MALAYSIA

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Macroeconomic Situation and Outlook

eing an open economy, Malaysia's economic performance in 2001 was significantly influenced by the weak external economic environment. The impact was compounded by the effects of September 11. Nevertheless, Malaysia has been able to weather the global economic slowdown to record a positive growth for the year at 0.4 percent and to contain unemployment at below 4 percent. This growth, however, was much lower than the 8.3 percent in 2000. As a result, with an average annual population growth rate of 2.6 percent, per capita income decreased by 3.9 percent to RM12,889 (US\$3,3912).

Indications are that world trade is expected to recover to about 2.5 percent in 2002. Growth in the major industrial countries as a group is expected to stabilise at 1.1 percent. In tandem with strengthening external demand, stronger growth in private consumption, a modest recovery in private investment, and sustained public sector expenditure, all major sectors of the Malaysian economy are expected to record positive growth in 2002. The manufacturing sector is expected to recover at 5.1 percent, benefiting from the improvement in global demand for electronics. The construction, services, mining, and agricultural sectors are projected to grow at 3.8 percent, 5.3 percent, 2 percent, and 1.1 percent, respectively. In addition, monetary policy will remain accommodating in order to provide a favourable environment to support the economic recovery process. The interest rate will remain low at 4 percent. Against the above scenario, the country's GDP growth in 2002 is projected to recover at around 4.5 percent. With the economic recovery, the labour market situation is expected to improve gradually in 2002, during which the unemployment rate is forecast to decline to 3.5 percent (2001: 3.6 percent).

Food Prices and Consumption

While consumer spending was sustained, the prevalence of excess capacity in several sectors of the economy led to downward pressure on consumer prices. Inflation remained moderate at 1.4 percent in 2001 (1.6 percent in 2000). The moderation in the rate of inflation largely reflected lower increases in the price of food. Food prices, which make up almost 35 percent of the CPI basket, rose by a slower rate of 0.7 percent in 2001 (1.9 percent in 2000). While demand remained moderate, food production and supplies increased during the year following favourable weather conditions and continued government measures to increase domestic food production. Imported food prices were also lower, concomitant with the moderate appreciation of the ringgit.

Consumer prices are expected to edge upwards in 2002 with a CPI anticipated at 1.8 percent in line with the projected recovery in the domestic economy. Other factors that may increase inflation are the recent hikes in freight rates, insurance premiums, and other transportation-related costs that will be translated into higher costs. With

respect to food prices, improved domestic demand would generate inflationary pressures if supply shortages, particularly food, are not immediately resolved. Given these risks, the measures already in place to contain inflation include efforts to increase domestic food production and reduce the cost of doing business.

Food Processing and Marketing

Efforts have been made to adopt suitable new technologies in the food subsector for the country to remain competitive and secure new market opportunities. Innovative science needs to be further encouraged, in particular for adding value – and for developing new branded "Malaysian food products". In this respect, the Ministry of Agriculture has introduced the "Malaysia Best" logo. Stronger branding for the greater recognition of local products is likely to be a significant key to global markets. Many opportunities exist for new technologies to be explored and incorporated into the mainstream food industry in Malaysia, from the adoption of precision farming practices to biotechnology and new food processing systems. To facilitate faster adoption, greater consideration is being given to the development of appropriate "incubator centres" to facilitate appropriate technology transfer. The value of developing an "agro-technology" park has also received some greater consideration.

Agricultural Production and Trade

Value added in agriculture expanded by 2.5 percent in 2001, largely the result of higher crude palm oil production, which accounts for 35 percent of total value added in the agriculture sector. This stronger growth was also the result of higher production of other agricultural groups, which comprise mainly the livestock, fishery, fruits, and vegetables subsectors. This increase was in line with efforts to increase domestic food production. Livestock production rose by 7.4 percent, while the production of fish remained virtually unchanged from the preceding year's level. The production of fruits and vegetables grew by 10.2 percent and 15.7 percent, respectively.

In 2002, growth in the agricultural sector is expected to moderate to 1.1 percent due largely to lower crude palm oil production with the anticipated lower yields arising from cyclical tree stress after 3 consecutive years of high production as well as the impact of a replanting program that will involve 200,000 hectares of old oil palm trees. Palm oil output is expected to decline by 2.8 percent. However, measures taken by the government to increase food production is expected to result in increased production of fruits, vegetables, livestock, and fish at 6.7%.

Exports of food and beverage products increased marginally in 2001 at 2.7 percent. Exports of manufactured food remained stable at 0.1 percent. Imports of food, however, increased at 10.4 percent.

Malaysia's trade policy on food items remained liberal to overcome domestic supply constraints via imports. The country has almost the lowest average tariffs among the ASEAN countries. As required by the Common Effective Protection Tariff (CEPT) scheme under ASEAN Free Trade Area (AFTA), as of May 2001, Malaysia has phased 1,135 product tariff lines of unprocessed agricultural products (UAPs) into the CEPT scheme. This represents almost 91 percent of all UAPs for Malaysia.

Food and Agricultural Policy

The Third Outline Perspective Plan (OPP3), launched in 2001, documented the framework and strategies for economic development over the next 10 years, 2001-2010. Regarding the food sector, efforts will be intensified to promote mechanization and large-scale commercial production of food including fish. The potential of aquaculture will be fully exploited not only to complement the supply of fish from marine catch but also to provide raw materials for downstream industries. Satellite farming will be introduced through the establishment of more food production areas close to major towns and cities.

Land utilization will be intensified through the adoption of integrated systems, such as multiple crops farming with livestock rearing. This will maximize land use and increase food production. To further encourage cultivation of vegetables and fruits, the Ministry of Agriculture has established Permanent Food Production Parks through the development of lands allocated by state governments. By end of 2001, 800 hectares of such land had been developed.

Food Safety

The Malaysian food industries consist of 5,565 food manufacturers and 172,252 food service entities (stalls, restaurants, etc). They contribute 11.9 percent to GDP, and consumer expenditure is approximately 34.9 percent of income.

Food safety is becoming an important issue in Malaysia due to several events, such as: i) demands from importing countries, especially for seafood, in which the United States and European Union have required HACCP certification, (meat and dairy products would be the next); ii) outbreaks of food-borne illness; iii) reportedly unsafe foods that have been imported to Malaysia and alerted local authorities and consumers (for example, BSE, dioxin, MCPD; iv) increased consumer awareness of food safety issues such as genetically modified and irradiated foods; v) rejection of vegetables for exports and imported fruits to Malaysia due to pesticide residues; vi) an increasing number of foreign workers who have different cultural practices in handling foods; vii) urbanization and rising economic interdependence, resulting in a longer food chain with greater risks of contamination; viii) emerging and reemerging disease due to resistant microorganisms; ix) changing consumer habits brought about by greater affluence; and x) increased promotion of food safety awareness by authorities and food industry.

Food Safety Management and Administration

Malaysia is practicing a hybrid system, which involves close collabora-

tion between the government and industry. The Malaysian government is responsible for the overall technical supervision of food safety activities including the formulation of legislation, codes of practice, and guidelines; determination of food safety policies; adoption of food sampling and food premises inspection strategies; and coordination of activities at the state and district levels. The industry in turn is responsible for producing safe, high-quality food. Other than the authorities and industry, several non-government organizations (NGOs), the most active being the Federation of Malaysian Consumers Associations (FOMCA), act as pressure groups in ensuring safe food for consumers.

Food safety administration is executed through a system that includes the central, state, district, and local authority levels. Various guidelines and circulars are issued to food safety enforcement officers to ensure effective and uniform food safety administration activities. To increase public awareness on food hygiene, posters and pamphlets are prepared and distributed, and health education programs are occasionally relayed through the mass media. Foods for export are monitored for the purpose of issuing health certificates for export items like frozen prawns, edible oils, fish, and fish products. Imported foods are randomly sampled by the Standards and Industrial Research Institute of Malaysia (SIRIM), which establishes standards for various food products. If the products satisfy the standards, producers may use the SIRIM mark as an indicator of the quality of their products.

Medical personnel are required to notify the Ministry of Health (either at the district, state, or central levels) of all cases of food poisoning. National statistics on outbreaks of food-borne illness are compiled annually; however, some food poisoning cases are not reported to the hospitals.

Government laboratories for food quality control services consist of the Food Quality Control Laboratory under the Ministry of Health, Chemistry Department, Department of Veterinary Services, and other research institutes and universities. Accredited private laboratories also provide food analysis services. These laboratories provide analytical support for food sampling activities and certification of food products for exports. Each state health department compiles monthly reports on food quality control activities from the districts and submits them to the Ministry of Health at the central level. The data are compiled and analyzed to evaluate the performance of food safety programs.

Food Legislation

The Food Act 1983 (Act 281 of the Laws of Malaysia) and its regulations, especially Food Regulation 1985, are the primary legislative documents for food safety activities in Malaysia. These regulations deal with such subjects as food hygiene, labeling, imports and exports, advertising, and laboratories. Other legislative documents include the Pesticides Act 1974, Animal Ordinance 1953, Fisheries Act 1985, Plant Quarantine 1976, Poison Act 1952, Prevention and Control of Disease 1988, Local Government Act 1976, Customs Act 1967, and Trade Act 1972. The Code of Practice for Food Hygiene, which covers the registration and inspection of all food establishments, is being

reviewed. In 1982, the Code of Practice for School Canteens was published, followed in 1996 by Guidelines for Mass Catering.

Depending on the requirements of the importing countries, exporters need to obtain a Health Certificate from the Ministry of Health and/or permit from other agencies such as the Department of Veterinary Services and the Department of Agriculture. The Department of Veterinary Services also issues Veterinary Certificates for livestock products for exports.

In late 2001, the National Food Safety and Nutrition Council was formed. New bills such as the Animal Feed Act and Veterinary Act as well as regulations on labeling, grading, and packaging of agriculture products and food cleanliness are being drafted by the Ministry of Health.

Food Safety System

The food safety system in Malaysia is very complex. It involves several authorities, mainly the Ministry of Health (Food Quality Control Division, Pharmacy Division, and Disease Control Division) and the Ministry of Agriculture (Department of Agriculture, Department of Veterinary Services, Department of Fisheries, and Federal Agricultural Marketing Authority); other ministries include the Ministry of International Trade and Industry, Ministry of Domestic Trade and Consumer Affairs, Ministry of Housing and Local Government, and the Department of Royal Customs and Excise. Initiatives are being undertaken to harmonize and coordinate the activity.

Hazard Analysis and Critical Control Point (HACCP) and Good Manufacturing Practices (GMP) are the more prevalent food safety systems being adopted by the food industry in Malaysia. GMP is currently used as a pre-requisite to HACCP.

HACCP is currently a voluntary exercise, except for seafood exported to the United States and the European Union. However, discussions for mandatory requirements for high-risk foods such as egg, meat, and dairy are underway. In 2001, the Ministry of Health published Guidelines for HACCP Certification, Guidelines for HACCP Compliance Audit, Guidelines for Certification of HACCP Compliance Auditor, and Guidelines for HACCP Surveillance Audit. As a result of the HACCP scheme implementation, the value of rejected local seafood exports declined by 64 percent, or RM31.6 million (US\$8.3 million), between 1997 and 2000. In general, the rejection rate of processed food for exports was reduced by 50 percent.

Malaysia has introduced an integrated ISO 9000/HACCP certification to enhance the competitive edge of Malaysia's food products in the international markets where HACCP and ISO 9000 are required either as a regulatory or import requirement. Countries that support such integration include the United States, Canada, New Zealand, and Australia. The integrated certification process is undertaken by the Food Quality Control Division of the Ministry of Health and SIRIM. There is also a move to integrate the Halal certification scheme into the ISO 9000/HACCP certification as proposed at the National Food Safety and Nutrition Council inaugural meeting early this year.

Other than HACCP and GMP, Good Agriculture Practices (GAP), Good Animal Husbandry Practices (GAHP), and the Responsible Code of Practice for Aquaculture (COP) are being adopted by agricultural operators as a guide to food safety assurance. The Ministry of Health is moving to replace GMP with Good Hygiene Practice (GHP) as a HACCP pre-requisite.

HACCP CERTIFICATION FROM THE MINISTRY OF HEALTH. For a large industry, that is, 150 full-time workers with annual sale turnover of US\$6.6 million, the cost for HACCP certification is US\$1,186 for a new application, US\$724 for each additional product, and US\$26 for renewal. Small and medium industries (SMIs) with fewer than 150 workers and annual sales of not more than US\$6.6 million are given discounts of 28 percent for new applications and 7 percent for each additional product. A total of 85 food industries have applied for certification under the HACCP scheme, and 55 of them have successfully obtained certification. The majority of these are from the seafood industry.

SMIs are not very keen to secure HACCP recognition because of the high costs of establishing the food safety system in their plants, which include infrastructure and process improvements necessary to meet HACCP requirement and consultancy and certification fee costs. Furthermore, some SMIs are still not aware of the incentives available or did not take the opportunity to use the incentives offered by the government.

VETERINARY HEALTH MARK (VHM) LOGO. The logo is awarded to animal processing plants under the Inspection and Accreditation Program of the Department of Veterinary Animal Services, Ministry of Agriculture. The logo is given to food plants that comply with the minimum standard requirements of the Hygiene and Sanitation Program and Quality Assurance and Food Safety Program created by the department. Inspections are focused on the Food Safety and Quality System and Good Manufacturing Practice Programs. The food plants that have been accredited and awarded with the VHM logo can use the logo on their label or packaging of registered products. By June 1999, a total of 55 plants already had the VHM logo. The department also issues mandatory Veterinary Certificates to animal products for exports based on Animal Rules 1962.

OTHER CERTIFICATES. Certificates with a rating (grade) are issued to food premises to indicate the level of cleanliness of the food premises and personnel hygiene. The Ministry of Health also issues Health Certificates to food premises, Free Sale Certificates for export products to underdeveloped countries, and Heat-Processed Meat Certificates, which are specially issued for the Japanese market. The Ministry of Agriculture issues Pesticide-free Certificates, Antibiotic-Free Certificates, and White-spot Disease Free Certificates. The Ministry of Science, Technology, and Environment issues GMO-Free Certificates and Food Irradiation Certificates.

Outbreaks and Concern Related to Food Safety

Most of the food poisoning cases happen in school. The Ministry of Health is still concerned with the cleanliness of food premises. Most of the reported incidences of food poisoning are due to Staphylococcus and Salmonella. Notifiable foodborne diseases are botulism, unspecified food poisoning, and illness due to Staphylococcus aureus, Salmonella, Vibrio parahaemolyticus, Clostridium perfringens, and Bacillus cereus.

GM FOOD. The Ministry of Science and Technology and Environment is currently formulating a Biosafety Law to control the handling, transportation, and release of genetically modified organisms including Genetically Modified Food (GMF). Biosafety issues for GMF would be under the purview of the National Biodiversity Council, under the National Biodiversity Act.

MCPD (3-MONOCHLOROPROPENE-1,2-DIOL). A well-known contaminant of acid-hydrolyzed vegetable protein (acid-HVP), MCPD is frequently used in savory foods such as soups, prepared meals, snacks, gravy mixes, stock cubes, and soy sauce. The compound is a recognized genotoxic carcinogen in vitro but not in vivo.

In June 2001, the UK Food Standard Agency withdrew 22 sauces, ketchups, and seasoning products made in China, Taiwan, Hong Kong, and Thailand for containing excessive levels of 3-MCPD. Immediately, the Ministry of Health in Malaysia contained the importation of soy sauce and related food products at all entry points and prohibited sales of the imported products. A total of 78,366 bottles of such products were taken off the shelf. Analysis indicates that 30 percent of the imported products had MCPD values exceeding the permitted limit (20 ppb).

DIOXIN (2,3,7,8 TETRACHLORODIBENZADIOXINE (TCDD). This compound is the by-product of chemical processes, including chlorine bleaching during paper manufacturing and PVC production. It is easily adsorbed into animal and human fat, and it is a Class 1 carcinogen, which can affect the reproductive system and human growth. The dioxin issue was publicized when the Belgian government detected

high level of dioxin in feed for chicken, cow, and swine in June 1999. Malaysia immediately prohibited the importation of dioxin and has taken off the market products containing the compound, including milk and meat products, starting June 7, 2001.

In 2000, there were 124 cases of cholera, 765 of typhoid, and 8,129 of food poisoning. However, cholera cases had dropped from 1,304 in 1998 to 519 in 2001, food poisoning from 8,640 in 1999 to 5,489 in 2001, and typhoid from 811 in 1999 to 610 in 2001. The cases were due to unhygienic handling of food and lack of cleanliness at food preparation premises. The cases occurred mostly at the primary schools (35 percent) and secondary schools (27 percent), followed by other institutions (24.5 percent) and ceremonies (12.4 percent).

Number of samples tested is based on 2-samples/1,000-population/year set by the National Work Plan. The offenders have decreased over the years, from 12.9 percent in 1995 to 9.9 percent in 2000. About 4.8 percent of the food premises inspected did pass the cleanliness inspection by the Ministry in 2000. In 2001, the number of samples that contravened food legislation for pesticide residue, nitrofuran, chloramphenicol, and beta-agonist in meat were 1.32 percent, 3.74 percent, 0.3 percent, and 19.49 percent, respectively.

Food Safety Education

The Food Quality Division of the Ministry of Health enforces the Training Program on Food Handling, which was introduced in 1996 to ensure optimum cleanliness in the preparation and sale of food, and later established the Food Handlers Training Institute. The program is compulsory to ensure participation by all operators of food stalls and restaurants. About 108,400 out of two million food operators had attended the training program.

MALAYSIA

	Units	1998	1999	2000	2001	2002 ^E	2003F
FOOD CONSUMPTION PATTERNS a							
Per-capita caloric intake	Cal/day	2822	2834	2842	2850	2858	2860
From animal products	Cal/day	539	549	557	565	573	573
From vegetable products	Cal/day	2283	2280	2277	2278	2277	2277
Protein (percent of calories)	%	7.8	7.8	7.8	7.8	7.8	7.8
Fat (percent of calories)	%	33.6	33.6	33.7	33.8	33.9	33.9
Carbohydrates (percent of calories)	%	58.6	58.6	58.5	58.5	58.5	58.5
INCOME AND FOOD PRICE b			•••••				
Per-capita income	US\$/capita	3093	3238	3516	3584	3646	3708
% disposible income spent on food	%	34.9	34.9	33.8	33.8	33.8	33.8
% disp. income food away from home	%	9.8	9.8	9.7	9.7	9.7	9.7
Food price index	1990 = 100	151.3	158.3	161.3	164.2	167.5	176.5
General price index (CPI)	1990 = 100	135.8	139.6	141.8	143.9	146.3	147.9
Food price index	%	8.6	4.6	1.9	0.7	0.6	0.8
General price index (CPI)	%	5.2	2.8	1.6	1.4	1.8	2.2
POPULATION b, c, d							
Total population	Million	22.2	22.7	23.3	24.0	24.5	25.0
Urban	%	57.3	58.1	58.8	59.6	60.4	60.4
Nonurban	%	42.7	41.9	41.2	40.4	39.6	39.6
Share of population in the following age groups	/0	12./	11./	11.2	10.1	57.0	57.0
0-4 years	%	11.6	11.5	11.6	11.5	11.3	11.5
5-14 years	%	22.4	22.0	21.4	21.1	20.7	20.6
15-19 years	%	10.1	10.2	10.1	10.1	10.2	10.2
20-44 years	%	38.9	39.0	39.2	39.4	39.5	39.6
45-64 years	%	13.2	13.5	13.8	14.1	14.3	14.1
65-79 years	%	3.2	3.2	3.3	3.3	3.4	3.4
80-over years	%	0.6	0.6	0.6	0.6	0.6	0.6
Median age of population	Years	22.8	23.0	23.4	23.7	24.0	24.7
Female labor force participation c, e	%	43.8	43.8	43.8	43.9	43.9	43.9
LIFE EXPECTANCY d, e		2n =	/				/
Males Females	Years Years	69.7 74.7	69.8 74.8	70.0 74.9	70.1 75.1	70.2 75.2	70.4 75.2
	icars	/4./	/4.0	/4.9	/).1	/).2	/).2
FOOD INFRASTRUCTURE							
Trade capacity	1000 円	216	22/	2/2	2/2	20/	215
Grain exports f, g	1000 Tons	316	224	243	263	286	315
Grain imports f, g	1000 Tons	3569	4145	4321	4504	4695	4883
Total food and agricultural trade	Million US\$	12286	11827	10674	10844	11021	11462
Total food and agricultural exports h, i, j	Million US\$	8386	7691	6449	6460	6471	6471
Perishable products k	Million US\$	275	325	344	352	360	374
Fishery exports <i>h</i> , <i>i</i>	Million US\$	301	295	344	350	357	359
Total food and agriculture import i, j, l	Million US\$	3900	4136	4225	4384	4550	4550
Perishable products k	Million US\$	761	864	931	975	1020	1062
Fishery imports i, l	Million US\$	221	253	293	299	305	317
Port capacity c	Million Tons	257	300	344	384	423	465
Road access e	Kms	64949	65091	65141	65345	66064	66592.5
Rail access e	Kms	2262	2265	2279	2311	2325	2325
Telecommunications e	Lines/100 person	29.3	31.4	35.2	38.3	41.5	42.5
Power Generation m	Gigawatts	60471	62553	66506	72413	78845	7979
Percent of population with refrigerators	%	93.0	93.0	93.0	95.0	95.0	95.0
FOREIGN INVESTMENT IN THE FOOD SECTO	R						
Inward FDI in the food sector, total n	Million US\$	93.1	72.8	70.6	72.5	74.4	77.4
From other PECC economies o	Million US\$	75.1	50.2	29.9	28.8	27.8	26.7
ROLE OF AGRICULTURE AND TRADE IN THE							
Agriculture as a share of GDP	%	9.6	9.4	8.7	8.3	8.0	7.9
Self-sufficiency in grains	%	38.0	31.0	30.6	30.2	29.7	29.5
Self-sufficiency in horticultural products	%	83.7	74.7	72.0	69.2	66.5	68.6
MACROECONOMIC INDICATORS b					······································		
GDP growth	%	-7.4	5.8	8.5	0.4	4.5	5.5
-	% %	8.0	6.8	6.8	4.0	4.0	
Interest rate p, q Exchange rate		3.92					5.0
Exchange rate	Ringgit/US\$	5.94	3.80	3.80	3.80	3.80	3.80

 $na = not \ available \ E = estimate \ F = forecast$

a. Food and Agriculture Organization (FAO), "FAO Yearbook Balance

a. rooa ana agricuiture Organization (PAO), PAO Tearroook Balaine
Sheets', Various issue
b. Bank Negara Malaysia, "Annual Report", Various issues
c. Malaysia, "Eight Malaysia Plan 2001-2005"
d. Department of Statistic Malaysia, "Yearbook of Statistics", Various issues
e. Prime Minister's Department, "The Malaysian Economy in Figures", Various issues

f. http://apps.fao.org/

g. Cereals and cereal preparations b. Department of Statistics Malaysia, "Export Malaysia", Various issues i. Department of Statistics Malaysia, "Monthly External Trade Statistics,

j. Excludes agriculture requisites, forestry and fishery products k. Fresh and frozen fruits, vegetables, meats and poultry, dairy products

and eggs

1. Department of Statistics Malaysia, "Import Malaysia", Various issues

m. Department of Statistics Malaysia, "Monthly Statistical Bulletin, March 2001"
n. Ministry of Finance Malaysia, "Economic Report" Various issues
o. Includes Australia, Hong Kong, Indonesia, Japan, Singapore, South b. Intimues Hashirata, Hong Kong, Indonesia, Japan Korea, Taiwan and United States

p. http://www.hnm.gov.my/pub/msb/latest/v_01.pdf

q. Average base lending rates at end-period