 2003

Hanoi Plan of Action, 1998

Memorandum of Understanding on ASEAN Cooperation and Joint Approaches in Agriculture and Forest Products Promotion Scheme, Langkawi, Malaysia 25 August 1994

Ministerial Understanding on ASEAN Cooperation in Food, Agriculture and Forestry. Bandar Seri Begawan, Brunei Darussalam, 28-30 October 1993

Protocol 8, Sanitary and Phytosanitary Measures to Implement the ASEAN Framework Agreement on The Facilitation of Goods in Transit, 2000

Protocol to Amend the Agreement on the ASEAN Food Security Reserve, Bangkok, 22 October 1982

Regional Strategy for Agriculture development and food security in the countries of the Association of South East Asian Nations, ASEAN, Version Three, Bangkok, May 2002

Second Protocol to Amend the Agreement on the ASEAN Food Security Reserve, Malaysia, 1997