ESC-Fibres Consultation no. 04/3

CONSULTATION ON NATURAL FIBRES

Rome, 15 - 16 December 2004

PROJECTIONS TO 2012: HARD FIBRES, JUTE, KENAF AND ALLIED FIBRES

Introduction

In the period to 2012, the market for sisal and henequen is expected to remain at the 2000-2002 levels, largely under the influence of strong demand from China that may offset decreases in sisal utilisation in the other countries. The market for abaca is expected to grow with increases in the trade of manufactures, and especially paper pulp, offsetting the expected decline in trade in fibre. Consumption of coir is expected to continue growing, albeit at a slower rate than that of the past decade, as growth in demand for coir products in India and China may decelerate.

The world jute market is expected to continue to contract in the medium term, albeit at a much slower rate than in the past decade. Strong demand in China and the Near East may offset the pressure exerted by the increased capacity in the synthetic fibre industry that results in increasing polypropylene's competitiveness vis-à-vis jute fibre and erodes the demand for the major jute products, such as sacking and carpet backing.

These projections for hard fibres and jute have been generated by means of partial equilibrium models estimated utilising FAO data and assuming weather and economic conditions will be normal. The models consist of estimated behavioural equations for production, as well as demand, exports and imports of fibre and manufactured products that allow for adjustment to changes to be gradual and not instantaneous, thus take into consideration biological, behavioural and other factors in the production and consumption of fibre and related products. The projections generated by the model are based on assumptions about the behaviour of certain economic relationships and variables, such as the relationship between supply and the price level, inflation, and economic growth. In addition, the projections do not take into account factors for which no, or scarce data exists, such as niche applications of sisal in the manufacturing of higher value added products. Therefore, predictions can be thought of as providing a baseline that reflects a ‘benchmark’ upon which analysis of various market scenarios can be conducted.

1. Sisal and henequen

Between 2000-2002 and 2012, global demand for sisal and henequen fibre and products is expected to contract by an annual rate of 0.35 percent as strong import demand from China is expected to offset the reduction brought about by the erosion by synthetic substitutes and by the adoption of harvesting technology that utilises less or no twine. Niche market applications, such as the use of sisal fibre for the manufacturing of composites for the automotive industry are subject to intense competition from other fibres such as flax. However, future developments in niche market manufacturing of higher value added products such as paper pulp, carpet yarn and composites for the automobile industry may generate additional demand, with growth rates that may offset the contraction of the traditional outlets of sisal.

During the decade 1990 to 2000, consumption in North America, a traditional user of agricultural twine, declined by 8.5 percent per annum to approximately 48 000 tonnes in 2000-2002. In the medium term, it is likely that consumption in North America, primarily in the United States, will decline to approximately to 43 000 tonnes, mainly due to the continuing displacement of sisal twine by heavy polypropylene twine used in big square bales. In Europe, between 1990-1992 and 2000-2002, consumption of sisal contracted by an annual rate of 6.4 percent to 35 000 tonnes. It is expected that in the period to the year 2012, the rate of decline in consumption in Europe will slow down, as possibilities for further substitution by synthetic fibres and for displacement by harvesting techniques may be exhausted. In China between 1990-1992 and 2000-2002, consumption increased by an average of 2.1 percent per annum from 39 000 tonnes to 46 000 tonnes. In the medium term, the market for sisal in China is projected to expand further, albeit at a slower rate to approximately to 58 000 tonnes in 2012, as strong demand for fibre for industrial applications is expected to compensate for the downward pressure exerted by the increased capacity in the polypropylene industry that weakens the competitiveness of sisal twine.

Between the 3-year periods of 1990-1992 and 2000-2002, global production of sisal and henequen contracted at an annual rate of 3.1 percent to 302 000 tonnes. In the medium term to 2012, global production is expected to contract further, as producers in all major countries respond to market signals, keeping supply levels in line with demand. Global production is projected to decrease by 1.5 percent per annum to 270 000 tonnes in 2012. Production in Brazil, the largest producing country, is expected to contract to 118 000 tonnes, whilst in Tanzania production is expected to remain stable. In China production is projected to decline by 3.3 percent per annum to 27 000 tonnes in 2012.

Between 1990-1992 and 2000-2002 global exports declined by 3.1 percent per annum. Exports of fibre and manufactures contracted by 2.19 percent and 3.64 percent per annum respectively. It is projected that aggregate exports are likely to increase by 0.68 percent to about 230 000 of raw fibre equivalent in 2012. Exports of fibre are projected to increase by 1.4 per cent from 80 000 tonnes in 2000-2002 to 109 000 tonnes in 2012, whilst in the same year exports of manufactures may expand to 115 000 tonnes. Trade in sisal, and especially exports from Brazil, are severely affected by the freight rate hike across all sizes both in the Atlantic and the Far East. High freight rates are the result of increased demand for minerals and grains especially from China, Europe and Japan, in conjunction with limited availability of large size vessels. Latest information suggests that rates continue to rise, with the Baltic Dry Index (BDI), a general index for dry freight rates, increasing by 12 percent over the month of November 2004. An increased number of grain cargoes from South America and China's decision to resume soybean imports from Brazil, have contributed to the market's bullish performance. Strong competition between bulk and container cargo, as well as relatively stronger import demand for higher value commodities have resulted in minerals and grains displacing sisal in freight. High steel and oil prices provide a disincentive for increasing tonnage capacity and, therefore, there may be no short term halt to the freight rate hike. Nevertheless, in the medium term increased tonnage capacity is expected to bring the market to a lower equilibrium level.

2. Abaca

In the decade to 2000-2002, global consumption of abaca, expressed in fibre equivalent, exhibited a strong annual growth rate reaching approximately 82 000 tonnes. Most of the increase in consumption took place in the EU and Japan in the form of increasing imports of paper pulp. During the same period, demand for traditional products, such as cordage, has remained stable. In the medium term, consumption of abaca fibre and products is expected to grow at a rate equal to 1.3 percent per annum, mainly driven by strong demand in Japan.

It is projected that in the medium term, production of abaca will expand at a slow rate of 0.29 percent per annum to a level of 85 000 tonnes in 2012, as prices strengthen from the low point of 2000-2001. The Philippines is expected to remain the major supplier producing approximately 70 000 tonnes, whilst production in Ecuador is projected to remain at approximately 12 000 tonnes in the period to 2012.

During the last decade, aggregate exports of fibre and manufactures have been increasing by 1.7 percent per annum to an average of 72 000 tonnes in 2000-2002. However, the composition of exports has been changing with manufactures amounting to nearly 60 percent of the total in 2000-2002, as compared to 52 percent in 1990-1992, as demand for manufactures, especially pulp, has been strengthening relative to that for fibre, mainly driven by strong demand for pulp from the EU and Japanese markets.

In the medium term to the year 2012, it is expected that total exports will increase by an annual rate of 1.4 percent to approximately 82 000 tonnes. However, the share of manufactures in total exports is expected to increase to nearly 70 percent amounting to 57 000 tonnes in 2012, compared to a 2000-2002 average of 43 000 tonnes. Exports of fibre are projected to contract by 1.0 percent per annum to 25 000 tonnes by the year 2012. Assuming normal economic conditions, strong market demand for specialty and non-woven paper will result in the share of pulp in total exports of manufactures increasing further and amounting to more than 70 percent of total exports of manufactures by 2012. The fast growth in exports of pulp is also expected to be sustained by developments in the structure of the abaca processing industry in both the Philippines and the importing countries.

3. Coir

As a by-product of the production of other coconut products, coir production is, by and large, determined by the cost and availability of labour relative to prices. Abundant quantities of coconut husk imply that, given the availability of labour and other inputs, coir producers can adjust relatively rapidly to market conditions and prices. It is estimated that approximately 10 percent of husks are utilised for fibre extraction, satisfying a growing demand for fibre and coir products. Between the 3-year periods of 1990-1992 and 2000-2002, global consumption of coir expanded by 11.2 percent per annum with consumption expanding in both producing and importing countries. In India, the largest coir producing and consuming country, consumption increased by 6.9 percent per annum to 412 000 tonnes, representing some 75 percent of global production. The fast growth of consumption was fuelled mainly by increasing demand for traditional coir products such as rugs, carpets and mattresses, as well as for non-traditional products such as coir pith, rubberised coir and geotextiles. In the medium term, the rapid growth in global consumption is expected to slow down to an annual rate of around 1.1 percent per annum, as the pace at which the coir industry is able to supply innovative and diversified products may decelerate due to a number of constraints such as the small scale of the processing industry.

During the 1990s, production in India expanded by 6.9 percent annually in order to meet domestic demand, whilst in Sri Lanka, a major exporter of coir fibre, production contracted due to weakening export and domestic demand. In the medium term it is projected that global production will increase from an average of 583 000 tonnes in 2000-2002 to 635 000 tonnes in 2012. Production in India is projected to increase by 1.6 percent per annum, whilst in Sri Lanka it is expected to expand at a faster rate of 3.0 percent.

International trade accounted for 30 percent of global production in 2000-2002, compared to 37 percent in 1990-1992, since most of the expansion during the past decade in global production and consumption took place in India. Raw fibre exports increased by 4.3 percent to 97 000 tonnes in 2000-2002, while exports of manufactures increased by an annual rate of 4.5 percent. In the medium term, demand for coir products in importing countries is expected to be met by India, as products from Sri Lanka, a traditional exporter of fibre and pith, are subject to ongoing competition by synthetic foams and fibres. In the medium term, total exports are expected to continue increasing at an annual rate of 1.1 percent in line with global demand and consumption trends in the established market destinations such as the United States and the EU. Exports of manufactures are projected to grow by 1.2 percent per annum to 80 000 tonnes in 2012, whilst exports of fibre are expected to expand to about 123 000 tonnes.

4. Jute, Kenaf and Allied Fibres

Assuming that weather conditions and yield per hectare of jute follow their normal patterns in each of the countries under examination, the world production of jute is projected to expand by 0.33 percent at 3.2 million tonnes in 2012, well above the average production level of the past decade, as increases in yields per hectare are expected to offset reductions in the area under jute. In the medium term, the area under jute in the Far East is expected to contract by 1.0 percent per annum from an average of 1.5 million hectares in 2000-2002 to 1.4 million hectares in 2012 as producers adjust to market conditions through disinvestment. The area under jute in India is expected to contract by 1.3 percent per annum, although production is expected to expand to nearly 2.0 million tonnes due to increases in yield. Between 2003 and 2012, yields are projected to increase from 2.36 to 2.50 tonnes per hectare. In 2003, the area under jute in Bangladesh increased to nearly 500 000 hectares, as compared to the 2000-2002 average of 468 000 hectares. In the medium term, the area under jute in Bangladesh is expected to remain approximately stable at 487 000 hectares. In conjunction with increasing yields, production is expected to increase by 0.4 percent annually from 844 000 tonnes in 2000-2002 to 958 000 in 2012. The area and production of jute in China are projected to continue to contract. Production declined from 619 000 tonnes to 139 000 tonnes in the course of the 1990s and is expected to continue to decline to 135 000 tonnes by 2012 as more land is sown to food crops.

During the past decade, world jute consumption contracted as the market continued to be shaped by two important factors, namely the intensity of competition with, and the displacement by, synthetic fibres and the extension of commodity bulk-handling facilities. These factors contributed to a decrease in world jute consumption from 3.3 million tonnes of fibre equivalent in 1990-1992 to 2.8 million tonnes in 2000-2002. Nevertheless, in 2003, consumption increased to just under 3.0 million tonnes. In the medium term to 2012, global consumption of jute is expected to continue to contract due to competition from polypropylene and bulk-handling technology. It is projected that global consumption will amount to just under 2.9 million tonnes in 2012. Consumption of jute and jute products in the developed countries is expected to continue to decline in the medium term, albeit at a slower rate than in the 1990s. A slowdown in the contraction of the market may reflect the gradual exhaustion of substitution possibilities between jute and competing products or technologies, at least in these countries. In the developing countries, consumption is expected to increase at an annual rate of 0.05 percent from 2.5 million tonnes in 2000-2002 to 2.6 million tonnes in 2012, mainly due to relatively stronger demand from China and the Near East.

In India, the largest market in the world, consumption of jute products is likely to remain at approximately 1.6 million tonnes in spite of the revised administrative regulations that determine the shares of jute and synthetic fibres in food grade sacks for agricultural commodities. The new provisions, introduced in the 2002-03 season, allow a reduction in the amount of food grains packed in jute from 100 per cent to 80 percent and a reduction in the amount of sugar packed in jute from 90 percent to 75 percent. These relaxations of the regulations are expected to weaken demand for jute in India, exert a downward pressure on its price and reduce the growth below that which the Indian jute market experienced during the last decade. However, there are some factors, such as the preference for jute packaging for food grains due to its breathability, as well as jute sacks re-usability that may work to offset the impact of these regulations. In the medium term, jute consumption in Bangladesh is projected to grow at an annual rate of approximately 0.9 percent from 159 000 tonnes in 2000-2002 to 185 000 tonnes in 2012, partly due to the ban imposed on polythene shopping bags introduced in 2002 for environmental reasons which should strengthen demand for jute. In China, it is expected that the consumption of jute will increase by 1.6 percent per annum, whilst consumption in other countries in the Far East, such as Thailand, Vietnam, and Nepal, is also expected to continue to decline. In the Near East and Pakistan, consumption is expected to grow at a slow rate, mainly driven by increases in the consumption of yarn for carpet backing in Iran. In Africa and Latin America consumption is projected to follow a downward trend due to competition from synthetic packaging materials.

During the decade to 2000-2002, trade in both jute fibre and products contracted by 2.9 percent annually to 822 000 tonnes following a long term downward trend determined, initially, by the shift of the processing industry from developed to developing countries, as well as by faster rates of decline in consumption in non-producing than in the producing countries. As a result, global trade during the 1990s accounted for a diminishing proportion of total global production. Nevertheless, in 2003 trade in jute fibre and jute products amounted to approximately 924 000 tonnes. In the medium term, as increases in consumption in developing countries are expected to offset weak demand in developed countries, it is expected that in 2012 trade in jute fibre and products will amount to 928 000 tonnes, increasing from the 2000-2002 level by an annual rate of 0.7 percent. China’s strengthening import demand is likely to fuel trade in jute and jute products. China was a net exporting country during the period 1979-1994, and although net imports have been erratic during the last years of the 1990s (e.g. 100 000 tonnes in 1998 and 4 500 tonnes in 2000), production is expected to contract at a rate faster than that consumption, resulting in an increase in imports to 64 000 tonnes by the year 2012.

As the jute processing industry has now shifted entirely to the developing countries, exports of yarn are expected to decline in line with the global market. Intense competition from polypropylene will depress trade in hessian cloth that is likely to decline at a faster rate than total trade. Sacking and carpet backing are likely to be the main jute products exported. Bangladesh is expected to remain the largest net exporting country. Its exports are projected to expand in line with the global market developments by an annual rate of 0.34 percent to 792 000 tonnes in 2012. Net exports from India are expected to remain stable at approximately 100 000 tonnes.

Table 1 - Hard Fibres: Production, Actual and Projected					
	Actual		**Projected**	**Annual growth rates**	
	1990-1992	**2000-2002**	**2012**	**1990-1992 to 2002**	**2000-2002 to 2012**
Sisal and henequen					
World	445	302	270	-3.13%	-1.53%
Kenya	38	22	23	-5.79%	-1.08%
Madagascar	13	10	5	-3.38%	-4.36%
Tanzania	31	23	24	-3.64%	0.16%
Brazil	208	131	118	-2.05%	-1.92%
Mexico	45	25	27	-6.44%	1.85%
China	32	37	27	1.39%	-3.32%
Abaca					
World	74	80	85	0.84%	0.29%
Ecuador	10	12	12	1.13%	0.01%
Philippines	61	66	70	0.80%	0.35%
Coir					
World	320	583	635	6.06%	1.59%
India	241	482	509	6.96%	1.44%
Sri Lanka	67	65	86	-0.32%	3.01%
Total Fibre (World)	167	338	372	7.66%	1.49%
Total Yarn (World)	153	241	264	3.95%	1.89%

Table 2 - Hard Fibres: Global Exports, Actual and Projected					
	Actual		Projected	Annual growth rates	
	1990-1992	2000-2002	2012	1990-1992 to 2002	2000-2002 to 2012
Sisal and henequen					
Exports of raw fibre					
World	99	80	109	-2.19%	1.43%
Kenya	29	16	12	-6.49%	-3.36%
Madagascar	10	9	5	-4.35%	-1.91%
Tanzania	5	12	11	13.69%	-1.57%
Brazil	49	37	46	-2.57%	-0.13%
Mexico	0	0	0	0.00%	-4.02%
China	1	0	0.34	-29.18%	7.63%
Exports of manufactures					
World	155	113	115	-3.64%	0.10%
United States	0	4	4	0.00%	-0.53%
European Union	35	22	22	-4.97%	0.84%
Kenya	1	4	4	3.64%	-0.26%
Madagascar	2	1	1	-7.05%	-2.80%
Tanzania	16	2	3	-26.13%	0.93%
Brazil	71	60	61	-1.31%	-0.20%
Mexico	7	4	7	-5.96%	2.72%
China	0	4	4	na	-0.53%
Abaca					
Exports of raw fibre					
World	31	29	25	1.36%	-1.04%
Ecuador	10	12	11	2.93%	-1.33%
Philippines	20	15	13	-0.03%	-0.63%
Exports of manufactures					
World	34	43	57	2.23%	1.49%
Ecuador	0.11	0.00	0.00	na	na
Philippines	33.36	42.13	56.06	2.34%	1.49%
Coir					
Exports of raw fibre					
World	72	97	123	4.27%	1.03%
Sri Lanka	62	50	46	-1.56%	-0.44%
India	0.40	13	26	32.49%	2.99%
Philippines	0.26	3	2	27.36%	-1.20%
Exports of manufactures					
World	44	73	80	4.54%	1.16%
India	30	54	63	5.12%	1.39%
Sri Lanka	4	13	12	13.43%	0.38%
Philippines	0	1	2	15.71%	2.16%

Table 3 - Hard Fibres: Global Imports Actual and Projected					
	Actual		Projected	Annual growth rates	
	1990-1992	2000-2002	2012	1990-1992 to 2002	2000-2002 to 2012
Sisal and henequen					
Imports of raw fibre					
World	96	76	98	-1.60%	1.17%
Canada	0.37	0.45	0.33	2.49%	-1.47%
United States	0.33	0.29	0.11	-2.62%	-4.19%
European Union	55	34	32	-5.05%	-0.30%
Former USSR	6.23	1.20	1.16	0.00%	0.03%
Oceania	2.10	0.76	0.37	-12.45%	0.03%
Japan	3	2	1	-8.60%	0.03%
China	8	13	36	2.59%	4.98%
Imports of manufactures					
World	151	89	104	-7%	0%
Canada	11	6	5	-6%	-1%
United States	79	47	43	-8%	-2%
European Union	45	23	23	-7%	0%
Former USSR	0.00	0.04	0.03	0%	-1%
Abaca					
Imports of raw fibre					
World	32	33	25	0.44%	-2.22%
Canada	0.15	0.07	0.05	-17.42%	-2.35%
United States	11	5	0	-10.24%	-19.51%
European Union	14	19	15	3.29%	-1.91%
Japan	6	7	7	2.29%	-1.08%
Imports of manufactures					
World	n/a	43	58	n/a	1.75%
United States	n/a	6	8	n/a	1.80%
European Union	n/a	9	12	n/a	1.77%
Far East	n/a	27	36	n/a	1.75%
Coir					
Imports of raw fibre					
World	72	113	123	5.67%	0.12%
United States	8	11	11	4.91%	-0.25%
European Union	36	41	39	1.70%	-0.44%
Other Europe	7	8	8	8.78%	-0.19%
Japan	6	5	5	0.12%	-0.38%
China	7	33	48	15.69%	1.35%
Imports of manufactures					
World					
Canada	42	60	63	4.27%	0.63%
United States	40	56	58	4.05%	0.60%
European Union	5	16	16	9.40%	0.45%

Table 4 - Hard Fibres: Global Apparent consumption, Actual and Projected					
	Actual		Projected	Annual growth rates	
	1990-1992	2000-2002	2012	1990-1992 to 2002	2000-2002 to 2012
Sisal and henequen					
World	**380**	**233**	**246**	**-3.91%**	**-0.35%**
Canada	12	7	5	-5.2%	-1.0%
United States	87	48	43	-8.5%	-1.8%
European Union	66	35	33	-6.4%	-0.9%
Oceania	2	1	0	-12.7%	-3.3%
Japan	3	2	1	-8.6%	-1.3%
China	39	46	58	2.1%	0.4%
Abaca					
World	n/a	82	92	n/a	1.34%
Canada	n/a	0	0	n/a	-1.65%
United States	n/a	12	9	n/a	-2.01%
European Union	n/a	29	29	n/a	0.35%
Japan	n/a	36	47	n/a	2.65%
Coir					
World	374	699	740	11.19%	1.09%
United States	14	28	28	7.29%	0.16%
European Union	65	74	75	2.25%	0.10%
Other Europe	12	14	15	7.05%	0.32%
Japan	6	5	5	-0.22%	-0.41%
China	7	33	48	15.69%	1.35%
India	208	412	417	6.89%	1.42%

Table 5 – Jute: Area, Actual and Projected (thousand hectares)					
	Actual		**Projected**	**Annual growth rates**	
	1990-1992	**2000-2002**	**2012**	**1990-1992 to 2000-2202**	**2000-2002 to 2012**
World	**2,072.30**	**1,551.75**	**1,390.15**	**-3.03%**	**-1.04%**
Developing	**2,072.30**	**1,551.75**	**1,390.15**	**-3.03%**	**-1.04%**
Africa	7.90	7.10	7.18	0.02%	0.22%
Latin America	33.63	20.43	14.82	-4.59%	-4.74%
Near East	1.17	0.20	0.16	-19.82%	-1.19%
Far East	2,029.60	1,524.02	1,368.00	-3.02%	-1.00%
Bangladesh	559.57	468.20	487.27	-2.32%	-0.19%
China	282.27	52.67	40.18	-18.70%	-3.19%
India	1,040.00	957.67	797.84	-0.46%	-1.27%
Nepal	12.80	12.50	10.34	0.69%	-1.81%
Thailand	123.60	25.35	24.84	-19.60%	-2.13%
Vietnam	11.37	7.63	7.52	-4.75%	1.99%

Table 6 – Jute: Production, Actual and Projected (thousand tonnes)					
	Actual		**Projected**	**Annual growth rates**	
	1988-1990	**1998-2000**	**2010**	**1990-1992 to 2000-2202**	**2000-2002 to 2012**
World	**3,359.73**	**3,005.04**	**3,254.63**	**-1.02%**	**0.33%**
Developing	**3,356.23**	**3,005.04**	**3,254.63**	**-1.00%**	**0.33%**
Africa	10.17	12.53	14.25	2.28%	1.31%
Latin America	33.43	22.83	20.04	-5.00%	-1.81%
Near East	2.87	0.30	0.38	-25.56%	3.53%
Far East	3,264.70	2,897.87	3,153.17	-1.09%	0.37%
Bangladesh	915.03	844.33	958.31	-0.67%	0.44%
China	619.33	139.00	135.01	-16.76%	-1.03%
India	1,530.83	1,856.87	1,996.00	2.51%	0.47%
Nepal	15.07	16.20	15.39	2.89%	-0.95%
Thailand	159.50	42.20	43.84	-16.75%	-1.14%
Vietnam	24.93	15.47	20.02	-3.80%	3.69%

Table 7 – Jute: Net Exports, Actual and Projected (thousand tonnes)					
	Actual		Projected	Annual growth rates	
	1990-1992	2000-2002	2012	1990-1992 to 2000-2202	2000-2002 to 2012
World	**1,107.79**	**822.32**	**928.09**	**-2.88%**	**0.71%**
Developing	**1,107.79**	**819.37**	**928.09**	**-2.88%**	**0.71%**
Far East	1,107.79	819.37	928.09	-2.88%	0.71%
Bangladesh	812.32	735.61	792.60	-0.72%	0.34%
China	87.46	-	-	n/a	n/a
India	209.16	95.68	100.46	-10.77%	-0.20%
Myanmar	-	7	5		
Nepal	17.30	10.70	11.51	-3.78%	0.58%

Table 8 – Jute: Net Imports, Actual and Projected (thousand tonnes)					
	Actual		Projected	Annual growth rates	
	1990-1992	2000-2002	2012	1990-1992 to 2000-2202	2000-2002 to 2012
World	**1,108**	**822.32**	**928.09**	**-2.88%**	**0.71%**
Developed	**705.30**	**364.46**	**313.71**	**-7.23%**	**-1.13%**
North America	101.83	63.43	53.28	-5.31%	-1.52%
USA	94.40	57.10	47.92	-5.60%	-1.62%
Europe	279.87	174.83	143.24	-6.09%	-1.54%
EU-15	246.77	163.13	132.90	-5.86%	-1.63%
Belgium	79.30	67.67	49.70	-5.85%	-1.81%
Germany	27.60	13.10	12.25	-6.24%	-0.72%
UK	54.47	26.97	22.09	-8.51%	-1.80%
Other Europe	33.10	11.70	10.35	-8.26%	-0.37%
Oceania	57.43	46.03	38.30	-1.50%	-0.90%
Japan	51.40	24.00	23.48	-9.21%	-0.02%
	89	92			
Developing	**557.47**	**393.24**	**469.79**	**-3.64%**	**1.39%**
Africa	113.43	47.43	39.22	10.47%	1.42%
Cote d Ivoire	9.47	19.43	14.98	1.99%	-1.54%
Latin America	39.61	24.15	35.34	-8.29%	1.39%
Near East	224.18	234.06	254.07	-0.50%	0.51%
Egypt	31.25	16.02	3.63	-6.71%	-9.57%
Iran	56.87	69.70	77.04	4.75%	1.08%
Sudan	58.03	23.35	15.44	-12.31%	-2.15%
Far East	14.04	86.74	137.15	16.59%	4.58%
China	..	15.24	64.03	n/a	14.98%
Pakistan	101.50	71.50	73.11	-2.00%	0.31%

Table 9 – Jute: Apparent Consumption, Actual and Projected (thousand tonnes)					
	Actual		**Projected**	**Annual growth rates**	
	1990-1992	**2000-2002**	**2012**	**1990-1992 to 2000-2202**	**2000-2202 to 2012**
World	**3,346.27**	**2,800.73**	**2,870.31**	**-1.88%**	**-0.10%**
Developed	**494.03**	**314.30**	**262.86**	**-5.47%**	**-1.36%**
North America	105.33	69.43	57.84	-4.84%	-1.64%
USA	97.90	63.10	52.48	-5.06%	-1.74%
Europe	279.87	174.83	143.24	-6.09%	-1.54%
EU-15	246.77	163.13	132.90	-5.86%	-1.63%
Belgium	79.30	67.67	49.70	-5.85%	-1.81%
Germany	27.60	13.10	12.25	-6.24%	-0.72%
UK	54.47	26.97	22.09	-8.51%	-1.80%
Other Europe	33.10	11.70	10.35	-8.26%	-0.37%
Oceania	57.43	46.03	38.30	-1.50%	-0.90%
Japan	51.40	24.00	23.48	-9.21%	-0.02%
Developing	**2,852.23**	**2,486.43**	**2,607.45**	**-1.34%**	**0.05%**
Africa	123.57	61.83	53.47	-8.91%	-1.37%
Cote d Ivoire	9.47	19.43	14.98	1.99%	-1.54%
Latin America	73.03	50.03	50.38	-4.66%	-1.19%
Near East	227.07	234.33	254.45	-0.61%	0.52%
Egypt	34.13	16.30	4.01	-7.62%	-8.87%
Iran	56.87	69.70	77.04	4.75%	1.08%
Sudan	58.03	23.35	15.44	-12.31%	-2.15%
Far East	2,217.30	2,090.07	2,198.30	-0.42%	0.06%
Bangladesh	133.60	159.33	185.42	1.47%	0.90%
China	531.90	154.27	199.05	-13.70%	1.63%
India	1,326.90	1,647.93	1,696.51	2.63%	-0.12%
Nepal	7.60	4.30	3.88	-5.46%	-1.11%
Pakistan	101.50	71.50	73.11	-2.00%	0.31%
Thailand	92.83	37.80	31.82	-12.03%	-2.16%
Vietnam	22.97	14.93	8.52	-1.41%	-4.60%