AN APHCA BRIEF:

Dairy Prices, Policies and Potential Opportunities for Smallholders in Asia

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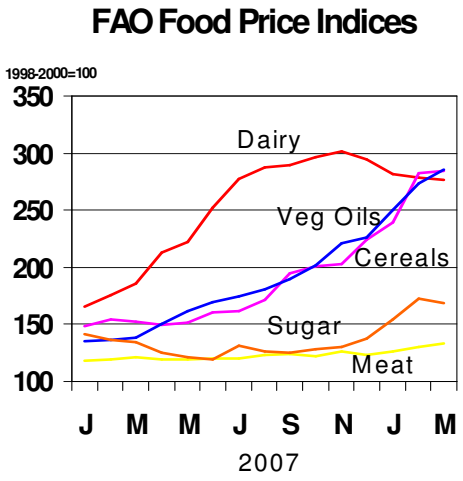
Governments around the world, concerned about food price inflation and local food security, are increasingly imposing measures to protect vulnerable populations. The objective of these policies range from short terms measures to protect the food security of vulnerable consumers, to those focused on encouraging supply responses by local producers. The priority policy focus, within the context of the current run up in all commodity prices, is to mitigate the impact of sharp short term price increases in national markets. Unfortunately some of the policy measures put in place, especially those which are focused at reducing retail prices for consumers, have ripple effects up the food chain that adversely affect producer livelihoods and food security in rural areas while holding long term implications for investment in the sector.

Dairy is no exception to the trend of escalating food prices and, in fact, throughout 2007, dairy product prices rose faster than another other agricultural commodity group (graph 1), plateauing in late 2007. As FAO indicates in their recent publication "Crop Prospects and Food Situation"[2], these escalating prices were the result of low stocks in major exporting countries, a discontinuation of the use of export subsidies by the EU, and adverse weather conditions in Oceania and other parts of the world. Unlike cereal prices, particularly those for rice which continues to remain high, dairy products are abating in early 2008. Other commodities such as wheat and sugar have also seen some recent price relief. For dairy, an easing of prices could be in response to positive supply responses in both developed and developing countries, as well as resistance by consumers, in a context of shrinking food expenditure availabilities, particularly in developing countries, to pay very high prices for higher valued livestock products.

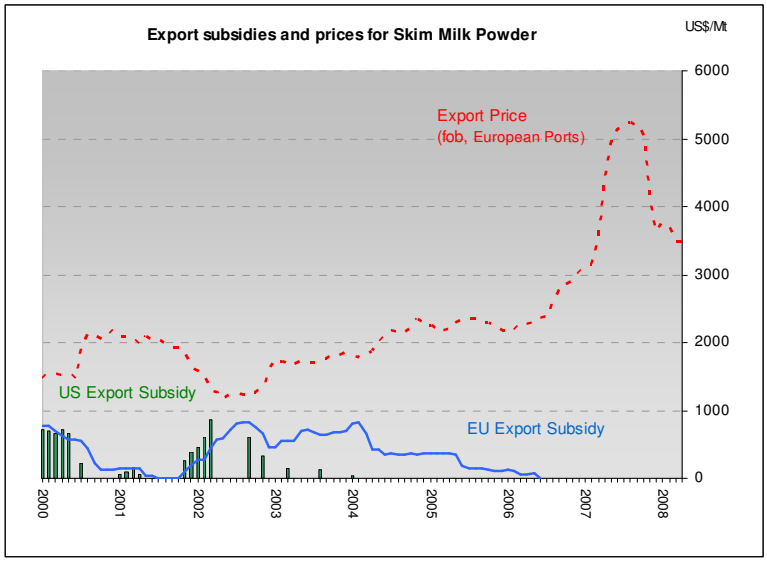


[1] Appreciation is conveyed to Sally Bulatao, dairy consultant in the Philippines as well as to others in the region who provided me with dairy prices.
[2] FAO Crop Prospects and Food Situation (April 2008): http://www.fao.org/docrep/010/ai465e/ai465e00.htm

This short article summarizes the factors leading to the upswing in global dairy prices, reviews some of the policy responses in the region, and discusses some of the opportunities and challenges for smallholder dairy sector in Asia.

The Background Shaping the Rise in Dairy Prices

Historically, high support for dairy products in OECD countries[3] have led to structural surpluses which, combined with the use of export subsidies and high tariffs in developed countries, have led to excess—and low priced- dairy products being directed to many developing countries in Asia and Africa. While milk consumption in developing countries is estimated at only 40 percent of global totals, nearly three quarters of global shipments of dairy products are destined for these countries. In fact, ninety percent of milk powder exports from developed countries are destined for developing countries where they are estimated to supply as much as half of the formal or processed dairy markets.



The sudden and recent rise in dairy prices took the market by surprise in late 2006 and is attributed to a number of factors which include higher feed prices, drought, policy changes, etc. However, in various studies, it has been estimated that decades long dairy product policies and support for the sector in OECD countries have depressed international milk equivalent prices by some 25-35 percent[4]. Consequently, while price rises may have been unexpected, they may likely reflect the reality of markets adjusting to a situation less distorted by government interventions.

Opportunities, Policy Responses and Potential Challenges for the Dairy Sector in Asia

The recent increase in dairy prices should be viewed as an opportunity for producers in developing countries, particularly in Asia and Africa, to benefit from structural changes in the global market place. In the case of Asia, where both milk production and consumption growth has been the strongest in the world, nearly 80 percent of the 238 million tonnes of milk produced in 2007 was supplied by smallholder dairy producers with 1-5 cows. These 10s of millions of households over the breadth of

[3] The OECD's estimate on the PSE (Producer Support Equivalent) for milk produced in developed countries is 49 percent, higher than any other agricultural commodity. This PSE implies that nearly half of the value of production of milk and dairy production is generated through some type of policy support.

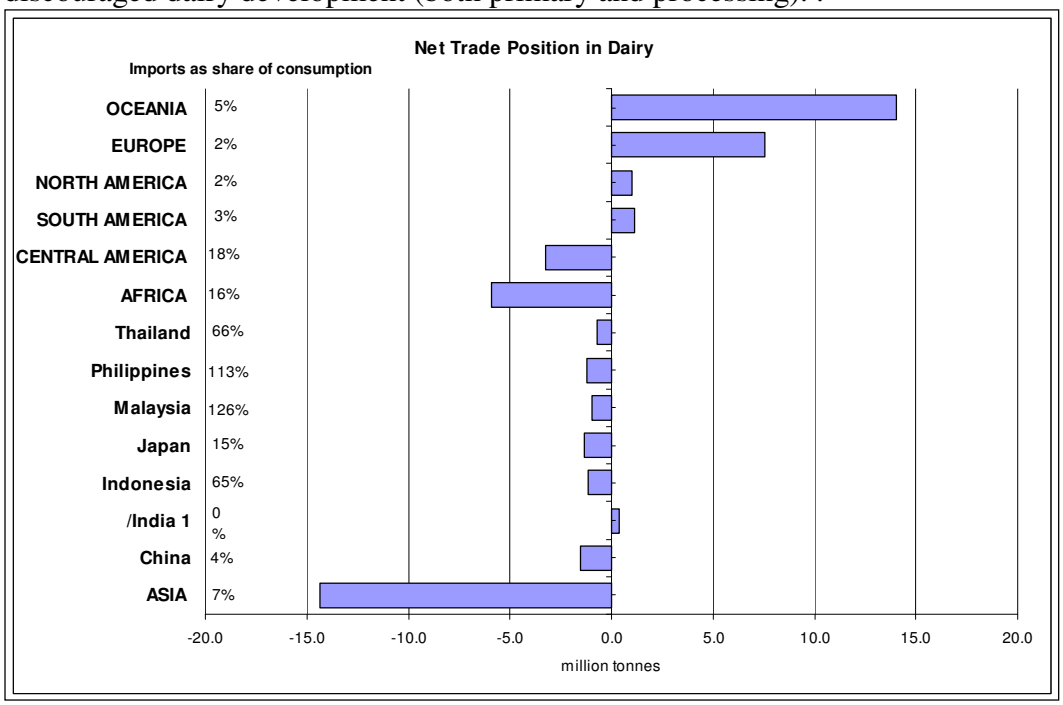
[4] Import Surges in Developing Countries: the Case of Dairy Products, FAO Brief.

Asia are some of the poorest in the world, in many cases landless, but they hold the capacity to respond quickly to economic signals, specifically to higher prices. This is particularly true of those smallholder producers who are scaling up, operate their dairy operation as a small enterprise and have access to market information.

The noteworthy opportunity and challenge for Asian smallholder dairy producers is to share in the opportunities afforded by rising demand in the region for milk and dairy products over the next decade. This is particularly obvious for Asia which is a region with the largest net trade deficit, importing, in 2007, approximately 19 million tones of dairy products (50 percent of global totals) which account for approximately 7 percent of domestic consumption.

According to recent OECD/FAO projections, milk production in Asia over the next decade is expected to rise over 60 million tonnes to 277 million tones by 2017, an annual increase of 3 percent. This is despite expectations that, although dairy product prices have been easing, increased prices are here to stay. Commodity projections by both FAO and the Food and Agriculture Policy Research Institute (FAPRI) indicate that milk prices over the next decade will remain 50 percent higher than historical averages[5].

This is supported by assumptions that the era of supporting dairy product exports through subsidies has ended. While export subsidies by developed countries constituted nearly 70 percent of dairy product exports in 1986, this fell to 44 percent in 2004 and is currently zero[6]. Certainly in the context of high import dependencies in select Asian countries, a continuance of high prices affords some opportunities for import substitution particularly in those countries where artificially low prices have discouraged dairy development (both primary and processing). .



[5] FAPRI projection for agricultural and bio-fuel markets (March 2008): http://www.fapri.iastate.edu/outlook2008/

[6] Import Surges in Developing Countries: The Case of Dairy Products; FAO Brief on Import Surges, May 2007.

The Policy Dilemma: Choices and Implications

Most of the policy responses in Asia to escalating food prices have been focused on food security crops, such as rice, maize, and wheat. In the dairy sector, there were some tentative moves by countries to limit dairy product exports in order to ensure domestic price stability, such as in India in 2007. These trade restrictions were short lived due to strong pressure from private sector exporters. In addition, many importing countries have reduced import tariffs on both livestock products and feed inputs. On the consumption sides, many countries have put in place price caps on a variety of products, including dairy products.

It should be emphasized that policy responses to higher prices not only have short term implications for stakeholders along the commodity value chain, ranging from consumers to input suppliers but hold long term implications for investment in the sector. Some of the possible policy choices options available to policy makers are outlined in the table below; these range from those targeting the supply side, marketing/trade, and those focused on ensuring food security for consumers.

Responding to High Commodity Prices; Potential Impact of Policy Interventions

Types of Policies / Impact on:	Short Term							Long Term	
	Farm Income	Production	Government costs	Consumer prices	Urban food security	Rural food security	International markets-price volatility	Production	Food security
Production									
• Input subsidies	↑	↑	↑	?	?	↑	?	↑	↑
• Allow producer prices to rise (suppy=demand)	↑	↑	NI	↑	↓	↑	↓	↑	↑
• Increase ceiling prices/administered prices for producers	↑	↑	↑	↑	↓	↑	NI	↑	↑
• administered prices (keep prices low)	↓	↓	↓	↓	↑	↓	NI	↓	↓
Marketing and Trade									
• Limit retail price increases	↓	↓	NI	↓	↑	↓	NI	↓	↓
• Release public stocks	↓	↓	↑	↓	↑	↓	NI	↓	↓
• Lower import tariffs for the commodity	↓	↓	↓	↓	↑	↓	↓	↓	↓
• Lower import tariffs for input	↑	↑	↓	NI	↑	↑	↓	↑	↑
• Export bans/increase export taxes	↓	↓	↓	↓	↑	↓	↑	↓	↓
Consumption									
• Vouchers to vulnerable populations	NI	NI	↑	NI	↑	↑	NI	NI	↑
• Consumer/food subsidies	↓	↓	↑	↓	↑	↓	NI	↓	?
Other									
• Reduce VAT	↑	↑	↓	↑	↑	↑	N.I.	?	?

↑ Increase
↓ Decrease
N.I. No impact
? Not clear

It is clear that different policies and the way that they are implemented hold the potential to alter economic incentives facing participants along the chain and consequently, and potentially, have differential impacts on food security in urban or rural areas. Policy responses that seek, to ensure food security and access to food, by controlling markets through ceiling prices, forcible procurement or direct government involvement in marketing activities will, in most cases, lower prices and constrain potential output gains and adversely affect rural livelihoods. The possible exception are those policies which put in targeted food assistance/voucher programmes, food for work/school which are received by only selected households and targeted vulnerable groups. However, the means of procuring these commodities for any assistance intervention can hold implications for demand and supply and consequently domestic prices.

DAIRY/LIVESTOCK

- **Production:**

  In January 2008, the **Chinese Government** announced that it would impose price caps on a range of products, including grain, edible oils, meat (including pork), milk, eggs. Meanwhile, the Government has set up state strategic reserves for meat (some imported beef/domestic pork going into the reserves). The Government is also subsidizes low-income consumers RMB20-30 ($2.7-4.3) per person per month for meat consumption over six months.

- **Marketing/Consumption**

  Thailand imposed price controls, including dairy products, chicken, eggs, beef and pork meat. In certain municipalities in **Pakistan,** city governments are setting retail fluid milk prices below the cost of production.

- **Trade**

  India in February 2007 prohibited the export of skimmed milk powder and other milk products—which lasted until September 2007.

FEEDSTUFFS: MAIZE AND SOYBEANS/MEAL

- **Trade**

  The **Thai** Ministry of Commerce agreed to cut the soybean meal tariff to zero, down from 4 percent in order to reduce local animal feed costs; however, this proposal recommends the tariff be waived on a year-by-year basis to avoid any long-term negative impact to domestic producers and soybean oil crushers. To reduce the cost of soybeans, the **Indonesian** government announced plans that would be in effect for a 6-month period: temporarily eliminate import duties on soybeans; and 2) provide a $110/MT subsidy to assist tempe and tofu producers.

  Korea cut import duties on corn and soybeans. The Government of **China** reduced the import tariff rate for soybeans to one percent from three percent for three months effective October 1, 2007. The one percent rate was extended to March 31, 2008 because of continued high CPI and the Chinese New Year vacation demand spike.

  In **Indonesia**, following protest over shortages of soybeans, the Government has reiterated that it will take a series of measures to stabilize food prices. In **India**, high domestic corn prices prompted the government to abolish the import duty on corn on January 25, 2007, through December 2007, only and remove the Tariff Rate Quota (TRQ) restrictions. Similarly, they also, to contain the rising prices of pulses in the domestic market, effective June 8, 2006, exempted pulses from the applicable 10 percent import duty through March 31, 2009 while several state governments have imposed stocks limits on pulses held by the private trade. Effective June 2006, the GOI imposed a ban on the export of pulses,which will be in force up to March 31, 2008.

  In **Vietnam** in mid-2007, the Government reduced tariffs of key agricultural commodities including meat, meat offal, eggs, milk products, vegetable oils, and materials for animal feed an average of 30- 50 percent from the current rates. The MFN rate of bovine meat was reduced to 12 percent from the current rate of 20 percent. For pork, the tariff is down to 20 percent from the current rate of 30 percent. The new import tax rate for corn used for animal feed is 2 percent, down from the current rate of 5 percent.

The critical issues of pricing policies and price transmission

Ensuring that the dairy sector in Asia benefits from structural changes[7] resulting in higher international prices requires that these prices are transmitted to national markets and then, subsequently, to producers. In many developing countries, higher milk payments to smallholder dairy producers can lead to strong productivity responses. This is because, unlike developed countries where average yields are almost 5 tonnes/animal/year, yields in developing countries in Asia average less than 1 tonne/year, with only China, Pakistan and India exceeding that level. Most smallholders feed their animals well below potential so that there is ample scope for rapid increases simply by improving feeding of locally available crop by-products. However, this potential can be realized through not only a favourable enabling environment which assures price transmission but technical support to producers on feeding, on-farm management, and a reduction of post-harvest losses. It is in response to the critical need for timely and targeted intervention in the smallholder dairy sector that FAO has elaborated an Asian Smallholder Dairy Development Strategy and Investment Plan (see box on page 12).

In most developed countries, the dairy sector, as indicated above, is highly supported through regulated or administered prices, high tariffs, or production controls, in the case of the EU, which limit production increases. In the US and Japan, dairy policies include complicated price supports for milk used for manufactured dairy products, classified pricing and revenue pooling, supported by restrictive import regimes which keep prices high. All of these policy interventions are designed to ensure stable and high producer incomes. In developing countries, dairy policies are not so prevalent but many countries view price controls as a means to ensure low prices for urban consumers and—possibly-- to protect producers against monopsony powers of processors. A recent FAO review of lessons learned in smallholder dairy development[8] reveals that Governments need to be very careful about interventions in the dairy sector, particularly those related to price policies which influence economic incentives faced by producers, influence rural livelihoods and food security and the investment climate for the sector.

To understand the potential benefits of a changing international market environment for dairy products, e.g. one characterized by high prices which allows some import substitution, a key challenge is to identify the extent to which changes in international dairy prices are transmitted into local economies. Opportunities for smallholders will be conditioned by the transmission of international prices into domestic markets and their ability to respond to those prices.

Country specific responses to higher dairy product prices

This section looks at price movements in a few countries in Asia and identifies some of the factors conditioning the transmission of the prices. Domestic policies,

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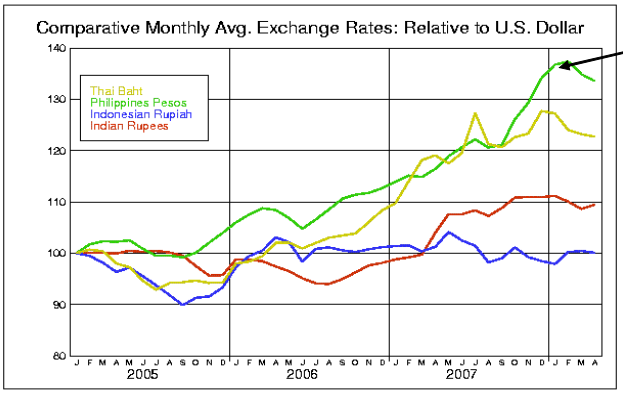
[7] Structure changes in agricultural markets are those whereby policy reform or factors outside the commodity sector itself lead to permanent shifts in the demand and supply curves. Examples could include the introduction of new technologies, concentration in industries, and in the case of dairy, an elimination of policies supporting the export of subsidized dairy products.

[8] http://www.aphca.org/reference/dairy/APHCA%20lessons%20learned%20revised.pdf

depending on how they are administered, influence general market signals and subsequently transaction costs, or the cost of doing business, often determine the extent to which individual producers are able to respond to those market signals. These signals are also influenced by the linkages between the fluid milk market and the processing sector. In South Asian countries with large informal markets, such as India, Bangladesh, and Pakistan, the linkages may not be as clear as those in East Asia where high imports and more limited fresh milk consumption result in more price transmission between local and international markets.

The first determinants of how international prices translate into local prices are related to exchange rate movements and a country's net trade position. While world dairy prices have increased substantially in recent years, this has been accompanied and partially caused by a substantial depreciation of the US dollar against many currencies (figure below).

The Exchange Rate Factor: Domestic prices don't necessarily rise as much as international prices



The Philippine peso rose by 33% since early 2006, making imports cheaper.

In an exporting country, such as Thailand, the appreciation reduces exporters earnings.

In countries like Indonesia and Bangladesh with stable currencies, the impacts on local prices are highest

The case of the Philippines:

After China, the Philippines is the largest dairy product importer in Asia and imports of nearly 2 million tones account for approximately nearly all of total consumption (in liquid milk equivalent). While the Government has accorded, over the past few years, more interest in dairy development, particularly focusing on dairy development zones, this is the recent change from the attitude from two decades ago when the Government decided that all support for dairy activities would be stopped and that the Philippines would simply import all its dairy requirements[9]. In fact, the Government's policy, through low tariffs (1-3%) on imports, was to assure adequate supplies of milk products for urban consumers. This resulted in most of domestic

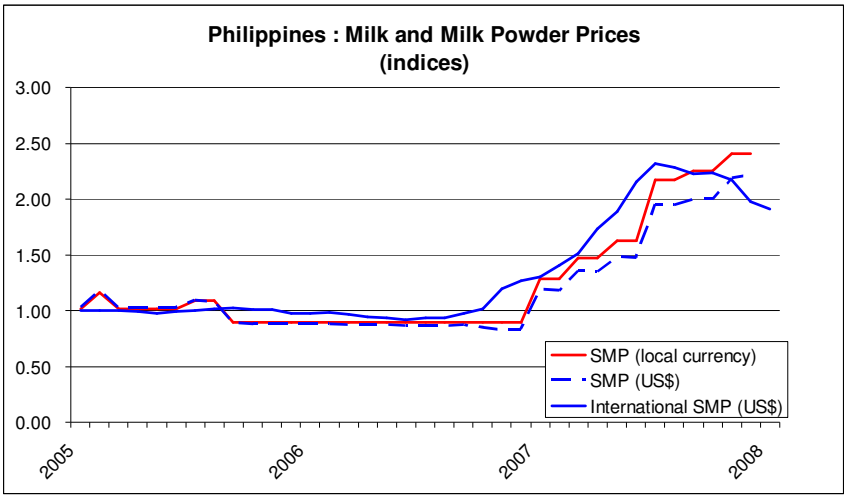
[9] Enterprise-Driven Dairy Development: the Philippines; Sally Bulatao, November 2007. FAO commissioned paper for the project Improved and Smallholder Dairy Farmer Participation for Sustainable Dairy Development.

milk requirements being supplied by imports, and currently 99 percent of processed milk is supplied by importers/processors.

While local milk only supplies one percent of total milk requirements for processing (in liquid milk equivalents), it still accounts for 30 percent of the liquid milk markets and is starting to gain significance as consumers show more appreciation of fresh milk. Despite the many challenges to the sector, the smallholder sector in the Philippines has managed to compete favourably in the open market. Smallholder dairy farmers owning less than 10 dairy animals comprise some 96 percent of the dairy farming sector. While one factor supporting success in the sector is an enterprise focused approach to dairy development, the other is a laissez-faire pricing policy which allows markets to determine prices.

A review of price movements, both domestic and international, reveals that the rise in international prices was immediately transferred into the Philippino wholesale market for milk powder, with only a slight delay. This is the result of strong linkages between international and domestic markets, particularly for milk powder products. This is despite the value of the peso which appreciated by 33% against the value of the US$, thus making imports less expensive.

Farm gate prices of locally-produced milk behaved in a similar manner. From a flat farm gate price range of P16 to P18 per liter for most of 2001 to 2006, competition among cooperative federations and local processors and increasing import prices of milk have driven farm gate prices to the current range of P18 to P22 per liter.



	2001-2006	2007- May 2008
Ave exchange rate (P/US$)	P53.21	P44.78
Farm gate price per liter	P16-P18	P18-P22
Farm gate price per liter (in US$)	$0.30-$0.33	$0.40-$0.49

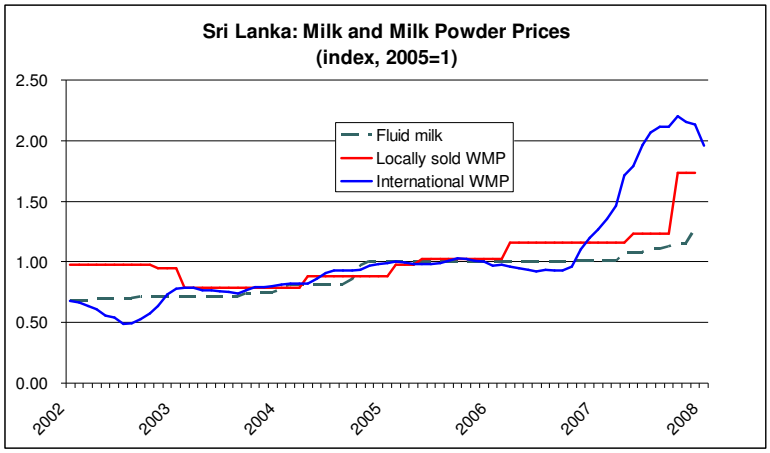
Sri Lanka: Similar to the Philippines, the Government of Sri Lanka has kept tariffs low on imports of dairy products to make milk, considered "essential" for food security and nutrition, affordable. In some year, actual effective tariffs have been even lower as partial duty waivers have been given. As a result, price trends in international markets are transmitted almost fully to the domestic market. With imports as a share of domestic consumption estimated at 72 percent and in the context of relatively

stable exchange rates, one could assume that high international prices would result in higher prices for local suppliers.

However, while the Government doesn't officially administer prices, farm-gate fluid milk prices are largely determined by MILCO's (a fully state owned milk processing company) processing and marketing costs, both of which are reputed to be relatively high. As a result of this pricing structure, the impact of higher international prices translated into nearly 50% rises in packages of locally sold whole milk powder. However, the nearly 70 percent in international whole milk powder prices translated into only a 25% increase in farm gate fluid milk prices.

Over 2007, increases in farm gate fluid milk prices in US$ terms rose from $.20/liter to $.25; however, this compares to prices which have remained relatively stable over the past 6 years. It is generally perceived that with low prices and profit margins, there have not been adequate incentives offered to producers to invest in dairying[10]. This is despite a study (Ranaweera and Attapattu 2006) which showed that total milk collection increased by 13 percent in 2004 due to higher prices being paid for milk (from RS 15 to RS 18 per liter).

While renumerative prices would facilitate additional investment in the sector, it is also recognized that, based on production costs, a minimum of 15 liters/day production is needed to earn a reasonable income from dairy farming on a smallholder level; in Sri Lanka, this translates into a three cows operation (Ranaweera). Consequently, it is clear that while pricing policies and the level of prices are instrumental in stimulating/or constraining supply responses; there are other factors, such as economies of scale, cost of production, including opportunities costs of labour and land, which will influence producer returns and long term incentives to engage in dairy production.



Setting milk prices in Pakistan

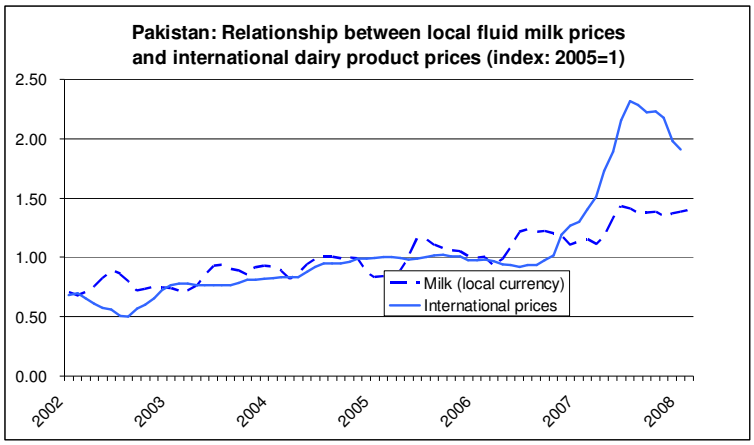
As the fifth largest dairy producer, Pakistan accounts for nearly 13 percent of global production, most of which is sourced from the 8.4 million dairying households owning between 1 and 10 cows. Despite its prominent position in terms of output, it is not a significant exporter of dairy products with exports in 2007 estimated at around 100,000 tonnes, or less than one percent of 32.5 million tonnes of production.

[10] Lessons Learned: Sri Lanka; NFC Ranaweera, November 2007. FAO commissioned paper for the project Improved and Smallholder Dairy Farmer Participation for Sustainable Dairy Development.

Dairy's contribution to Pakistan GDP surpasses all the major crops[11] and the sector has witnessed strong production gains, exceeding 3 percent per year, over the past decade. Most of this has been driven by expanding animal numbers with yields still low at 1.1 tonnes/year.

While the Government has typically had limited involvement in dairy development and maintains no official nationally-recognized price controls, local authorities are legally authorized[12] to set the price of selected food items, including milk. In an FAO study (Umm E Zia), the milk prices set by districts varied between RS 16-RS 30/liter; this is confirmed by monthly price data for fluid milk prices which has fluid milk prices rising from RS 19/lt to approximately RS 23/lt over the 2007 period (US$.31 to US$37/lt).

However, in most cases, price setting doesn't take into consideration the rising costs of inputs and in both Pakistan and Sri Lanka these prices have risen approximately 8-10 percent per year (in line with inflation over the past two years). In selected localities, municipalities are setting price ceiling below the cost of production. According to analysis undertaken in Pakistan[13], milk prices in Karachi are set at RS 32/lt while black market rates, during peak season often go up to RS 42/lt. The short term implications are that farmers will reduce or stop new investments (particular the purchase of buffalo calves, the price of which has gone up by 30-40 percent). This will create milk shortages in Karachi and potentially led to a shortage of cattle in the long run.



Price movements in other countries in the region

Dairy product prices throughout the region over the past two years have witnessed some degree of increase, as indicated in the table below, with the highest increases noted for wholesale prices in whole milk and skim milk products. These higher prices translated, by a varying degree, into high fluid milk prices. It is interesting to note that in Vietnam and Mongolia, countries with no pricing policies for dairy products and heavily dependent on imports, the increase in powder prices was mirrored in the fluid milk prices. In Nepal, the government establishes a formula for payment of milk

[11] Lessons Learned Study-Pakistan, Umm e Zia, October 2007, . FAO commissioned paper for the project Improved and Smallholder Dairy Farmer Participation for Sustainable Dairy Development.

[12] Under the Foodstuff (Control) Act, 1958 and the Price Control and Prevention of Profiteering and Harding Act, 1977 local governments are authorized to fix retail prices of milk under the preamble of protecting public interest by controlling the supply, distribution, movement of, and trade and commerce in essential foodstuffs.

[13] Dairy Crises in Karachi due to unjustified price controls, Arif Siddiqui, April 2008.

based on milk shed, distance from the factor and seasonality. Retail prices of milk are maintained RS 28/liter throughout the year.

Dairy Prices in Selected Asian Countries									Change:
	Type	Units	Currency	Jul-06	Jan-07	Jul-07	Jan-08	Current	2006-Current
Malaysia	WMP, wholesale	liter	Local					16-22	na
	fluid milk, farm gate		Local	1.30	1.21	1.46	1.41	1.45	10%
Vietnam	WMP, wholesale	tonne	US$	2,600	2,800	4,500	4,400	4,200	38%
	fluid milk, farm gate	tonne	US$	281	300	400	400	400	30%
Nepal	WMP, wholesale	kg	Local	175	185	195	200	225	22%
	fluid milk, farm gate	liter	Local	24	24	25	26	28	14%
Mongolia	WMP, wholesale	kg	Local	2,500	3,000	3,500	5,000	5,200	52%
	fluid milk, farm gate	liter	Local	200	450	300	700	650	69%

Conclusions:

Policy decisions by Governments need to be implemented with a broader understanding of their direct and indirect implications. This is particularly true of any policy which affects price levels along the chain, from retail price ceilings to those which link producer prices to cost of production. It could be perceived that control of milk prices in several countries in the region is counter-productive to general pro-poor objectives of enhancing rural development and supporting incomes of smallholders. This is particular true in an environment of rising prices, both for outputs and inputs, where fixed and administered prices constrain dairy producers, both big and small, from responding quickly to price signals. It is particularly disadvantageous for smallholders who often don't have the social networking ability to identify and link up with different milk collectors who offer higher prices.

On the other hand, it is also recognized that the nature of milk, its characteristics which include perishability, seasonal production patterns, the need-in many cases - for further processing, may necessitate a floor price policy for milk. In view of the medium outlook for higher dairy prices, it is clear that an enabling environment characterized by fair and renumerative market prices is the first step in ensuring supply responsiveness by producers.

Technical assistance is also needed to enhance on-farm performance and market access; however, fair prices are the key to having producers adopt new technologies and better management styles. Fair pricing also involves ensuring a premium payment for milk quality and the private sector establishment of incentive-based milk payment systems is an important step in enhancing incentives for higher on-farm productivity. The Government's role in fair pricing for quality extends to ensuring that the necessary food quality standards are in place and regulatory systems ensure inspection of dairy processing plants.

The recent and rapid escalation of commodity prices is the test that policy makers need to examine the environment that is most conducive to sector development. Low prices over the past twenty years have led to an underinvestment in agriculture, dairy included. In dairy's case, a commodity, unlike rice and other food security crops, which, in Asia, is not supported by many support programmes, ensuring enabling and fair pricing policies are the first step to sector development.

Asian Smallholder Dairy Development Strategy and Investment Plan

To support smallholder dairy development in Asia, FAO/CFC and the Animal Production and Health Commission for Asia and the Pacific (APHCA) have developed an Asian smallholder dairy development strategy and investment programme. Developed in consultation with regional experts from 18 Asian countries, the strategic **vision** is: "Asian milk for health and prosperity" while the **mission** statement focuses on: "Improving the competitiveness of smallholder milk producers to provide more and better quality milk and dairy products to Asian consumers."

Strategic Pillars: *The Strategy will address the challenges and objectives outlined above through strategic interventions under four mutually reinforcing pillars as prioritised and ranked by the workshop delegates:*

> ***Pillar 1:*** *Human resource development and knowledge management through: (i) providing smallholders and other value chain actors appropriate skills training; (ii) effective M&E of sectoral development; and (iii) support for regional collaboration in knowledge management through a smallholder dairy network.*
> ***Pillar 2:*** *Improving the productivity and competitiveness of smallholder milk producers through: (i) preparing a "menu of options" for dairy development models; (ii) selecting dairy development models appropriate for local conditions; (iii) assisting smallholder dairy sector to compete for resources and compete in product markets; and (iv) assisting smallholders to increase milk yields, quality and profitability.*
> ***Pillar 3:*** *Strengthening the linkages between farmers and consumers to deliver a quality product at a fair price through: (i) improving farmer access to marketing channels; (ii) increasing opportunities for smallholders to access the formal sector; (iii) strengthening price incentives to deliver quality milk; (iv) creating competitive supply chain conditions; (v) creating fair and transparent pricing systems; (vi) diversifying the range of dairy products on offer; (vii) educating consumers on the nutritional benefits of dairy products; (viii) stimulating consumer demand; and (ix) reducing losses in the dairy chain.*
> ***Pillar 4:*** *Enhancing the enabling environment through: (i) developing a smallholder inclusive policy framework; (ii) creating a legal and regulatory framework conducive for smallholder dairy development; and (iii) supporting the development of a favourable macro-economic framework.*

Implementation and Next Steps: *The Strategy will be implemented through a ten-year investment plan, estimated to cost around USD 250 million. The majority of these investments will take place at country, rather than regional level. Nevertheless, the Strategy also supports the establishment of a regional platform for dairy development to link stakeholders around the region through technical, policy and information networking systems. An immediate action plan has been prepared to support this process. Meanwhile, partners are committing approximately USD 15.6 million for key interventions, which will commence immediately.*

For more information, find the strategy and other project information at:
http://www.aphca.org/reference/dairy/dairy.html