

Making Agricultural Trade Work for the Poor

International trade in agriculture can be a mixed blessing – on the one hand, benefiting low-income consumers by allowing the possibility of cheap food; on the other hand, threatening the livelihoods of poor farmers and fishing communities. Policymakers in Asia and the Pacific have to balance these and other considerations if they are to ensure that agricultural trade promotes human development.

Economic transformation typically focuses on modernization in the urban areas, but in the poorest countries most people actually live in the countryside. Progress in human development will, therefore, be shaped by what happens to rural communities, whether engaged in agriculture or fisheries. The lives of the urban poor too will depend on achieving greater food security.

Agriculture is important throughout the region, but its significance varies considerably from country to country. As a proportion of GDP, agriculture's contribution in 2002 ranged from 6 per cent in the Republic of Korea to 52 per cent in Lao PDR (Table 3.1). It also varies in its share of total employment – in 2000 this ranged from close to 70 per cent Viet Nam and India to less than 1 per cent in Singapore and Hong Kong, China (SAR) (Table 3.2). Generally, agriculture is more important for the poor countries.

Food Insecurity in Asia

When agriculture is weakened, this also has a serious effect on food security. Asia is already home to 65 per cent of the world's food insecure – over 510 million people around the region. There was some progress in the first half of the 1990s, but since then in most countries – the exceptions being China, Viet Nam and Thailand – the number of hungry people has increased. At the turn of the century even the Republic of

Korea and Malaysia saw their number of under-nourished stagnate or rise.¹

Between 1990 and 1995, India, for example, made significant gains, reducing the total number of hungry people by 13 million, but in the second half of the 1990s, despite economic growth, the number of hungry increased by 18 million.² Indeed, South Asia as a whole has one

TABLE 3.1
VALUED-ADDED IN AGRICULTURE AS PERCENTAGE OF GDP

0.1–10%	15–25%	25–40%	40–55%
Hong Kong, China (SAR)	Philippines	Bangladesh	Nepal
Singapore	China	Pakistan	Lao PDR
Japan	Fiji	Mongolia	Afghanistan
Australia	Kiribati	Bhutan	Myanmar
World	Indonesia	Cambodia	
Korea, Rep.	Sri Lanka		
Mauritius	Viet Nam		
Malaysia	India		
Thailand			

Source: World Bank 2005.

TABLE 3.2
PERCENTAGE EMPLOYMENT IN AGRICULTURE

0–6%	12–25%	37–50%	50–80%
Singapore	Korea, Rep.	Sri Lanka	Thailand
Hong Kong, China (SAR)	Mauritius	World	India
Fiji	Malaysia	Philippines	Viet Nam
Australia	Maldives	Mongolia	Nepal
Japan		Indonesia	
Kiribati		Pakistan	
		China	

Source: World Bank 2005.

Malnutrition not only denies people their right to health; it also has serious economic implications

of the highest proportions of undernourished – 22 per cent – second only to Sub-Saharan Africa.

Malnutrition has profound implications – damaging health and leading to lifelong physical or cognitive disabilities that reduce chances of survival. It can also be passed from one generation to the next: malnutrition hits particularly hard at women, and when undernourished women give birth to underweight girls, they too may grow up to be malnourished mothers, sustaining an intergenerational cycle of malnutrition. In India and Bangladesh, more than 30 per cent of all children are born under-weight.

Malnutrition not only denies people their right to health; it also has serious economic implications. Malnourished children are less able to concentrate in school, and malnourished adults are less able to work effectively – thus undermining productivity and economic growth. On top of this there are the costs, personal and public, of dealing with poor health: in Bangladesh malnutrition is thought to cost up to 8 per cent of GDP. In India, the costs of iron deficiency alone total more than \$30 billion.³

The Effects of Trade

In these circumstances a greater engagement in international agricultural trade is likely to have a major impact – positive or negative – on the

lives of the poor. On the positive side, increasing agricultural exports should stimulate agricultural employment and incomes and have second-order multiplier benefits for the associated supply and service industries.

This optimistic scenario may not, however, be realized. For one thing, efforts at boosting exports could be frustrated by protectionist policies of the importing countries. And even if exports do increase, they could be more than offset by a rise in imports, which could put a different group of people out of work. Nor do export industries necessarily benefit other parts of the economy: if they lack connections to rural enterprises, the economic ‘multiplier’ could be quite low. The government’s revenues too may be smaller than expected: if it had to reduce tariffs to encourage trade, its income could indeed fall.

Other factors might also cause trade liberalization and export increases to yield disappointing results. If, for example, exporting countries concentrate on primary commodities such as coffee or tea, then increasing the volumes could flood world markets with these goods and cause prices to fall. Some countries may be able to escape this trap by diversifying to higher-value crops, but the poorer countries may not have the necessary capacity or the infrastructure. Another possibility is that most of the benefits from a rise in exports could be captured by transnational trading and manufacturing companies, leaving few gains for the cultivators.

The Pattern of Global Agricultural Trade

Though trade in agricultural goods has been growing, it still only accounts for a small proportion of total agricultural output – most of which is still consumed nationally. For staple food crops, only for wheat is global trade consistently above 10 per cent of total world production (Table 3.3). The proportion tends to be higher for plantation crops, but even for these

TABLE 3.3
SHARE OF WORLD PRODUCTION OF SELECTED AGRICULTURAL PRODUCTS
TRADED ACROSS BORDERS 2005

Commodity	Proportion traded internationally (%)
Coffee	68
Tea	40
Soybeans	34
Sugar	21
Bananas	20
Cotton	18
Wheat	17
Feed grains	11
Rice	7

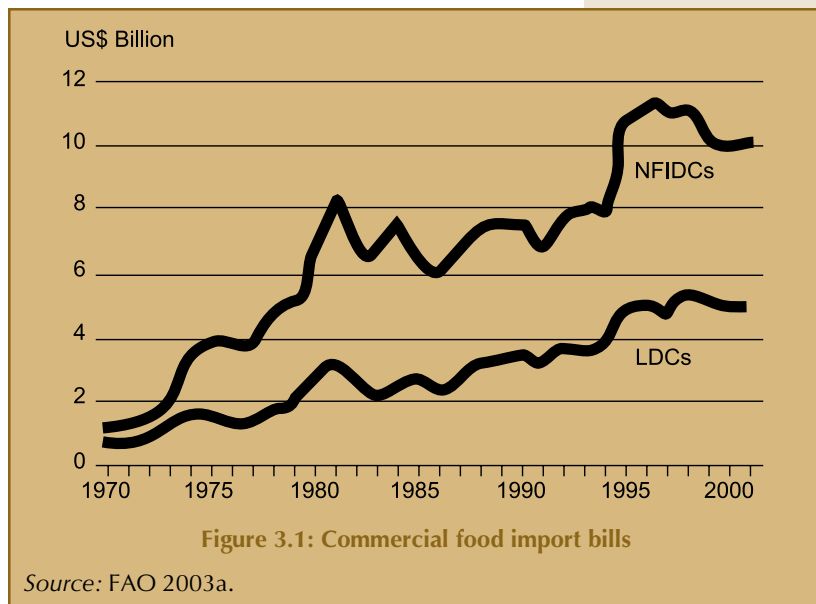
Source: FAS/USDA 2005.

it represents more than 50 per cent of global production only for a few, such as coffee.

Most global agricultural trade is between developed countries, whose share of both world exports and imports is around 70 per cent. Developing countries do less well. Not only do they have a smaller share of world agricultural trade, they earn less from it. In recent years they have also suffered a deterioration in the balance of trade between exports and imports: in the early 1960s, they had an overall annual agricultural trade surplus of almost \$7 billion, but by the early 1970s their trade surplus fell to about \$1 billion, and by the end of the 1980s it had disappeared. Indeed, since the beginning of the 1990s developing countries have generally been net importers of agricultural products, with a deficit in 2001, for example, of \$11 billion.⁴

The deficit has been caused by rising imports of food. In 2001, globally the Least Developed Countries imported \$4.8 billion worth of food, corresponding to 10 to 12 per cent of national calorific intake. The ‘net food-importing developing countries’ were even more dependent. In the same year, they imported \$10.1 billion worth, corresponding to 35 per cent of calorific intake. The value of imports may be considerably lower than the peak reached in 1996 (Figure 3.1), when food commodity prices were at cyclical highs, but in real terms, in recent decades it has been increasing by more than 6 per cent annually.

The change was most drastic for the LDCs. From being net food exporters, they became net food importers. Indeed, by the end of the 1990s their imports were more than double their exports. And for both groups of countries this trade gap seems destined to widen further. Between 1970 and 2001 developing countries as a whole saw their food imports rise by 115 per cent, but by 2030 their annual imports are expected to reach \$50 billion. The developed countries too have seen an increase over the same period, though only by around 45 per cent.⁵



Not only have the developing countries experienced a growing food trade deficit, they have also suffered a deterioration in the terms of agricultural trade. Although commodity prices overall have been falling for the past 40 years, they have fallen most steeply for the type of exports that mostly come from developing countries, such as raw materials, tropical beverages, oil crops and cereals – rather than for the goods exported mostly by the developed countries: horticultural, meat and dairy products.

Some developing countries have responded by shifting from tropical beverages and raw materials – coffee, tea, cocoa, sugar, cotton and tobacco – to higher-value crops. But this is more difficult for farmers in the LDCs, most of whom lack the funds to invest. As a result, for the LDCs between the 1960s and 1999–2001, the proportion of their exports accounted for by raw materials and tropical beverages increased from 59 to 72 per cent.

The Food-Trading Countries

For food crops – principally cereals, rice and meat – developing countries that trade internationally fall roughly into one of three categories:

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1. *The natural exporters.* These countries have favourable geographical conditions, sparse populations, or specific experiences that have encouraged an extensive low-cost agricultural sector that delivers substantial surpluses of food staples.⁶ In Asia, these include Thailand (rice and poultry) and Viet Nam (rice).
2. *The self-sufficient countries.* These are the majority of developing countries, which have been largely self-sufficient in food. When they do trade in global markets, they are more likely to buy than sell, but can usually finance necessary imports by exporting other agricultural products, typically tropical plantation crops.
3. *The net importers.* These, many of which are

also among the world's poorest countries, are chronically dependent on imports for basic food supplies. And their numbers could increase following trade liberalization if cheap food imports encourage farmers and businesses to switch to more profitable commercial crops.

The developed countries might be classified in similar groups. Thus, Australia, Canada and the United States are also natural exporters of staple foods. Europe also has significant exports, of sugar for example, but EU countries might better be termed as 'unnatural exporters' since their surpluses are largely sustained by subsidies. Many other countries are net food importers but have no difficulty in financing this through exports of industrial products.

The overall balance of food trade between developed and developing countries varies between different products. Most imports of rice and wheat – for example, 80 per cent of the globally traded tonnage – are by developing countries, as are sizeable proportions of feed grains and soybeans. For animal products the pattern is different: virtually all the imports of high-value animal products such as beef, pork, poultry and cheese are by the developed countries, either from each other or from developing countries. The only animal product imported in significant volumes by developing countries is the low-value powdered milk, of which 85 per cent of world trade goes to the South.

Agricultural Trade in the Asia-Pacific Region

Countries in the Asia-Pacific region thus have a vital interest in the trade in agricultural products. In global terms, however, they are hardly major players. Even the region's largest exporter, China, ranks only at number 9, with 3.3 per cent of global trade (Table 3.4).

A number of Asian countries, though they do have some agricultural exports, have a much

TABLE 3.4
LEADING AGRICULTURAL EXPORTERS IN THE ASIA-PACIFIC REGION 2003

	\$ millions	Market Share (%)
China	22,158	3.3
Australia	16,337	2.4
Thailand	15,081	2.2
Malaysia	11,061	1.6
Indonesia	9,942	1.5
New Zealand	9,603	1.4

Source: Computed from the WTO Online Statistics Database accessed on 10 July 2005.

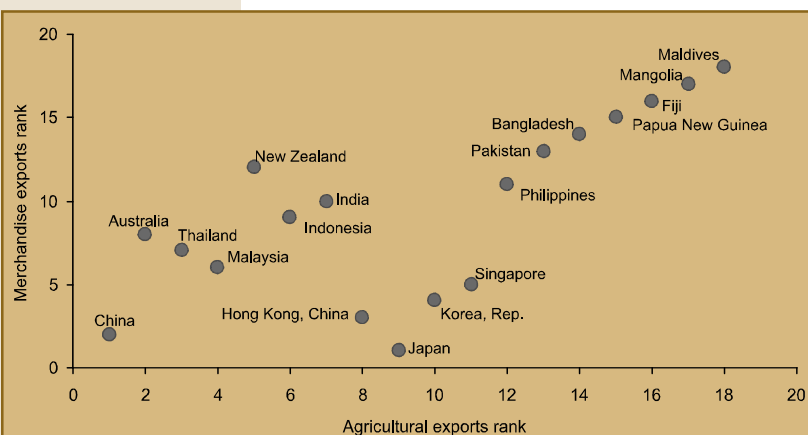


Figure 3.2: Exporter rankings: a comparison of those for merchandise and agricultural goods

Source: Based on World Bank 2005.

greater weight in other areas of international trade, particularly manufactured exports. This is illustrated in Figure 3.2, which plots countries according to their ranks as merchandise exporters and agricultural exporters. Thus, Japan ranks second in terms of merchandise trade but only eighth in agricultural trade; indeed any country below the 45-degree line is more important in merchandise exports than it is in agricultural exports. On the other hand, Australia, Thailand, Indonesia and New Zealand rank higher for agricultural trade. Of the leading exports of either category, only China has the same ranking in both.

The principal route to success for most Asian countries seems to be the more productive non-agricultural sector – though countries like Malaysia and the Republic of Korea have largely developed their export sectors by investing the surplus of their agricultural output in them. Even today, Viet Nam has agricultural exports as an important source of foreign exchange and will suffer from any distortions in trade.

More worrying for the future is the prospect of food shortages. Now that China has become a major food importer, global food supplies could become much tighter, with serious implications for the major food importers. Food is not like any other tradable commodity, and a number of countries in the region may, therefore, become more preoccupied with national food security and will want to move closer to national self-sufficiency – which will imply greater protection for farmers who find it difficult to compete at world prices, especially when these are distorted by subsidies in the US and the EU.

Protectionism in the North

One reason why developing countries have limited representation in global agricultural markets is that they face determined and unfair protectionism. Many developed countries, despite their promises to reduce trade barriers,

continue to shield their farmers from foreign competition.⁷

There was some progress in the 1990s. For the OECD as a whole, between 1986–88 and 1995–97, the level of producer support as a proportion of farm receipts fell from 37 to 30 per cent.⁸ Unfortunately, it has stayed around this level ever since. In 2004 this was worth \$279 billion, and taking into account support for general services to agriculture such as research, infrastructure, inspection, and marketing and promotion, total support to agriculture was equivalent to 1.2 per cent of OECD GDP. There may have been some change in the composition of this support – substituting measures that are considered trade-distorting with those that are supposedly not, but the overall level remains much the same and is particularly high for products that are critical to Asia – rice, sugar, milk, wheat and meat.

As a result of these subsidies the producers of a whole range of products – including corn, wheat, rice, soy, dairy, meat and cotton – can dump these on world markets, making it very difficult for developing countries to compete.

In the Agreement on Agriculture from the 1986–1994 Uruguay Round of trade negotiations, the developed countries committed themselves to reducing the extent of their domestic support. However, the rules are so skewed that although they prevent middle-income developing countries from using subsidies, they have enabled the EU to continue giving such support (Table 3.5), and the US to increase it.

Indeed, the US has dramatically increased the amounts it spends on subsidies (Table 3.7). This has enabled it to maintain a dominant position in maize and soybeans, for which it is responsible for more than half of global exports; it has also emerged as a leading exporter of rice.

For the purposes of the Agreement on Agriculture, much of this expenditure (70 per cent for the US and 44 per cent for the EU) is classified not as export subsidies but as ‘Green

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TABLE 3.5
EUROPEAN UNION – ESTIMATES OF SUPPORT TO AGRICULTURE, \$ MILLIONS

	1986–88	2002–04	2002	2003	2004*
Farm-gate value of production	211,407	245,289	242,506	242,428	250,933
Total support estimate (TSE)	106,372	113,401	109,972	117,223	113,007
Transfers from consumers	82,142	55,343	53,684	57,550	54,795
Transfers from taxpayers	25,747	58,960	56,676	61,059	59,146
Budget revenues	-1,517	-903	-388	-1,386	-935
TSE share of GDP (%)	2.82	1.20	1.20	1.26	1.16

Notes: European Union refers to the EU-15 countries in 2004.
* provisional.
Source: OECD 2005.

Box' expenditure on items such as research and extension, which are said to have only a minimum effect on trade and for which support can be unlimited.⁹ The EU also gives some of its support under the 'Blue Box' items that are related to measures for limiting production.¹⁰

Impact on Developing Countries

These subsidies have enabled OECD countries to export a number of commodities at prices below the cost of production.¹¹ In 2002, for example, the extent of price reduction below the cost of production was as follows:

- *Wheat* : 43 per cent
- *Soybeans* : 25 per cent
- *Maize* : 13 per cent
- *Cotton* : 61 per cent
- *Rice* : 35 per cent

These subsidies have had a very serious impact on farmers, and particularly poor farmers, in the Asia-Pacific region. Rice subsidies in the US, for example, which enabled it to maintain exports even during the 1990s when world prices were falling, have affected rice farmers all over the region, but especially in Thailand, Viet Nam and India. Maize subsidies have also driven prices down, affecting farmers in the Philippines and China. Soy subsidies have similarly undermined the livelihoods of 2.5 million Indonesian farmers. Collapsing prices have meant that many producers in the region have been unable to sell even in their own domestic markets, creating rural unemployment and increasing poverty.

Tariff Barriers

The OECD countries offer a great deal of protection to their farmers through subsidies. On the face of it, their protection through tariffs might seem quite low, or at least lower than in developing countries – since applied tariffs on

TABLE 3.6
UNITED STATES – ESTIMATES OF SUPPORT TO AGRICULTURE, \$ MILLIONS

	1986–88	2002–04	2002	2003	2004*
Farm-gate value of production	143,469	210,871	193,151	214,023	225,437
Total support estimate (TSE)	64,009	96,972	90,020	92,199	108,696
Transfers from consumers	15,223	16,203	17,148	13,461	17,998
Transfers from taxpayers	50,274	82,700	74,915	80,650	92,534
Budget revenues	-1,487	-1,931	-2,043	-1,912	-1,837
TSE share of GDP (%)	1.34	0.88	0.86	0.84	0.93

Note: *provisional.
Source: OECD 2005.

TABLE 3.7
US SUBSIDIES TO SELECTED AGRICULTURAL PRODUCTS, \$ MILLIONS

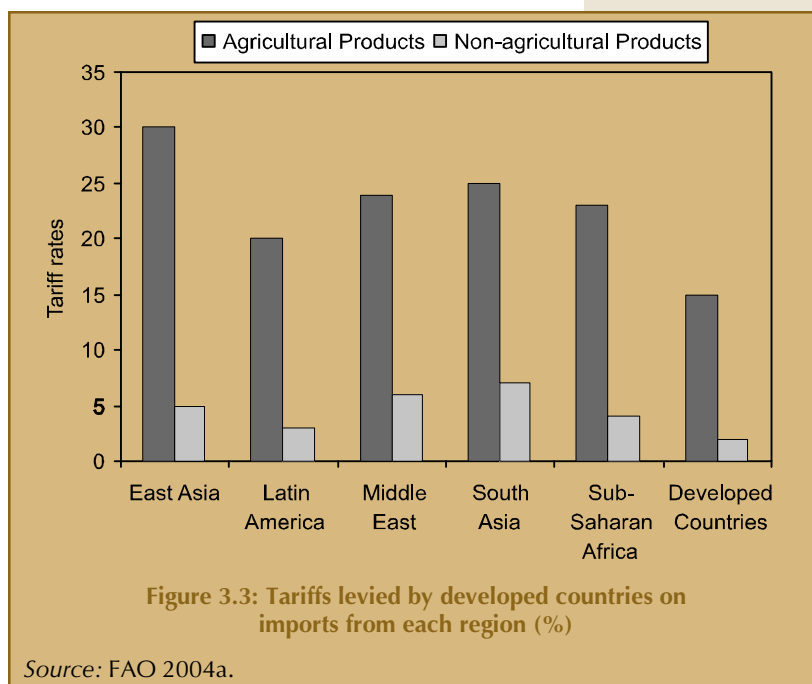
	1995	2001
Maize	32	2,800
Soybeans	16	3,600
Cotton	32	2,800
Rice	12	763

Source: Dhar 2004a.

imports from developing countries are estimated at 12 per cent for the US, 20 per cent for the EU, and 18 per cent for Canada.¹² But, for several reasons these averages are misleading. They refer to the *ad valorem* duties. But, a high proportion of tariff lines in agriculture – 44 per cent for the EU and 43 per cent for the US – are non-*ad valorem* duties, which when converted to *ad valorem* equivalents are much higher. Moreover, these are averages across all tariff lines. For certain commodity groups that are of particular interest to developing countries, the rates are very high. For the OECD countries as a whole, these amount to around 350 per cent for tobacco, 277 per cent for chocolate, 171 per cent for oilseeds, and 134 per cent for poultry.¹³

The other form of protection is through tariff escalation – setting low tariffs for raw materials but steadily escalating the rates as commodities are converted to finished goods. Escalation is particularly pronounced on commodity sectors important to the poorest developing countries: meat, sugar, fruit, coffee, cocoa, hides and skins.¹⁴ The US, for example, has tariff rates of zero, 0.2 and 15.3 per cent on raw cocoa, intermediate products and final products respectively. Moreover, these are weighted averages and mask very high peaks: the maximum tariff on final products is 186 per cent. The situation is similar for the EU with respect to fruit, for example. The tariff rates are 9.9, 18.5 and 18.0 per cent on raw, intermediate and processed fruit products, with a maximum for fruit products of 98 per cent. Again, many of these rates are non-*ad valorem*, so the percentages underestimate the full scale of the tariffs.¹⁵

Tariff escalation will reduce a country's chances of exporting processed products. However, the developed countries seem to be more successful at overcoming this obstacle; overall, they get 68 per cent of their agricultural export earnings from processed products, while for developing countries the proportion is 57 per cent and for the LDCs only 20 per cent.¹⁶



As a result of their selective protection methods, the developed countries overall apply higher tariffs to goods from developing countries than they do to goods from other developed countries. As is clear from Figure 3.3, the rates are highest for goods from East Asia and South Asia.

Transnational Companies and Small Farmers

Market distortions are the result not just of subsidies and tariffs, but also of the power of a few vertically integrated transnational companies that dominate the entire food chain – from distributing seeds to placing products on supermarket shelves. For soybean crushing, for example, more than 70 per cent of the US market and around 80 per cent of the European market is controlled by just three companies.¹⁷ Similarly for grains: at the global level, trading, storage, processing and milling are dominated by a few big companies.

This is worrying for a number of reasons. First, large corporations prefer to deal with a few

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large producers, rather than with a multitude of small suppliers, thereby squeezing many small producers out of the market. Second, they greatly influence, or even determine, world prices – affecting not only food traded internationally but also the prices of products that appear in the smallest village markets.

This control is most visible to consumers in the spread of supermarkets. Globally, the top 30 supermarkets control almost one-third of grocery sales, and they have been expanding at a remarkable pace in the Asia-Pacific region. In East Asia, for example, over the past decade the supermarkets' share of retail food sales has ballooned from less than 20 to more than 50 per cent. Supermarkets want to deal with a small number of reliable suppliers who can deliver on schedule large volumes of high-quality produce – which for farmers generally requires substantial investments in irrigation, greenhouses, trucks, cooling sheds and packing technology. This is a tall order for small farmers, though some have made a success of contract farming.¹⁸

Distorted Trade and Human Development

All these distortions in global agricultural trade can adversely affect farmers – eroding their means of livelihood and their security. As a result, even countries that are successful agricultural exporters do not necessarily achieve higher standards of human development. Thailand, for example, is Asia's largest food exporter, but its small farmers have gained little from its increased exports of rice. Since 2001, Thailand has exported more than 7 million tonnes annually – about 30 per cent of world rice exports – yet about 40 per cent of rural households live below the poverty line. The government has prioritized commercial rice production, while millions of small farming families have fallen into debt and lost their lands, partly because of low prices for their crops: about 4.7 million of the 5.7 million farming

families have no land, or inadequate land to sustain themselves. Malnutrition is increasing: in 2000, 18 per cent of Thai households were malnourished. Thailand appears to be feeding the world on the backs of its poor rice farmers.

Similarly, the World Bank found that since China's accession to the WTO in 2001 and its subsequent liberalization of agriculture, the poorest rural households have suffered a 6 per cent drop in their living standards due to the combined effects of a drop in real wages and an increase in the prices of consumer goods.¹⁹ The study also found that liberalization has widened rural-urban income gaps: since 2001, most urban dwellers have seen their incomes rise, while rural households have on average seen their incomes drop, with the poorest being most seriously affected – a fall that is raising the prospect of some discontent in the rural areas.

Not all these are effects of distorted international trade patterns. Many are linked to liberalization measures associated with structural adjustment and the conditions imposed by World Bank and IMF lending. Indeed, these programmes have often required liberalization on a scale even more sweeping than those required under the Uruguay Round. They have also required a number of other measures – such as privatizing state-run enterprises, eliminating subsidies and price controls, and abolishing marketing boards (Box 3.1).

Why should liberalization damage the interests of poor farmers? There seem to be a number of interrelated factors.²⁰ These include:

- *Falling prices.* Liberalization opens local markets to imports and thus to low world prices. Farmers could respond by switching from food to commercial crops, though they would not necessarily do any better, since the prices for these too have fallen as more countries enter the market.
- *Rising cost of inputs.* Farmers now have to pay more for inputs such as fertilizers – partly because the world prices for these

AGRICULTURAL TRADE LIBERALIZATION IN INDONESIA

Following the 1997 Asian financial crisis, the IMF imposed sweeping trade liberalization conditions as part of its multimillion-dollar loan to Indonesia. These included lowering tariffs as well as the deregulation of BULOG, the state food purchasing and distribution agency, thus providing the major agricultural exporters, such as the US, with access to a large market for their agricultural surpluses.

Indonesia's applied tariff rates were brought down to 5 per cent or less even on staple products. The tariffs on soy and rice were set at zero and on corn at 5 per cent. Only after social and political chaos and rioting was the rice tariff adjusted to 30 per cent (Kwa 2004).

Before deregulation, BULOG had sole control over imports of the major food commodities coming into Indonesia, and hence was able to regulate food supplies and domestic prices. This role has been dismantled almost completely. BULOG no longer controls the quantities being imported, and private traders have

total freedom in this regard. BULOG's previous role in ensuring distribution of rice and other staples between regions has also been severely limited.

The results of liberalization have been dramatic. During the 1980s Indonesia was at times self-sufficient in rice, but over the period 1988–2002 it imported on average 10 per cent of national needs. The US has been the clear winner in this market-opening exercise. US exports to Indonesia, amounting to \$411 million in 2000, climbed to \$720 million in 2001. Since then, imports have increased even further (Setiwant 2003).

The impact on rural employment is clearest in soybeans. Where there were 5 million soybean producers in 1996, by 2001 there were only 2.5 million. Taking one producer to be supporting a family of four, 10 million people's lives have been affected. Whilst some soy farmers may have switched to rice or corn, the more likely scenario is that they would have left farming altogether.

have been rising, but also because governments have been withdrawing subsidies.

- *Withdrawal of state services.* The removal of services for irrigation, post-harvest facilities and farm-to-market roads in the Philippines, for example, has meant that small-scale farmers are unable to improve productivity levels or get their products to market at prices that cover costs.
- *Land consolidation.* Trade liberalization can make some land more valuable for mechanized farming of certain crops. This leads to land consolidation. Whilst the concentration of farms can increase productivity and competitiveness, it also drives tenants and small farmers from their land, and in the absence of safety nets adds to unemployment and poverty.²¹ In Cambodia, for example, following trade liberalization, land was concentrated into fewer hands, and between 1983 and 2003 the proportion of rural households who were landless rose from 3 to 20 per cent.
- *Rising gender inequality.* Prior to liberalization, many women sold their produce to parastatals. Now they have to sell to traders, who may take a greater cut. Women are also affected disproportionately by the elimina-

tion of subsidies, the drying up of credit and the surge of food imports.

- *Unsustainability.* The international food market encourages farmers to devote large areas to single crops, with excessive use of fertilizers and pesticides, which can cause damage to both land and water supplies.

Trade liberalization does, of course, have positive effects. Not only does it lower prices for consumers, it can also enable rural communities, and especially women, to engage in non-agricultural activities through micro- and small enterprises, for example. However, the positive effects are often far outweighed by the negative.

Making Agricultural Trade Work for the Poor

Neither economic growth nor an expansion of trade will necessarily benefit the poor; indeed, it may harm them. What would it take to make trade work for the poor? Changing international trade rules will be important, but national governments can also take measures to change the context within which trade liberalization operates.

Governments serious about agricultural development will need to make more serious efforts at land reform

1. Promote Agricultural Development

Although more than half the region's population depend on agriculture for their livelihoods, relatively little has been done to promote productivity and employment. Indeed, public expenditure on agriculture has been declining. Between 1990 and 2001, public expenditure on agriculture as a proportion of GDP in four South-East Asian countries fell from 8.4 to 3.8 per cent, in three South Asian countries from 1.9 to 1.2 per cent, and in two countries of the South Pacific from 1.0 to 0.8 per cent.²²

India is an example where the government in the past decade has largely neglected the agricultural sector. Though most of India's poor live in the countryside, investment in agriculture has been in serious decline, between the 1980s and the 1990s falling by 29 per cent. Just as important is the shortage of agricultural credit. While consumers can take loans to buy a house or a car at interest rates of 9 to 11 per cent, farmers wanting crop loans can be charged 17 per cent. Even then, most farmers cannot even access government loans and have to rely on moneylenders who can charge them rates of several hundred per cent.

If governments want broad-based and equitable development, they will need to invest more in agriculture – particularly for capital formation – while providing price support, affordable loans, assistance with irrigation and marketing, and help with storage, processing and distribution facilities.

2. Carry Out Land Reform

Governments serious about agricultural development will need to make more serious efforts at land reform. In Asia, one-third to one-half of smallholders subsist on less than one hectare. In Bangladesh, for example, 78 per cent of rural household are classified as land-poor. In India the proportion is 71 per cent. Elsewhere, the

proportions may be smaller but still significant: more than one-third in Indonesia, the Philippines and Sri Lanka. If anything, the problem seems to be getting worse as the concentration on export agriculture and the growth of cities and industry combine to push more poor families off their land.

Land ownership is particularly difficult for women. In Nepal, for example, even though two-thirds of agricultural labourers are women, until very recently they were permitted to own land only as part of a married couple, and when couples separated the land rights went to the husband. While women can inherit property since 2002, it reverts back to the natal family upon marriage.²³

Recent attempts at land reform have not got very far. In the Philippines, for example, the government's Comprehensive Agrarian Reform Programme (CARP) has never really been implemented. The Philippines has also attempted 'market-assisted land reform', which involves helping the landless procure land directly from landowners. However, the beneficiary only gets help if he or she presents a farm plan that is geared towards commercial cash crops. The programme does not, therefore, promote small-scale farming. Also, the current landholders object strongly, and given the scarcity of land are unwilling to sell. The farmers' movements are also opposed, because of the unequal bargaining positions of the landholder and the farmer. All in all, the programme has not been very successful.

3. Address Relative Prices

Trade liberalization also alters relative product prices, and therefore, its net impact on poverty reduction depends also on the direction of price changes and how they affect input and factor prices and farmers' incomes. If the price changes are pro-poor, then they will tend to reinforce any positive growth effects of trade reform on the

poor. However, the outcome also depends on complementary policy changes, specifically on whether or not they:

- Create new markets that are pro-poor;
- Stimulate the poor to respond to altered prices and new market opportunities;
- Provide second-round spillover effects that are pro-poor;
- Minimize any transitional unemployment that concentrates on the poor;
- Raise government revenue that leads to pro-poor public expenditure; and
- Reduce the vulnerability of the poor.²⁴

4. Offer Protection to Poor Producers

At present many poor farmers find it difficult to compete. Governments will, therefore, need to find ways of protecting small farmers who are viable food producers but are threatened by low world prices either through higher tariffs, prices support or subsidies on inputs.

Agricultural Trade Policies of Developing Countries

Given their different patterns of agricultural trade, individual developing countries will also have different interests, depending on whether they are exporters or importers. Producers of tropical beverages and raw materials will aim for access to global markets and a steady income. They want to avoid price volatility and ensure that they are not persistent losers in the shifting terms of trade between tropical products, food and non-agricultural products. Thus, they would benefit by coordinating their production programmes so as to maintain steady supplies, for example, while also establishing effective insurance systems in case demand dips temporarily. Food exporters too would welcome stability in terms of access and prices; they would also want to adjust their own patterns of production to reduce dependence on imports.

The most significant dilemma for developing countries, however, concerns the impact of international trade on the prices of staple foods. Should governments aim to maintain prices to provide decent livelihoods to farmers, or should they lower prices so as to help poor urban consumers? This is a major issue for Indonesia, for example, which is a large domestic producer of rice but is not self-sufficient and has to import to meet the rice gap. Selling imported rice at low world prices could harm local producers and, therefore, Indonesia applies tariffs on imports.

Some, including the World Bank, argue that these tariffs should be removed or should be as low as possible since the poorest Indonesians spend 30 per cent of their incomes on rice.²⁵ Others argue that a cheap rice policy is counter-productive. If Indonesian farmers get low farm-gate prices, they are unable to improve their situation and are less able to invest in education, which means that Indonesia will remain with an unskilled, low-wage and low-productivity economy.²⁶ Continuing rural poverty also depresses local purchasing power and the demand for other domestic products and thus hampers national development, sustaining a high degree of dependence on foreign markets.²⁷

In practice, the trend in agricultural trade is towards greater liberalization. In some cases this is because countries have entered into bilateral, regional or multilateral agreements that require more open trading. In others, however, countries have either liberalized unilaterally or have been required to do so by international agencies on which they rely for capital inflows to cover balance of payments deficits.

Unfortunately, much of this liberalization has been asymmetric. Developing countries have liberalized their agricultural trade far more than the developed countries, which have maintained significant levels of subsidies to national food producers as well as using technical non-tariff barriers. This asymmetry has been accentuated by the Uruguay Round agreements on Trade-

Developing countries have liberalized their agricultural trade far more than the developed countries

Related Aspects of Intellectual Property Rights (TRIPS), within which the clauses on Geographical Indications have so far mostly been exploited by the developed countries. The developing countries could, however, also use these as a lever to advance their human development agenda.

The Current Negotiations

The current Doha Round of trade negotiations offers an opportunity to correct these inequities. But they do not seem to be going in the right direction – particularly with respect to the ‘Green Box’, which refers to support that can be unrestricted, and the ‘Blue Box’, where there are more restrictions (*see* Notes 9 and 10). Early in the negotiations, the US and the EU managed to ensure that they could continue to misuse Green Box support measures and even maintain and extend the Blue Box measures that should have been phased out at the end of the Uruguay Round.²⁸

There have been some gains. The meeting of the General Council of the WTO in July 2004 led to a framework agreement that required the developed countries to reduce and eventually eliminate direct and indirect subsidies to agricultural exports. It also obtained a promise of a substantial reduction of domestic support to farmers.²⁹ However, the text allows for some exemptions – notably, through a provision for lower cuts for an ‘appropriate number’ of ‘sensitive products’. This will, for example, allow the US to protect uncompetitive products such as sugar.

Even so, the developing countries have made some gains. The agreement explicitly recognized the need for ‘special and differential treatment’ for developing countries in terms of the scale of tariff reduction, the number and treatment of sensitive products and the length of the implementation period. In particular, just as the developed countries can designate certain ‘sensitive

products’, the developing countries can identify an appropriate number of ‘special products’ that will be eligible for more flexible treatment and not subject to tariff reduction commitments – based on their contribution to food security, for example, and rural development needs. The framework also provided for ‘special safeguard mechanisms’ against disruptive imports, import surges, or sharp price declines in specific agricultural products.

How much has really been achieved? The eventual elimination of export subsidies would of course be welcome, but these should already have been phased out, even under current WTO rules. The main change is that the EU, which is the primary user of such direct subsidies, has made its reductions conditional on parallel reductions on the more indirect subsidies, such as export credits that are primarily used by the US.

The main sticking point, however, is not on support for exports but on direct support to domestic producers. Developed countries have so far offered very little on this, which makes up the bulk of agricultural support.

This framework agreement was largely ratified at the December 2005 WTO meeting in Hong Kong. The EU accepted at this meeting that it would phase out export subsidies by 2013, though this only corresponds to the reduction already envisaged in the reform of the EU Common Agricultural Policy that was to be completed by 2013. On other agricultural issues, the Hong Kong Declaration reiterates the need to work out ways to reduce tariffs and domestic support and says that the greatest reductions will be expected from countries giving the most domestic support and applying the highest import tariffs. However, these seem unlikely to result in any significant cuts in support.

For developing countries, Hong Kong has, therefore, produced three limited gains: the EU commitment to phase out export subsidies by 2013; the opportunities to designate certain ‘special products’ that will not be subject to tariff

reduction commitments, and the ‘special safeguard mechanism’ to deal with import surges or sharp declines in prices.

Intellectual Property

Another contentious feature of the international trade regime instituted through the Uruguay Round was the agreement on TRIPS. This aims to protect the rights of individuals and companies that have invested in research and development – giving them the opportunity to recoup their costs on the grounds that, without such protection, they will have little incentive to make similar investments in the future.

Others argue, however, that such protection is unnecessary – that the period in which competitors try to match their innovations already offers sufficient opportunities to recoup R&D costs. And in some respects nowadays there should actually be less need for protection, for as modern products become more complex, the capital costs increase, which poses barriers to entry and alleviates the risk of failure – thus deterring competitors. Moreover, many of the innovations for new products lie less in the products themselves than in the way they are produced; the process of technological change is thus embodied in the firms, which further undermines the position of potential competitors.

There are also many problems with ambiguous definitions. At what point, for example, does an increment in human knowledge warrant being described as an innovation? And how does one take into account the fact that much innovation builds on common property, for example, drugs derived from natural products? If the innovator is allowed to charge, should the country or community that provided the original material not also have similar rights?

Despite these and many other objections, the developed countries have been demanding stronger international patent protection, and in particular have been pressing it through the

trade regime via the TRIPS agreement. This brings a number of advantages: first, because it creates an opportunity for enforcement; countries that do not respect intellectual property rights (IPRs) would face retaliation through trade sanctions. Second, it creates an international body, in the form of the Dispute Settlements Panel of the WTO, to which IPR violations can be referred. Third, it passes the responsibility for policing the rights to national governments, who would not want to see all exporters penalized for infractions by a single enterprise. The Uruguay Round agreement thus not only forced countries to recognize IPRs, it also created a workable mechanism for enforcing those rights.

Until recently, the main implications of this for agriculture would have been for inputs like fertilizers, pesticides and machinery. Matters have changed because of two kinds of technological development. First, since the years of the Green Revolution many companies have been producing hybrids or varieties generated through scientific research. Second, more recently, researchers have been using genetic engineering and biotechnology to manipulate genes to produce crop varieties that have higher yields and greater pest resistance, and are more appropriate for particular conditions of climate, soil and moisture.

Transnational corporations hope, therefore, to apply patents to ‘plant variety protection’, arguing that this will ensure further research. This is doubtful, since in most of the developing world such research is mainly financed by governments, and commercial varieties generally offer cosmetic differences using lines or strains based on research provided by public institutions.

In fact, some forms of protection will inhibit future research. This was evident even during the Green Revolution, when seed multinationals such as Monsanto and Pioneer Hi-Bred International Inc managed to get patents for plants

Developing countries can rightly claim that transnational companies are plundering their resources

that prevented farmers from saving the seeds of the resulting crops. This meant that, when the International Centre for Maize and Wheat Improvement in Mexico developed semi-dwarf improved varieties of wheat for developing countries, it could not offer these to India, where they were covered by a utility patent in America. As a result, the Green Revolution in India did not boost the production of maize. Consequently, patent protection can create new obstacles to agricultural improvement.

Companies can also reinforce this legal form of protection with a technical one by engineering varieties whose ‘terminator seeds’ do not germinate, or in which during natural reproduction a certain quality collapses or cannot be transmitted through seeds. They can also tailor plants to ensure that they will not express a particular trait, such as herbicide resistance, unless they are sprayed with specific chemicals that activate the right gene.

Developing countries can rightly claim that transnational companies are plundering their resources. Tropical countries are oceans of biodiversity and provide most of the original species as the basis for research in the developed countries. This has been referred to as ‘biopiracy’, when foreign companies steal and then patent biological resources and traditional knowledge from the developing countries. The US patent on the use of turmeric for healing wounds is a well-known case in point.

But there have also been other cases where biotechnology and patenting are damaging developing countries in a more insidious way. Thus far, generations of plant breeding in different countries have produced distinctive and valuable varieties. Biotechnology can take these varieties and engineer them so that they will also grow in other places – as has happened with basmati rice, for which the commercial plant breeder, RiceTec, built on traditional knowledge without having to pay for it, and managed to differentiate its product to render it ‘novel’ enough to be consi-

dered for a patent. But what constitutes novelty is generally an arbitrary judgement.

Geographical Indications

Despite these implications, it has been argued that developing countries could, even if partially, exploit the TRIPS agreement in their favour. For example, by using the system of Geographical Indications (GIs). These are indications – words, phrases, symbols or images – that identify a good as originating in a territory, where a given quality, reputation, or other characteristic of the good is essentially attributable to its geographical origin.³⁰ Geographical Indications are thus unlike patents in that they do not protect new creations but simply recognize existing ones.

The idea originated in Europe and most GIs refer to products from developed countries, such as Champagne, Cognac, Roquefort cheese, Napa Valley wines and Scotch whisky. Examples of GIs in Asia include: Basmati rice, Phu Quoc fish sauce, Long Jing tea, Himalayan waters, Alphonso and Sindhri mangoes, Hunza apricots, Bhutanese red rice, Mongolian Cashmere, Pakistani Shu (windproof woollen fabric) and Ajrak (designs from Sindh), Jasmine (Hom Mali) rice and Thai silk, Lao Agar fragrance, Sumatra Mandheling coffee, Shaoxing alcohol, Maotai, Xuancheng art paper; and Ceylon and Darjeeling teas.

Geographical Indications offer an advantage for policymakers since they are usually public property. Intellectual property is usually owned by individuals or corporations, and 97 per cent of all patents worldwide belong to the industrialized countries.³¹ But Geographical Indications are owned publicly by the state, or agencies legally vested by it. Even subsistence-based societies with low levels of technology can thus in principle use GIs to promote their traditional products and know-how.

This opens up many development opportu-

Geographical indications offer an advantage for policymakers since they are usually public property

nities. Asian nations have a wide range of distinguished products, but only a few are globally known – which means there is a tremendous scope to publicize them at home and abroad. Once a Geographical Indication is recognized, communities and enterprises in the designated area can stop other people from using it. They are also in a position to charge a premium for what have effectively been certified as ‘authentic’ products. It might be argued that raising prices would disadvantage poor consumers, but GIs in most cases are not usually staple items of basic needs and consumption; they are generally special products, with high value that are not much used by the poor.

There are also indirect benefits. GIs are often linked with popular tourist regions – which widens economic opportunities for local people through micro-enterprises and could attract additional investment into the region to develop the place and the product, such as in Viet Nam’s Phu Quoc island.

As well as being valuable for protecting local products, GIs also provide a way of protecting local knowledge and natural endowments. The developing countries in Asia and Africa are home to 90 per cent of the biological resources that are a source of plant-based drugs. In 2004 the market value of pharmaceutical derivatives from indigenous people’s traditional medicine was estimated at \$60 billion.³² In recent years, some Western pharmaceutical companies have attempted to seize control of this knowledge through patents – as for example, with the natural fungicide in the bark of the Indian neem tree. There are also examples of attempts by outsiders to tap the anti-diabetic properties of the banana plant in the Philippines. These have the potential to generate direct, equitable revenue-based benefits to the poor and the marginalized.

The TRIPS Agreement and GIs

The TRIPS agreement offers some protection for

GIs. But it has its limitations. It forbids countries from registering a trademark that suggests the product originates in a place protected by a GI, but only if it does so in a way that misleads the public. Thus, if a sauce were described as a Phu Quoc ‘kind’, ‘type’, ‘style’ or even ‘imitation’, it would be allowed. This creates areas of ambiguity – since producers can free-ride on the reputation of a product without necessarily misleading the public, and there can also be uncertainty in deciding whether or not the public is misled. Moreover, the burden of proof lies with the GI holder.

The only exceptions to this are products of particular value to the developed countries: wines and spirits. Thus, a company that wanted to market, say, a ‘Beaujolais-type wine produced in Viet Nam’ would not be prevented from doing so on the ground of misleading the public, but it would be caught by a further clause that offers stronger protection for wines and spirits against even this kind of encroachment.³³

GI Regimes in Asia

Asia has in practice had many GIs for hundreds of years, though only recently have countries considered protecting them through an intellectual property regime. Even today, most countries do not have a separate legal *sui generis* instrument. Instead, they provide some, though often inadequate, protection through two main channels: trademark laws or business practice laws such as those for unfair competition, consumer protection or food standards. Often, however, in response to a threat they have tried to produce more specific legislation – as in India, Thailand and China (Box 3.2).

Nevertheless, Asians still have a long way to go when it comes to presenting their cases. In negotiations the Geneva-based delegations of Asian countries favour short-term tactical bargaining, rather than substantiating their positions with solid research and information.

GEOGRAPHICAL INDICATIONS IN ASIA

A number of Asian countries have been developing systems to protect Geographical Indications:

India. In the late 1990s, India fought a well-publicized battle to rescind some US patents on Basmati rice, but it was not until 1999 that it belatedly passed the Geographical Indications of Goods (Protection and Registration) Act, which only came into effect on 15 September 2000. This defined GIs more specifically than TRIPS: in addition to agricultural goods bearing geographical names, it covers natural goods like coal and bauxite, as well as manufactured goods, like Kanchipuram sarees and Kohlapuri slippers. It stipulates that one of the activities of either production or of processing or preparation of the goods concerned should take place in the territory, region or locality. The Indian system is quite elaborate though the alternative of protecting GIs through the trademark system is said to be even more prohibitive and inadequate (Thual 2003). Either system could be daunting to individual and small-scale producers who want to protect their products.

Thailand. Thailand too sprang into action only in self-defence, when a variant of its famous Jasmine rice was patented in the US as Jasmati. A *sui generis* Act on GIs was finally passed and came into force in April 2004. Known popularly as the 'Champagne Law', it has standard procedures for registration and penalties for misuse: a fine of up to \$5,000. It also provides for cancelling

GIs if, for example, they are contrary to peace and order, good public morals and national policy (Chuenjaipanich 2004). Thailand is using this system as part of its 'One Tambon, One Product' programme. Launched in 2003, this has selected 60 community products for upgrading and quality certification, with the aim of first expanding the domestic market and later exports.

China. There are two distinct regimes of GI protection. The first, which has operated since China joined the Paris Convention in 1985, is through the China Trademark Office (CTMO), and the first regulations were introduced in 1993. As of November 2003, 100 GIs had been registered with 233 applications pending. The second regime is *sui generis*, through the Administration for Quality Supervision, Inspection and Quarantine (AQSIQ). In 1999, for example, in cooperation with the French Government, this recognized GIs for Shaoxing Yellow Wine. As of November 2003, 123 GI applications had been made to AQSIQ, of which 49 had been approved and 41 were under examination (Li et al. 2003). Producers of the most famous Chinese GIs, such as Long Jing tea and pottery, who have availed themselves of protection, say that sales of rival counterfeit products have declined while their sales and prices have increased rapidly, enabling them to pay more taxes to state coffers.

Source: Waglé 2003.

As a result, the intrinsic merits of their GIs get diluted. Some producer associations, like that for Thai silk, and new international networks like ORIGIN are working toward collecting facts and information on selected products. But government departments should take the responsibility to conduct research – collecting information on market share and value, the number of people employed, ancillary rural industries, actual cases of loss in terms of jobs and incomes through lack of protection, and the potential for investment and increasing tourism.

Fisheries and Human Development

Fish has become a highly traded commodity. More than 800 fish species are traded internationally in many different forms, shapes, brands and preparations. By weight, some 38 per cent of total fisheries production enters international

trade – worth nearly \$60 billion in fish and fish products.

Fisheries are particularly important for developing countries. While the share of developing countries in global merchandise exports was 38 per cent in 2001,³⁴ their share in global fish exports in 2000 was slightly less than 50 per cent. Fish thus provides a valuable source of foreign exchange for developing countries, with net receipts of around \$17 billion a year, more than from the combined exports of tea, rice and coffee.³⁵ Of this, the net export trade in seafood between 1990 and 2000 increased from \$10 billion to \$18 billion, an increase in real terms of 45 per cent, due to a large extent to the emergence of aquaculture.

Asia has much to gain by promoting equitable agricultural trade generally, but this is particularly true for that in fish. The region accounts for more than one-third of global exports of fish

and fish products – 7 million tons annually.³⁶ China is now the world's largest exporter of fish, while Japan is the world's largest importer, but the fish trade is important throughout the region.

- *Viet Nam.* Fisheries represent 5 per cent of GDP, and 40 per cent of total fish production is exported, with earnings of \$2.1 billion in 2002 – greater than exports of agricultural products such as rice and rubber and next only to crude oil and garments.
- *India.* Fish is the third-largest export, after textiles and cotton. India exports 25 per cent of its marine fish production. In 2002-03 Indian export earnings from seafood stood at US\$ 1.4 billion.
- *Thailand.* Fisheries are 4 per cent of GDP, and Thailand exports more than three-quarters of its production.

But fisheries can be even more significant for smaller developing countries such as Cambodia, where fish accounts for 4 per cent of GDP, and especially small island developing states, such as Fiji and the Maldives, where it contributes 9 per cent of GDP.

Employment in Fisheries

Fishing, both for home markets and for the export trade, employs many millions of people. Indeed, the Asia-Pacific region is home to 85 per cent of the world's fishers and 95 per cent of its fish farmers. Although marine capture is still the biggest employer, aquaculture is fast catching up in some of the major fish-producing countries. Marine capture fishing usually employs men, but aquaculture, fish processing and marketing employ large numbers of women.

- *Viet Nam.* About 3 million people are directly employed in fisheries, and there are

plans to develop aquaculture to employ an additional 2 million people by 2010.³⁷

- *Indonesia.* There are more than 2 million fishers – half full-time, half part-time – as well as 2 million fish farmers.³⁸
- *India.* There are 725,000 full-time fishers and an equal number of part-timers. In addition, over 1 million people, mainly women, are engaged in pre- and post-fishing activities.
- *Thailand.* There are over 250,000 fishworkers. Around one-third are employed as workers in large-scale fisheries, another one-third are owner-operators in large-scale and small-scale operations, and most of the rest are aquaculture farmers.

In some respects fishers are in a stronger position than farmers because they sell a larger proportion of their production on a regular and consistent basis.³⁹ In other respects, however, they can be more vulnerable, whether as a result of natural factors such as fluctuations in the fish catch, bad weather, and exposure to cyclones, or as a result of economic factors such as market price fluctuations and variable access to markets. This vulnerability was underscored by the 2004 Indian Ocean tsunami, which badly affected the livelihoods of fishers in Indonesia, India and Sri Lanka.

Incomes in fisheries can also be more equitably distributed than in other sectors. In capture fisheries, for example, earnings are typically shared between the owners of the boats, equipments and the crew. Also, fishers working for the export market can earn more than those working for the domestic market. Export species fetch a higher price than non-export species, and those workers on board fishing vessels targeting export species receive a higher share of the catch than for non-export species. On the other hand, the input costs are generally higher for catching or rearing high-value species.

Nevertheless, many fishing communities

The region accounts for more than one-third of global exports of fish and fish products – 7 million tons annually. It is home to 85 per cent of the world's fishers and 95 per cent of its fish farmers

Many fishing communities already have low incomes, but their situation could get worse as stocks are exhausted

remain very poor. Most full- and part-time fishers in the artisanal and small-scale sectors are completely dependent on fisheries for their livelihood, and nearly 6 million of them, over 80 per cent of whom live in Asia, are believed to be earning less than \$1 per day.⁴⁰ Of a further estimated 17 million income-poor persons engaged in aquaculture and other related activities (boat-building, net-making, marketing and processing), over 14 million are to be found in Asia. Globally, then, around 23 million income-poor people work in the fishery sector; of these, 19 million are from Asia.

As a result, fishing communities can have lower levels of human development. In the Indian state of Tamil Nadu, for example, fishing communities have a literacy rate of 65 per cent compared with a state average of 74 per cent. Many live in poor housing conditions. Population growth is also more rapid here than elsewhere.

Sustainability

Many fishing communities already have low incomes, but their situation could get worse as stocks are exhausted. Intense competition in open-access fisheries is leading to overfishing in several commercially important fisheries. Unregulated coastal industrialisation has also given rise to problems of coastal pollution, which is killing fish and threatening the livelihood of fishing communities in many Asian countries, including India, China and Thailand. Elsewhere, there have been some successes, as in the Maldives, which has introduced environmentally friendly fishing methods and technology – but it has yet to promote Maldives fish in international markets as coming from sustainable sources.

It might have been thought that aquaculture would be more sustainable. But in fact, the reverse seems to be true. The emergence of cultured shrimp in many parts of the region has not

only caused considerable environmental damage but also had knock-on effects in marine capture fisheries. This is partly because the volume of cultured shrimp on international markets has depressed prices for wild harvested shrimp – forcing many trawlers to switch over to high open-bottom trawls, which catch all species of fish. This, in turn, has undermined the livelihoods of other non-trawling fishers. In addition, the collection of shrimp fry from the wild gathers not only shrimp fry but other marine fish larvae – further reducing fish stocks.

The Impact of Tariff Measures

The Asian fishing sector also faces problems accessing markets in developed countries. At first glance, the barriers do not appear high. The EU, Japan and the US extend preferential tariff treatment under the Generalized System of Preferences (GSP). For unprocessed fish, frozen fish, crustaceans and molluscs, most developed countries apply fairly low tariffs: Japan, which is the world's biggest market for fish and fish products, has a tariff of about 4 per cent. The US has a nominal tariff of just 1 per cent for fish imports. The EU, on the other hand, applies tariffs on primary shrimp products of 12 to 18 per cent and has an average tariff of 10 per cent.

Tariffs are much higher, however, for processed fish and fish products. Japan, for example, applies a tariff rate on fresh/chilled/frozen tuna of 3.5 per cent, but for processed tuna the rate is 9.6 per cent. The developed countries also typically apply quotas – with higher tariff rates for deliveries beyond the quota: the US, for example, applies a 6 per cent rate to processed Thai tuna within the quota but 12.5 per cent for deliveries beyond it. For the EU, tariff rates on processed tuna can reach 25 per cent.

Even for unprocessed fish, there can be further hurdles. The EU discriminates against imports of fish and fish products from countries

that have not met with their obligations under multilateral environmental agreements. There can also be protests against the arrival of large volumes of particular products. Viet Nam, for example, between 1999 and 2002 increased its exports of frozen catfish fillets to the US from 5 million to 34 million pounds. The Catfish Farmers of America, a group representing catfish growers and processors, lodged a dumping complaint, and in 2003 the US International Trade Commission ruled that Viet Nam's exports had hurt the US catfish industry and imposed tariffs of 37 to 64 per cent. As a result, fishermen in Viet Nam suffered a sudden fall in prices and a sharp decline in income.

In addition to tariff barriers, the developed countries can also restrict imports via non-tariff barriers. These include food safety standards, environmental measures such as ecolabelling and certification programmes, and requirements for compliance with multilateral environmental agreements.

Food Safety Standards

As a result of the globalization of the fish trade and the increasing demands for consumers for safe fish of high quality, developed countries now have much more systematic procedures assuring food safety, using a Hazard Analysis and Critical Control Point (HACCP) system.⁴¹ Processors who export to the EU and the US markets in particular have to comply with tight import regulations or face rejections that they can ill afford (Box 3.3). These standards vary from one market to another: the US, for example, requires that levels of histamine in canned sardines, mackerel and anchovies should not exceed 50 parts per million (ppm), while the EU generally permits up to 150 ppm in canned fish.

Technological advances in seafood analysis are now such that pesticide and pharmaceutical residues can be detected at the parts per billion

(ppb) level, and in some cases at the parts per trillion (ppt) level. The EU, for example, uses a high-performance liquid chromatography (HPLC) method that can detect antibiotics such as chloramphenicol at 0.3 ppb and nitrofurantoin at 1 ppb levels. At this level of sensitivity, a 'safe' product can suddenly become 'unsafe'.⁴² On a number of occasions, the EU has rejected Asian shrimp imports, having detected traces of prohibited carcinogenic antibiotics like nitrofurantoin and chloramphenicol as well as other bacterial inhibitors such as aminoglycosides and macrolides.

The importing countries also have different control procedures. The EU requires fish imported from a foreign processor to be accompanied by a certificate from an authorized national agency, and it reserves the right to inspect the regulatory process and to decertify a national agency until remedial action is taken. In the case of the US, the individual exporter has to demonstrate an ability to produce seafood according to the US regulations.

Meeting these regulations and complying with the International Organization for Standardization's requirements, especially ISO 9002 for fish processing plants, adds significantly to the costs for exporters – who have to pay for consultants, personnel, record keeping and training. At

Processors who export to the EU and US markets in particular have to comply with tight import regulations or face rejections that they can ill afford

BOX 3.3

FOOD SAFETY STANDARDS AND SMALL-SCALE FISHERIES

From a small-scale fisheries perspective, in addition to the cost aspects, one of the main problems in adopting a HACCP plan would be the difficulty in implementing it at the point where fish is caught, especially for beach landing fishing units like *kattumarams* and canoes in countries like India. According to EU and the US standards, fish has to be stored in ice or kept in frozen storage as soon as it is harvested. Storage of fish in iceboxes would be difficult on board traditional fishing craft like *kattumarams*, which are made of lashed logs. Yet many *kattumarams* using long lining and bottom set gillnets are engaged in catching fish for the export market. Strict implementation of HACCP plans would result in their forced exit from that market.

The fish handling standards of many import markets require that fish is not exposed to beach sand. Because many of the fishing villages that harvest fish, shrimp and cephalopods for the export market have only the beach for landing their catch, it would be difficult for them to comply with a HACCP plan unless they invested in iceboxes and maintained them in a hygienic manner.

2002 prices, an HPLC measuring system, for example, costs around \$220,000 per unit. Even complying with HACCP is difficult for small-scale operations (Box 3.3). These rising certification costs are then reflected in falling profits – as reflected in the ‘unit value realization’: for shrimp, for example, this rose from \$1 in 1961 to \$9 in 2001, but by 2002 had fallen back to \$7.

The high standards required for export markets also have implications for domestic markets. Most exporting countries do not have national standards for food safety. India, for example, does not have a quality standard for seafood for its own domestic consumers. Under the WTO Agreement on Sanitary and Phytosanitary Measures, however, members are required to establish equivalence in the regulations and regulatory processes between importing and exporting nations. For the developed importing nations, this does not represent a problem, since the requirements for importing are normally just an extension of their domestic standards. Many developing countries will, however, need to introduce new systems.

Developing such systems is a national responsibility. But poorer countries should also be able to count on support from the developed countries. This commitment is embodied in Millennium Development Goal 8, which aims to develop global partnerships for development and especially to help build trade capacity towards greater market access, particularly for the LDCs.

Ecolabelling

In an effort to ensure that fish and fish products originate from sustainable fisheries, a number of countries are now encouraging, or requiring, systems of ecolabelling. Japan, for example, uses ecolabelling to control imports of tuna for the lucrative sashimi market. This aims to prevent imports that come from illegal, unreported or

unregulated fishing vessels. The EU and the US are also in favour of ecolabelling and certification. As yet, however, there are no multilateral agreements on this issue, and it is not yet clear to what extent such labelling systems come under the WTO Agreement on Technical Barriers to Trade.

Developing countries are worried that even voluntary ecolabelling requirements would effectively exclude imports from artisanal and small-scale fisheries. They have a number of concerns:

- *Costs.* Ecolabelling will add to the expenses for the fishing industry, with no guarantee that these increases will be offset by higher incomes for certified products.
- *Loss of autonomy.* Small-scale artisanal fishers are anxious that they will lose their autonomy if they have to comply with standards that are developed and applied by external agencies – standards that may not take into account specific aspects of their fisheries.
- *Practicability.* Certification is likely to be given for a fishery in its entirety. For example, the ecolabelling programme ‘Fish for Ever’, established in 1997 by the Marine Stewardship Council, provides a label not to a firm, but to a whole industry, and thus requires collaboration from all its fishing units. In fact, one of the main problems in Asian fisheries is the conflict between bottom trawlers and other small-scale, passive-gear groups who compete for the same space and resources. Cooperation across fisheries is hard to achieve.

Even if ecolabelling systems could be applied, they might have perverse outcomes. If, for example, certified fish commanded higher prices, this could intensify catching of those fish – especially in fisheries where it is difficult to impose limitations on fishing effort.⁴³ On the other

hand, things could work in the other direction: fishers unable or unwilling to comply with the requirements in a certified fishery might then be diverted to uncertified, or uncertifiable, fisheries where they could over-exploit fish stocks.

In practice, given the poor state of fisheries management in many developing countries, ecolabelling is a long way off. Some fairly homogeneous fisheries, like the tuna industry in the Maldives, might be able to cope. But elsewhere, preparing an industry for certification will be more complex and expensive. The lobster fishers of Ceara, Brazil, for example, supported by a private foundation, applied for precertification. However, the pre-assessment showed that certification was impossible in the short term since the fishery was in such a bad condition.⁴⁴

The EU, Japan and the US are unlikely to require ecolabelling, but at some point they may insist on proof that the fishery at least has a management plan. Developing countries would, therefore, be well advised to start preparing standards for sustainable harvesting of fisheries, resources along with standards for food safety and better living conditions for workers.

Multilateral Environmental Agreements and Fisheries

A number of multilateral environmental agreements (MEAs) have implication for the trade in fish. The 1982 Law of the Sea Convention, for example, includes measures ‘to protect and preserve rare and fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life’ (Article 194). Other MEAs that contain potential trade measures in fisheries and agriculture include: the 1972 Wetland Convention called the Ramsar Convention; the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora; the 1980 Convention on the Conservation of Antarctic Marine Living Resources; the 1992 Convention

BOX 3.4

CITES, THE SHRIMP-TURTLE DISPUTE AND INDIAN FISHWORKERS

The shrimp-turtle dispute at the WTO between the US and several Asian countries is the first case that involved an MEA. The 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) considers all species of sea turtles to be threatened with extinction and bans their international trade. Sea turtles also appear on the Red Data List of threatened species of the International Union for the Conservation of Nature.

The US will import shrimp only from countries having a marine turtle conservation programme comparable to that of the US. This means that shrimp fishing vessels are required to add a turtle excluder device (TED) to the belly of their trawls. In response, the Indian state of Orissa in 2001 made TEDs mandatory for all trawlers in Gahirmatha, Devi and Rushikulya and distributed 500 fully subsidized TEDs to trawler operators.

However, the trawler operators are reluctant to use TEDs – arguing that 20 to 30 per cent of their catch would be lost through the escape hatch provided for turtles. Another possibility is that turtles or ray fish could get stuck in the mouth of TEDs, blocking the entry of other fish. The situation is even more difficult in multi-specied fisheries, where the TEDs would need to account for fish of different sizes.

Turtle biologists too are unconvinced of the value of TEDs. Some say that it would be better to concentrate on ‘reproductive patches’ – congregations of reproductively active adults that are almost entirely found within 5 kilometres of the seaboard. They believe that it would be more effective – and much cheaper – to focus protection here, rather than guarding large areas that may not be active turtle habitats.

on Biological Diversity, and the 1995 UN Fish Stocks Agreement.⁴⁵ An example of a multilateral environmental agreement hindering shrimp farmers is presented in Box 3.4.

It is quite likely that in the future MEA obligations could play a major role in seafood exports. The fish trade is fast emerging as an area with potential conflicts between MEA obligations and trade rules.

Fisheries Subsidies and the WTO

However, an immediate development that could potentially affect market access of many developing countries is the ongoing debate on fisheries subsidies. The Doha Round of WTO for the first time speaks of fisheries subsidies and their uses for ‘achieving legitimate development goals’. It also takes into account the demand from developing countries that certain subsidies be treated as ‘non-actionable’, including those on technology, research and development

funding, production diversification and development, and implementation of environmentally sound methods of production.

This is a vital issue for many developing countries where small-scale fisheries are a crucial source of livelihoods. Some have expressed reservations about discussing fisheries subsidies at the WTO. Several small-island developing states (SIDS), including Fiji, the Solomon Islands, Papua New Guinea and the Maldives, proposed 'special and differential' treatment in fisheries for developing coastal states in general and for SIDS in particular. The SIDS were also the first to attempt a broader definition of 'artisanal fishers' and proposed that any new disciplines on fisheries subsidies should exempt government programmes aimed at raising income levels of artisanal fishers.

Phasing out subsidies designed to enhance capacity will have major social implications for the fisheries sector in several developing countries and result in significant unemployment in coastal fisheries. Ways of providing alternative employment, either in fisheries or aquaculture or in other economic activities, have to be explored. Any investments toward developing such alternatives should certainly be treated as non-actionable subsidies.

Policy Directions for Agricultural Trade

Developing countries face some complex choices for policies on agricultural trade. They have to consider the impact of such trade on different groups in the population, and examine especially the effect on the most vulnerable groups.

Most countries want to maximize exports to earn the foreign exchange needed to finance critical imports. The choice is simpler for those that can produce enough food locally while also being able to export commodities, including food, in order to earn foreign exchange. But even countries that do not have enough good land or other agricultural resources to feed their own

populations could conclude that it is economically more efficient to devote some of these resources to high-value commercial crops for export and then use the foreign exchange to import food. This may seem rational from the point of view of economic efficiency, but it may be irrational from the perspective of human development. For while increasing trade in this way might boost economic growth – and benefit poor consumers – it is also likely to depress local prices and undermine the livelihoods of poor farmers.

Such a policy would also weaken national food security. In principle, all countries should, if necessary, be able to buy food from world markets. But in practice, most countries prefer to reduce future vulnerability by sustaining domestic production of staples. They may, therefore, prefer to restrict liberalization, fearing that an external shock, like a sharp increase in oil prices or a rise in interest rates, would leave them unable to import sufficient to meet national needs.

These different circumstances and scenarios imply that each country is likely to have its own priorities, which will colour its stance in trade negotiations. Exporters like Australia, New Zealand, Thailand and Viet Nam will favour most elements of liberalization, whether this concerns widening market access, reducing subsidies or generally increasing competition. Other countries will be more interested in limiting agricultural trade liberalization in order to ensure food security and protect domestic livelihoods. These differences are understandable, so donors or international agencies should resist the temptation to straitjacket countries into a single common policy on agricultural trade.

Nevertheless, even if all developing country interests do not fully coincide, they may overlap to a certain extent. As a result, there is usually some degree of solidarity in the developing-country camp. This suggests three general strategies:

- *Highlighting inconsistency by the developed countries.* The richer countries are often demanding greater access to markets in the developing countries while also demanding the right to protect their own farmers;
- *Protecting sensitive products.* Agreements should include safeguard measures, especially for ‘sensitive’ products, in order to protect livelihoods and ensure food security;
- *Arguing for differential treatment.* Developing countries believe that they, and the poorest countries in particular, should be able to count on a degree of differential treatment.

In these circumstances, a number of developing countries will need to maintain agricultural tariffs to protect their small farmers and ensure that they can still compete on local markets. But at the same time, they must strengthen the future position of such farmers through land reforms and investment in rural development infrastructure, processing and storage facilities and inputs and, where necessary, offer price support. This may seem to privilege farmers over poor urban consumers, and therefore, governments should also ensure the availability of basic foods at affordable prices – which implies a continuing role for state trading enterprises or the establishment of targeted safety nets.

But there can be no ideal common package. Each country will have to fashion its own set of policies, depending on whether it is a food importer or exporter, on the mix of small and commercial farmers and the competing demands of rural and urban areas. No cookie-cutter set of rules will meet the human development needs of all.

Harnessing Intellectual Property

For intellectual property protection, much more research has gone into the legal and adminis-

trative aspects than into its economic benefits. Indeed, the TRIPS agreement itself was drawn up with ‘remarkably little analysis of its expected economic impacts’.⁴⁶ This could be costly for developing countries. For most poor countries, this would represent a substantial proportion of the development budget and might more fruitfully be invested elsewhere. Again, however, there can be no standard model of IPR protection; countries will choose the model that matches their resources and their development prospects and fears over costs.

Geographical Indications

There is a much stronger case for strengthening protection for well-known GIs – which tends to cost less than protecting Intellectual Property Rights.⁴⁷ For most Asian countries that are embarking on this enterprise, the first task is a national effort, ideally at the grassroots, to catalogue what they have and what they might wish to protect and develop. This would include foods, beverages, clothing and crafts, for example, as well as bioresources like plants, herbs and trees.

They should also estimate the value of output and how it could increase, given sufficient legal, marketing and technological investments. They should also be able to indicate how many people will benefit from the increased output, disaggregated by gender, ethnicity, and income-group.

A Fisheries Policy Framework

Just as developing countries, and particularly the LDCs, should have some leeway for protecting their poorest farmers, they should also be able to protect fishing communities. This would demand action from both the importing and the exporting countries. The importing developed countries would need to avoid support or subsidies on exports to their own producers, and

resist efforts to protect them from fair competition from developing countries.

But much more also needs to be done in the developing countries that export fish. First, they need to introduce management measures to prevent fisheries in their national waters from being overfished or fished to their biological limits. This would include regulations on minimum mesh sizes, establishing closed areas/seasons, and prohibitions on catching certain species and listing species that cannot be exported below a minimum size. In some cases it should also be possible to redirect the fishing effort to other areas. A number of Asia-Pacific countries are already taking such steps, but these need to be generalized and strengthened.

A second option is to produce more of the output through aquaculture. China, for example, has a zero-growth policy for marine capture from its inshore and offshore waters and intends to further boost output from aquaculture and distant water fishing. But because aquaculture can be environmentally destructive, China has also introduced what it calls 'ecological aquaculture', to incorporate principles of natural and social ecology, planning for 'community development and concerns for the wider social, economic, and environmental contexts of aquaculture'.⁴⁸

Other priority fisheries areas are:

- *Food safety standards.* Develop effective and enforceable national food safety standards and establish their equivalence with those prevailing in import markets. For this purpose, the LDCs in particular should be able to rely on international development assistance.
- *Catch certification.* As a precursor to international ecolabelling schemes, some developing countries should be able to embark on national certification programmes – pooling the efforts of national- or state-level fisheries authorities, together with fish-

worker organizations and the scientific community. With this experience, Asian countries could be involved in establishing an ISO Technical Committee on fisheries that could work towards an international 'ecolabel' protocol.

- *Negotiations on subsidies.* In the long run, subsidies should be phased out in most countries. But in the WTO debates on subsidies the Asian countries should press for this to happen more rapidly in the developed and higher-income developing countries. For capacity-enhancing subsidies – they could argue for complete exemption for the LDCs.

Policy Priorities

In summary, the key areas for policy are as follows:

1. *Ensure a consistent focus on agriculture.* Most of the world's poorest depend on agriculture and on access to secure supplies of food. Effective policies on agricultural trade are, therefore, crucial to human development and should be kept at the forefront of public debate.
2. *Promote solidarity among developing countries.* In agricultural trade, developing countries have many interests in common. They can unite, for example, in exposing the inconsistencies of developed country policies. They can also together argue for differential treatment for the most vulnerable countries, especially LDCs. And as a group they will want to ensure stable prices for food and non-food agricultural products.
3. *Accommodate different national interests.* Each country must, however, also fashion its own set of policies, depending on whether it is a net food importer or exporter, for example, on the mix of small and commercial farmers and on the competing demands

of rural and urban areas. These inherent differences and conflicts of interest need to be recognized and discussed in an open and transparent fashion at national and international levels.

4. *Promote the interests of the poor.* Trade liberalization is not an end in itself; it is of value only if it benefits the poor. Trade policy must, therefore, incorporate a comprehensive range of instruments, including tariffs and various types of support for weaker groups. Without this more inclusive approach, public support for any type of liberalization is likely to collapse and provoke wide-scale protectionism.
5. *Harness geographical indications and intellectual property rights.* One priority should be to establish and protect Geographical Indications, thoroughly cataloguing national assets and the benefits that can be derived from them. Some developing countries could also create

national systems for protecting intellectual property rights, though for many this could prove too expensive.

6. *Reform national fisheries.* Developing countries need to defend the interests of small-scale fishing communities and promote sustainable fisheries in both marine capture and aquaculture, through more effective management. But they also need to respond to current and future international developments by establishing food safety standards, for example, and developing new forms of catch certification.
7. *Invest in rural development.* In the long term, international agricultural trade is likely to increase. Developing countries should, therefore, help rural communities to be more resilient, by promoting equitable rural development through land reform and carrying out other measures that increase productivity with equity while promoting human development.