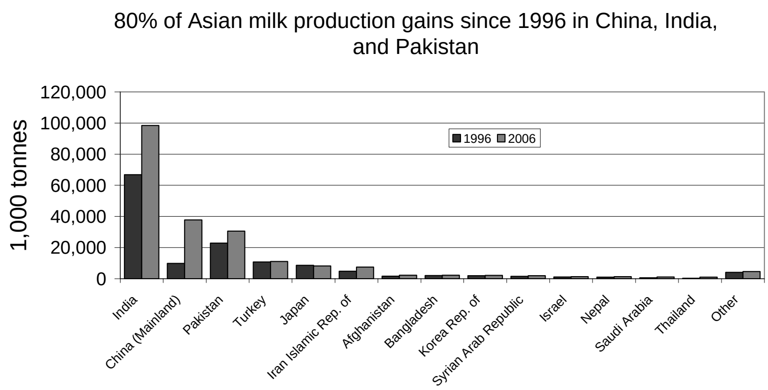
AN APHCA BRIEF ON SMALLHOLDER DAIRY DEVELOPMENT

Supporting Opportunities for the Smallholder Dairy Sector in Asia: The Challenges for Regional Stakeholders

Dairy consumption in Asia and the Pacific has more than doubled in twenty-five years, rising 4 percent annually to reach nearly 240 million tones in 2007, more than one third of global totals. Nearly four-fifths of these gains have been housed in South Asia which accounts for 60 percent of the region's bovine and ovine populations and for 20 percent of global milk consumption.

In 2006, a possible long term structural adjustment in international dairy markets, characterized, in particular, by tight global supplies and high prices as a result of elimination of EU export subsidies for dairy products shocked market participants.



Combined with long term drought in Australia and a potential long term investment slow down in that industry, which accounts for 10 percent of global exports, these developments hold unprecedented opportunities for smallholder dairy operations in many developing countries.

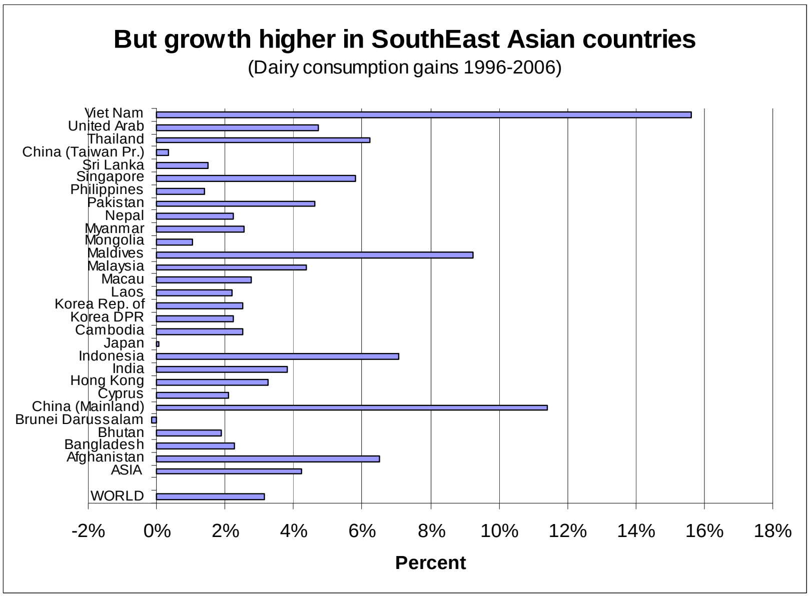
This is particularly true in Asia where over 80 percent of dairy animals are raised by backyard or small scale farmers who have provided a critical and unique ingredient in the region's ability to maintain robust gains in milk production

Certainly one of the catalysts for supporting local dairy development from the perspective of policy makers is highlighted by FAO's recent estimates that dairy product imports by developing countries will reach US$21.3 billion in 2007, up from $13 billion in 2006. This is fuelled by a two-thirds increase in import prices and, in combination of escalating prices for basic food stuffs such as maize, rice, and vegetable oils, raises regional concerns about food security.

Local responses to growing consumption needs

Translating into opportunities for local producers, strong consumption gains in Asia over the past 10 years have supported the dairy sector with production rising from 138 million tonnes to 222 in 2007. In fact, production gains in Asia have accounted for nearly 60 percent of global totals over the past decade. Growing demand by both urban and rural consumers in South Asia, a region of strong dairy traditions, was supplied by smallholders holding 2-5 cows; these are the producers who reputedly account for nearly 80 percent of milk production.

Characterized by a long historical tradition of both urban and rural milk consumption accompanied by strong informal rural milk market systems, consumers in South Asia consume nearly 93 kg/caput/annually (compared to the 113 kg/global average). However, the explosion in consumer acceptance of dairy products over the past decade has been in East and South East Asia where per capita consumption levels are generally one-third the levels of South Asia.



Coming from a low base characterized by low traditional preferences for fluid milk, double digit consumption gains in have been witnessed in countries like China and Vietnam where annual gains since 2000 in this region have exceeded 11 percent/year. These gains have been fuelled by growing incomes, changing diets and demographic trends which favor more western diets and strong generic promotion of milk products, including the promotion of school milk programmes.

The role of imports in supplying local consumption

Asian Dairy Imports [1]

1,000 tonnes milk eq.	1996	2006	Share of consumption (%) 1996	2006
China (Mainland)	537	2,500	5	6
Indonesia	577	1,600	45	69
Philippines	1,251	1,900	99	108
Malaysia	1,232	1,300	107	115
Japan	1,631	1,500	16	16
Thailand	1,131	1,400	80	70
Singapore	720	1,400	175	182
Viet Nam	247	700	78	74
China (Taiwan Prov.)	749	700	69	68
Korea Rep. of	310	800	13	27
Hong Kong	986	500	231	122
Total ASIA	14,018	24,000	9	10

[1] Share of consumption exceeding 100% implies re-exports.

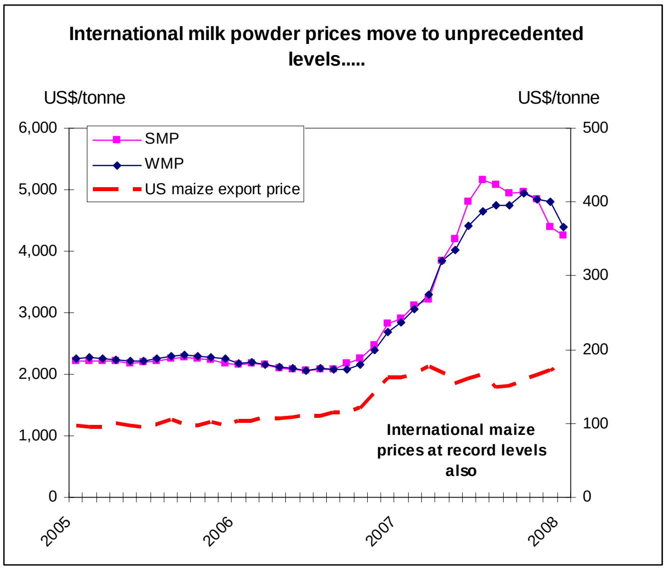
Asian, a region where GDP growth is estimated at 5-6 percent annually, constitutes an important market for the major dairy exporters, dominated by New Zealand, the EU, Australia, the US, and increasingly Argentina. While the region's dairy product imports, particularly those of milk powder, have nearly doubled over the period, from 10 to an estimated of 24 million tones in 2006, the import dependency of the region has remained stable at nearly 9 percent.

Regional averages, however, tend to mask local realities and, in fact, while dairy product imports by South Asia, limited by strong consumers preferences for fresh milk, availabilities of local product and barriers to imports, constitute only 1 percent of domestic consumption, imported milk products into the South East Asian region supply nearly one-quarter of domestic requirements. When calculating dairy imports as a share of processed milk, this share jumps to over 90 percent in some countries.

In fact, Asia imports constitute more than half of global totals in milk products, and in countries like Sri Lanka, the Philippines, and Vietnam, where tariff levels are very low and consumers are familiar with and favor reconstituted milk products, import dependency has reached over 80%. In China, a country which has witnessed double-digit consumption gains over the past decade, imports constitute only 6 percent of total consumption. However, with imports estimated at 2.5 million tonnes, China constitutes the largest dairy product importer in the world, followed by Mexico, Russia, Egypt, Indonesia, Malaysia and the Philippines.

The opportunity …….

International market prices of dairy products, rising well over twice their levels of one year ago, hold considerable opportunities for future dairy development in Asia. While prices of internationally traded milk powder are expected to gradually subside from their historical peak of near US$5,000/tonne in late 2007, the perceived competitiveness of large holder dairies heavily reliant on increasingly higher priced imported inputs is expected to erode. Increasingly large processors in the region are gravitating towards local suppliers of fresh milk, and in many regions, this implies stronger institutional linkages with smallholder producers, the characteristics of which differ by country and by local conditions within countries.



In some countries, depending on their linkages with international markets and the substitutability of fluid milk with reconstituted/UHT milk, domestic prices have been rising. This affords interesting opportunities for local dairy development. In some countries, however, smallholder participation has been constrained by government administered pricing schemes for milk and/or strong monoposony power by processors and/or collusion in price setting.

Changes in dairy prices since late 2006

	Units	Oct-06	Dec-07	% increase
SMP (NZ)	tonne	2263	4400	94%
SMP (Phil)	25kg bag	2,300	6,200	170%
Fluid Milk (Sri Lanka)	liter	22.00	27.50	25%
Fluid Milk (Vietnam)	liter	3600	6100	69%

The Challenges……

To ensure broader stakeholder engagement in current market opportunities for dairy, it is clear that the opportunities for smallholder dairy producers can only be understood within the wide range of influencing factors: economic, institutional, commercial, legal, technological and social. However, effective strategies for enhancing the contribution by smallholders to growing livestock product demand is complicated by the fact that the specific constraints/opportunities facing the sector differ not only by country but by specific localities.

Consequently, useful models of small and large-holder milk producers, which are characterized by the specific linkages within the value chain, need to be reviewed and analyzed. It is particularly important that the enabling factors which are critical in successfully forging linkages between smallholder suppliers, processing facilities and traditional markets for fluid milk and other locally acceptable dairy products be identified, weighted and ranked. The selection and promotion of acceptable models need to be based on local conditions, market access, cultural factors and consumption patterns. These models could range from enterprise-driven smallholder dairy operations in the Philippines and Vietnam, to cooperative development in South Asia, to strengthening opportunities for subsistence farmers in Bangladesh.

APHCA's response

In anticipation of generating guidance on best practices involved in context specific sustainable smallholder dairy development, lessons learned in the region need to be reviewed and analyzed as to the critical factors supporting their success or leading to failure. It is critical that the context specific/organization issues be analyzed to determine possibilities for increasing productivity, scaling up and/or replication of specific models. It is only then that specific entry points for the various stakeholders, whether they be producers, processors, or policy makers, can be identified

APHCA (the Animal Production and Health Commission of Asia and the Pacific), FAO, and the Common Fund for Commodities (CFC), are organizing a workshop on smallholder dairy development in Chiang Mai, Thailand from February 26-29th, 2008. The objective of this workshop is to regroup regional dairy experts/private sector stakeholders/donors and policy makers to discuss the development of a regional strategy or an "actionable roadmap" for smallholder dairy development. Approximately 50 participants from 18 countries in the region will participate. More information on the project can be found at the following website: http://www.aphca.org/reference/dairy/dairy.html.

We welcome dialogue, input and collaboration from other actors in the region.

World and Asian dairy markets at a glance

	1986	1990	2000	fcst 2007	Share of global: 1981	1990	2000	2007	Change 2007/1981 % 1/	2007/1990 % 1/	Annual change 1986-2007 % 1/	2000-2007 % 1/
World Balance												
Live Inventories (1000 number)												
World	-	324,436	528,273	544,404					73	68		0.4%
Developed	-	44,043	73,441	63,980	0%	11%	13%	9%	34	37		-1.7%
Dvpg	-	280,368	455,167	480,882	0%	69%	79%	71%	158	124		0.7%
Asia	-	224,359	258,212	262,207	0%	56%	45%	39%	160	123		0.2%
SE Asia	-	10,312	12,794	14,266	0%	3%	2%	2%	530	384		1.4%
South Asia	-	114,079	137,317	154,457	0%	28%	24%	23%	129	94		1.5%
US	-	9,993	9,210	9,204	0%	2%	2%	1%	30	26		0.0%
EU	-	-	-	-	-	-	-	-				
Oceania	-	4,376	5,508	6,234	0%	1%	1%	1%	74	81		1.6%
Production (000 tonnes)												
World	391,550	404,115	579,209	678,215					76	69	2.5%	2.0%
Developed	268,462	262,551	346,649	360,503	69%	65%	60%	53%	35	36	1.3%	0.5%
Dvpg	123,087	141,562	232,560	317,711	31%	35%	40%	47%	148	121	4.4%	4.0%
Asia (from 1992 incl. CIS	93,069	108,462	170,693	241,527	24%	27%	29%	36%	154	120	4.4%	4.4%
SE Asia	8,127	10,577	17,240	51,223	2%	3%	3%	8%	425	317	8.7%	14.6%
South Asia	60,282	71,200	109,902	137,860	15%	18%	19%	20%	126	93	3.8%	2.9%
US	64,920	67,005	76,023	84,097	17%	17%	13%	12%	29	21	1.2%	1.3%
EU 1/	138,974	130,416	127,062	151,391	35%	32%	22%	22%		17		2.2%
Oceania	14,522	13,965	23,418	25,213	4%	3%	4%	4%	10	15	2.5%	0.9%
Consumption (000 tonnes milk equiv.)												
World	386,062	401,372	576,030	677,951					26	38	2.6%	2.1%
Developed	247,423	245,622	321,075	333,779	64%	61%	56%	49%	-1	29	1.4%	0.5%
Dvpg	138,632	155,738	255,326	344,147	36%	39%	44%	51%	77	71	4.2%	3.8%
Asia (from 1992 incl. CIS	102,658	118,262	186,027	260,733	27%	29%	32%	38%	73	62	4.3%	4.3%
SE Asia	11,867	14,951	26,212	62,313	3%	4%	5%	9%	312	248	7.8%	11.4%
South Asia	61,231	71,840	110,675	138,412	16%	18%	19%	20%	52	41	3.8%	2.8%
US	63,069	67,220	75,089	81,167	16%	17%	13%	12%	3	1	1.2%	1.0%
EU 1/	126,119	120,035	116,644	140,851	33%	30%	20%	21%		23		2.4%
Oceania	8,203	7,830	9,796	9,040	2%	2%	2%	1%	-18	-9	0.4%	-1.0%
Per capita consumption (kg/cap/year milk equiv.)												
World	76	69	88	96					114	126	1.1%	1.1%
Developed	178	136	171	176					114	136	-0.1%	0.3%
Dvpg	38	39	55	66					114	123	2.6%	2.5%
Asia (from 1992 incl. CIS	36	38	51	62					134	124	2.5%	2.6%
SE Asia	8	9	14	31					217	161	6.6%	10.6%
South Asia	61	65	83	92					8	60	1.9%	1.4%
US	257	263	263	265					41	58	0.2%	0.1%
EU 1/	351	237	246	290						20		2.1%
Oceania	327	293	316	268					185	146	-0.9%	-2.0%
Imports (000 tonnes milk equiv.)												
World	21,685	20,504	38,850	46,412					72	101	3.5%	2.2%
Developed	5,453	4,945	11,463	11,676	25%	24%	30%	25%	45	76	3.5%	0.2%
Dvpg	16,226	15,554	27,118	34,736	75%	76%	70%	75%	1241	502	3.5%	3.1%
Asia (from 1992 incl. CIS	10,124	10,570	17,411	23,645	47%	52%	45%	51%	730	476	3.9%	3.9%
SE Asia	4,096	4,976	10,289	13,000	19%	24%	26%	28%	437	217	5.4%	3.0%
South Asia	967	650	916	1,040	4%	3%	2%	2%	2468	4780	0.3%	1.6%
US	1,399	1,245	1,952	1,970	6%	6%	5%	4%	51	375	1.6%	0.1%
EU 1/	1,598	1,329	3,063	1,600	7%	6%	8%	3%		4		-7.8%
Oceania	239	276	548	679	1%	1%	1%	1%	157	160	4.9%	2.7%
Exports (000 tonnes milk equiv.)												
World	27,111	23,246	41,551	46,676					-95	-90	2.5%	1.5%
Developed	26,492	21,868	37,218	38,400	98%	94%	90%	82%	27	58	1.7%	0.4%
Dvpg	619	1,378	4,351	8,300	2%	6%	10%	18%	69	86	12.5%	8.4%
Asia (from 1992 incl. CIS	535	770	2,077	4,439	2%	3%	5%	10%	100	96	10.1%	10.0%
SE Asia	356	602	1,317	1,910	1%	3%	3%	4%	197	154	7.9%	4.8%
South Asia	19	10	143	488	0%	0%	0%	1%	-43	-14	15.9%	16.6%
US	3,250	1,031	2,886	4,900	12%	4%	7%	10%	-10	-1469	1.9%	6.8%
EU 1/	14,453	11,710	13,481	12,140	53%	50%	32%	26%		2		-1.3%
Oceania	6,557	6,480	14,237	16,852	24%	28%	34%	36%	156	161	4.4%	2.1%

Milk and milk products statistics ***(million tonnes, milk equivalent*** **)**
SOURCE: FAO's FOOD OUTLOOK, NOVEMBER 2007

	Production			Imports			Exports		
	2005	2006 *estim.*	2007 *f 'cast*	2005	2006 *estim.*	2007 *f 'cast*	2005	2006 *estim.*	2007 *f 'cast*
ASIA	**216.7**	**229.0**	**241.5**	**22.8**	**24.0**	**23.6**	**4.4**	**4.6**	**4.4**
China	32.0	38.1	45.0	3.5	3.7	3.8	0.4	0.3	0.3
India 1/	95.1	98.4	101.4	-	-	-	0.6	0.7	0.5
Indonesia	0.9	0.9	0.9	1.5	1.6	1.5	0.2	0.2	0.2
Iran, Islamic Rep. of	7.4	7.6	8.0	0.3	0.3	0.3	-	-	-
Japan	8.3	8.1	8.0	1.6	1.5	1.4	-	-	-
Korea, Rep. of	2.2	2.2	2.1	0.8	0.8	0.8	-	-	-
Malaysia	-	-	-	1.3	1.3	1.3	0.2	0.2	0.2
Pakistan	29.7	31.2	32.5	-	-	-	-	-	-
Philippines	-	-	-	1.7	1.9	1.8	0.1	0.1	0.1
Saudi Arabia	1.2	1.2	1.3	2.2	2.4	2.3	0.8	0.8	0.9
Singapore	-	-	-	1.2	1.4	1.4	0.6	0.6	0.7
Thailand	0.9	1.0	1.0	1.4	1.4	1.4	0.4	0.4	0.4
Turkey	11.1	11.6	12.1	0.1	0.1	0.1	0.1	0.1	0.1
AFRICA	**32.6**	**32.7**	**33.0**	**6.8**	**7.0**	**6.8**	**0.4**	**0.4**	**0.4**
Algeria	1.7	1.7	1.8	1.9	1.8	1.7	-	-	-
Egypt	4.1	3.7	3.7	0.8	0.8	0.8	0.1	0.1	0.1
Kenya	2.8	2.8	2.7	-	-	-	-	-	-
South Africa	2.9	2.9	2.8	0.2	0.2	0.2	0.1	0.1	0.1
Sudan	7.6	7.6	7.7	0.2	0.2	0.2	-	-	-
Tunisia	1.0	1.0	1.0	0.1	0.1	0.1	-	-	-
CENTRAL AMERICA	**15.7**	**16.0**	**16.3**	**5.4**	**4.8**	**4.8**	**0.3**	**0.3**	**0.3**
Costa Rica	0.8	0.8	0.8	-	-	-	0.1	0.1	0.1
Mexico	10.0	10.2	10.4	2.9	2.4	2.5	0.1	0.1	0.1
SOUTH AMERICA	**52.4**	**54.1**	**54.7**	**2.1**	**2.2**	**2.2**	**3.0**	**3.6**	**3.1**
Argentina	10.1	10.8	10.1	-	-	-	1.7	2.2	1.8
Brazil	25.5	26.2	27.0	0.5	0.5	0.5	0.4	0.3	0.3
Colombia	6.8	6.8	6.9	-	-	-	0.1	0.2	0.2
Uruguay	1.8	1.8	1.8	-	-	-	0.5	0.5	0.4
Venezuela	1.3	1.4	1.6	0.8	0.7	0.7	-	-	-
NORTH AMERICA	**88.3**	**90.5**	**92.0**	**3.0**	**2.6**	**2.6**	**5.0**	**5.2**	**5.3**
Canada	8.1	8.0	7.9	0.8	0.6	0.7	0.4	0.4	0.4
United States	80.3	82.5	84.1	2.3	1.9	2.0	4.6	4.8	4.9
EUROPE	**216.1**	**215.0**	**215.5**	**5.1**	**5.6**	**5.7**	**17.6**	**15.7**	**16.3**
European Union	146.9	145.5	151.4	1.8	1.7	1.6	13.4	11.6	12.1
Romania	6.3	6.4	-	0.1	0.1	0.1	-	-	-
Russian Fed.	31.1	31.3	32.2	2.4	2.9	3.1	0.3	0.2	0.2
Ukraine	13.7	13.3	13.0	-	-	-	1.3	1.1	1.0
OCEANIA	**24.7**	**25.4**	**25.2**	**0.7**	**0.7**	**0.7**	**15.3**	**17.5**	**16.9**
Australia 2/	10.1	10.1	9.6	0.4	0.4	0.4	4.7	5.1	4.3
New Zealand 3/	14.5	15.2	15.6	-	-	-	10.6	12.4	12.6
WORLD	**646.5**	**662.7**	**678.2**	**45.9**	**46.8**	**46.4**	**46.0**	**47.3**	**46.7**
Developing Countries	290.2	304.4	317.7	34.6	35.2	34.7	7.9	8.7	8.3
Developed Countries	356.2	358.3	360.5	11.3	11.7	11.7	38.1	38.6	38.4
LIFDC	214.7	226.5	238.7	14.3	15.0	14.8	3.3	3.6	3.4
LDC	22.9	23.2	23.5	2.5	2.6	2.5	0.1	0.1	0.1
NFIDC	46.3	47.3	48.5	3.7	3.7	3.7	0.3	0.3	0.3

1/ Dairy years starting April of the year stated.
2/ Dairy years ending June of the year stated.
3/ Dairy years ending May of the year stated.

Note: The solids content method was used to calculate milk equivalents. ME multiplication factors used: butter 6.60, cheese (from whole cow milk) 4.40, cheese (from skim cow milk) 2.00, milk powder 7.60. Regarding assumptions and approaches in calculation of milk equivalents please refer to the IDF Bulletin No. 390 (March 2004).