

# STRATEGIC ALLIANCE FOR THE DEVELOPMENT OF COIR INDUSTRY IN THE APCC COUNTRIES AND DEMAND PROSPECTS FOR COIR PRODUCTS IN ECOFRIENDLY APPLICATIONS

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1. The natural hard fibres are facing serious challenges mainly from synthetic products. It may sound anachronistic in the context of growing awareness about the benefits of green business. Coir is green business as much as it deals with an eco-friendly, biodegradable natural fibre for a variety of end uses made out of a renewable resource - the coconut husk. But it is increasingly getting marginalised. The market share of coir has been reducing and is far from its potential. It has affected the producers - their livelihood and food security - mostly belonging to the developing countries. It is time that the issues involved are reviewed closely to understand the factors causing decline in the market share and evolve strategies for retaining and expanding its share.
2. The Asian and Pacific Countries together contribute 85 to 90% of the total world production of coconut.

**Table I**

## **Production of Coconuts in Nut Equivalent, 1996-2000** (1000 Nuts)

Country	1996	1997	1998	1999	2000
<b>A. APCC Countries</b>	<b>46,216,400</b>	<b>47,860,320</b>	<b>46,729,500</b>	<b>47,689,500</b>	<b>47,820,000</b>
F.S. Micronesia	40,000	40,000	40,000	40,000	40,000
Fiji	196,400	163,320	136,500	136,500	150,000
India	12,952,000	13,061,000	12,717,000	12,536,000	12,252,000
Indonesia	13,804,000	13,520,000	13,891,000	14,973,000	15,119,000
Malaysia	722,000	696,000	600,000	580,000	572,000

Papua New Guinea	960,000	906,000	858,000	1,020,000	1,032,000
Philippines	11,937,000	13,708,000	12,806,000	12,504,000	12,499,000
Samoa	160,000	173,000	186,000	186,000	190,000
Solomon Islands	288,000	297,000	307,000	318,000	330,000
Sri Lanka	2,546,000	2,630,000	2,522,000	2,828,000	3,096,000
Thailand	1,130,000	1,130,000	1,135,000	1,108,000	1,098,000
Vanuatu	346,000	346,000	346,000	346,000	340,000
Vietnam	1,065,000	1,120,000	1,115,000	1,044,000	1,032,000
Palau	70,000	70,000	70,000	70,000	70,000
<b>B. Other Countries</b>	<b>6,707,279</b>	<b>6,743,558</b>	<b>6,919,048</b>	<b>7,077,409</b>	<b>6,982,240</b>
<b>Asia</b>	<b>603,375</b>	<b>611,476</b>	<b>706,049</b>	<b>747,355</b>	<b>760,739</b>
Bangladesh	111,250	111,569	111,650	111,650	111,250
Brunei	163	163	163	163	169
Cambodia	66,250	72,500	70,000	70,000	70,000
China	146,213	146,213	217,924	217,924	227,871
Maldives	16,250	16,250	16,250	16,250	19,955
Myanmar	260,250	261,625	287,500	328,206	328,206
Pakistan	2,750	3,000	2,400	3,000	3,125
Singapore	250	158	163	163	163
<b>Pacific</b>	<b>343,500</b>	<b>345,000</b>	<b>348,750</b>	<b>348,750</b>	<b>326,625</b>
Amer Samoa	5,875	5,875	5,875	5,875	5,875
Cocos Is	7,625	7,625	7,625	7,625	7,625
Cook Islands	5,625	6,250	6,250	6,250	6,250

Fr Polynesia	108,750	108,750	106,250	106,250	96,250
Guam	51,875	51,875	51,875	51,875	51,875
Kiribati	100,000	100,000	106,250	106,250	96,000
Nauru	2,000	2,000	2,000	2,000	2,000
New Caledonia	19,750	20,625	20,625	20,625	18,750
Niue	2,500	2,500	2,500	2,500	2,500
Tokelau	3,750	3,750	3,750	3,750	3,750
Tonga	30,625	30,625	30,625	30,625	30,625
Tuvalu	2,250	2,250	2,250	2,250	2,250
Wallis Etc.	2,875	2,875	2,875	2,875	2,875

**Source:** FAO Statistics.

Today the coconut industry as a whole is at cross roads with intense competition, increasing cost of production and falling prices. Any attempt to augment income and reduce cost of production will be a boon to the coconut producers. Against this background, the coir industry is one which deserves priority attention. It provides gainful employment to the rural masses, helps in poverty alleviation and enables rural development apart from providing ecofriendly products for a variety of end uses both in the domestic and export markets. The coir industry has developed at varying degrees only in a handful of coconut producing countries viz. India, Sri Lanka, Thailand, Indonesia, Philippines, Malaysia, Vietnam etc.

**Table II**  
**Production of Coir Fibre**

	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
(.....000 tonnes.....)						
India (Brown fibre)	149.1	169.0	210.0	236.0	246.0	251.0
Sri Lanka	55.8	58.3	62.4	55.2	55.1	52.2
Thailand	4.2	6.0	6.4	8.6	8.7	9.0
Other countries	4.0	4.5	5.0	6.1	5.6	5.1
<b>Total above countries</b>	<b>213.1</b>	<b>237.8</b>	<b>283.8</b>	<b>305.9</b>	<b>315.4</b>	<b>317.3</b>
India (white fibre for yarn production)	127.7	127.0	124.0	120.0	120.0	110.0

*Source:* FAO Statistics, December, 2001

Out of them India and Srilanka together contribute almost 90% of the global coir production.

- According to FAO sources, out of the total annual global production of coconuts, only 10% of the coconut husk is being used for fibre extraction amounting to an estimated 0.5 million MT of coir. The production of coir fibre is given in Table II. Out of this, only about 30% enters the world trade. The exports in the form of fibre and yarn from producing countries is used for value addition in the importing countries. Srilanka is the largest exporter of fibre followed by Thailand and India. The export of coir fibre is given in Table III.

**Table III**  
**Export of Coir Fibre**

	1996	1997	1998	1999	2000	2001
(.....000 tonnes.....)						
<b>Srilanka</b>						
Of which: Bristle fibre	<b>48.53</b>		<b>49.85</b>	<b>50.86</b>	<b>46.82</b>	<b>46.70</b>
						<b>44.25</b>
Twisted fibre	5.52		5.70	5.01	4.08	4.33
						3.73
Mattress fibre	18.64		18.09	25.76	19.51	17.86
						16.57
	24.38		26.07	20.08	23.22	24.51
						23.95
China, Hong Kong	0.58		0.68	0.68	0.62	0.60
						0.60
India	1.05		0.89	1.09	1.53	2.05
						3.00
Indonesia	0.87		0.60	0.03	0.06	0.08
						0.08
Philippines	0.93		1.00	1.82	1.51	0.24
						0.25
Thailand	3.32		4.79	5.11	6.90	7.00
						7.00
Singapore	0.30		0.20	0.20	0.20	0.20
						0.20
<b>Total, Far East</b>	<b>55.69</b>		<b>58.23</b>	<b>59.92</b>	<b>57.70</b>	<b>56.94</b>
						<b>55.00</b>
Tanzania	0.10		0.10	0.10	0.10	0.10
						0.10
Other Africa	0.10		0.00	0.00	0.00	0.00
						0.00
<b>Total, Africa</b>	<b>0.20</b>		<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>
						<b>0.10</b>
Mexico	1.08		1.76	1.94	0.69	0.69
						0.69
Venezuela	0.15		0.41	0.03	0.28	1.28
						1.30
<b>Total, Latin America</b>	<b>1.22</b>		<b>2.18</b>	<b>1.96</b>	<b>0.97</b>	<b>1.97</b>
						<b>1.99</b>
<b>WORLD TOTAL</b>	<b>57.11</b>		<b>60.51</b>	<b>61.98</b>	<b>58.77</b>	<b>59.01</b>
						<b>57.09</b>

*Source:* FAO Statistics, December, 2001

Product exports are mainly from India and to some extent from Philippines and Sri Lanka, in the form of mats, mattings, rugs, carpets, needle felt, rubberised coir, geotextiles etc. The export of coir mats, mattings & rugs are at Table IV.

**Table IV**

<b>Export of Coir Mats, Mattings &amp; Rugs</b>						
	1996	1997	1998	1999	2000	2001
(.....000 tonnes.....)						
India		24.70	26.58	30.62	36.96	41.36
Sri Lanka	0.69	0.34	0.78	0.78	0.90	1.27
China	0.63	0.98	1.00	0.97	0.97	0.60
Philippines	1.70	2.10	3.62	3.95	3.44	2.50
Austria	0.05	0.05	0.05	0.01	0.06	
Belgium/Lux	0.96	0.20	0.24	0.24	0.17	
Denmark	0.34	0.07	0.07	0.13	0.13	
France	0.23	0.28	1.06	2.24	0.50	
Germany	0.69	0.77	0.77	0.64	0.66	
Italy	0.68	0.83	0.80	0.56	0.86	
Netherlands	3.18	0.42	0.27	0.28	0.29	
Portugal	1.42	1.76	0.30	0.08	0.11	
Spain	0.14	0.01	0.01	0.00	0.03	
Sweden	0.42	0.48	0.29	0.28	0.31	
United Kingdom	0.17	0.11	0.12	0.14	0.11	
<b>Total EC (15)</b>	<b>8.26</b>	<b>4.96</b>	<b>3.97</b>	<b>4.60</b>	<b>3.21</b>	<b>3.00</b>
<b>Total Above Countries</b>	<b>35.18</b>	<b>33.08</b>	<b>35.95</b>	<b>40.92</b>	<b>45.47</b>	<b>48.73</b>

*Source:* FAO Statistics, December, 2001

The single largest producer of fibre continues to be India with 361 T.M.T followed by Sri Lanka with 52.2 T.M.T. and Thailand with 9 T.M.T. during the year 2001. The largest exporter of fibre was Sri Lanka with 44.25 T.M.T. followed by Thailand with 7 T.M.T. and India with 3 T.M.T. during the same period. The largest exporter of yarn and products was India with 58.36 T.M.T. followed by Sri Lanka with 6.87 T.M.T. in the reference period. The developed countries were the major importers of yarn and products. The imports of coir mats, mattings and rugs into principal importing countries is given in Table V.

**Table V**  
**Import of Coir Mats, Mattings and Rugs by Principal Importing Countries**

	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
(.....000 tonnes.....)					
<b>DEVELOPED</b>	<b>29.90</b>	<b>30.13</b>	<b>32.29</b>	<b>35.68</b>	<b>36.15</b>
<b>EUROPE</b>	<b>21.70</b>	<b>20.80</b>	<b>21.40</b>	<b>22.70</b>	<b>21.20</b>
EC (15)	20.99	20.02	20.73	22.02	20.47
Austria	0.27	0.27	0.21	0.26	0.20
Belgium/Lu	1.75	1.08	1.36	1.90	1.30
Denmark	0.59	0.58	0.30	0.21	0.24
Finland	0.02	0.04	0.04	0.07	0.06
France	3.13	2.60	3.00	3.55	3.91
Germany	4.26	4.10	4.12	4.43	3.90
Greece	0.32	0.35	0.47	1.05	0.89
Ireland	0.10	0.05	0.07	0.00	0.00
Italy	1.65	1.75	1.63	1.56	1.55
Netherlands	2.59	2.62	2.44	2.16	1.84
Portugal	0.27	0.34	0.16	0.21	0.22
Spain	1.03	1.08	0.47	0.61	0.50
Sweden	0.84	0.87	0.32	0.70	0.52
United Kingdom	4.18	4.31	6.14	5.31	5.33
Norway	0.13	0.11	0.12	0.15	0.17
Switzerland	0.60	0.63	0.54	0.57	0.53
<b>Other Developed</b>	<b>8.20</b>	<b>9.33</b>	<b>10.89</b>	<b>12.98</b>	<b>14.95</b>
Australia 2/	1.04	1.10	1.19	1.39	1.00
Canada 2/	0.20	0.12	0.17	0.27	0.25
Japan	0.30	0.20	0.27	0.30	0.30
United States	5.27	6.50	7.90	9.67	12.00
Other n.e.s.	1.40	1.39	1.37	1.36	1.40
<b>DEVELOPING</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>	<b>1.50</b>	<b>1.50</b>
<b>Total Above Countries</b>	<b>30.40</b>	<b>30.63</b>	<b>32.79</b>	<b>37.18</b>	<b>37.65</b>

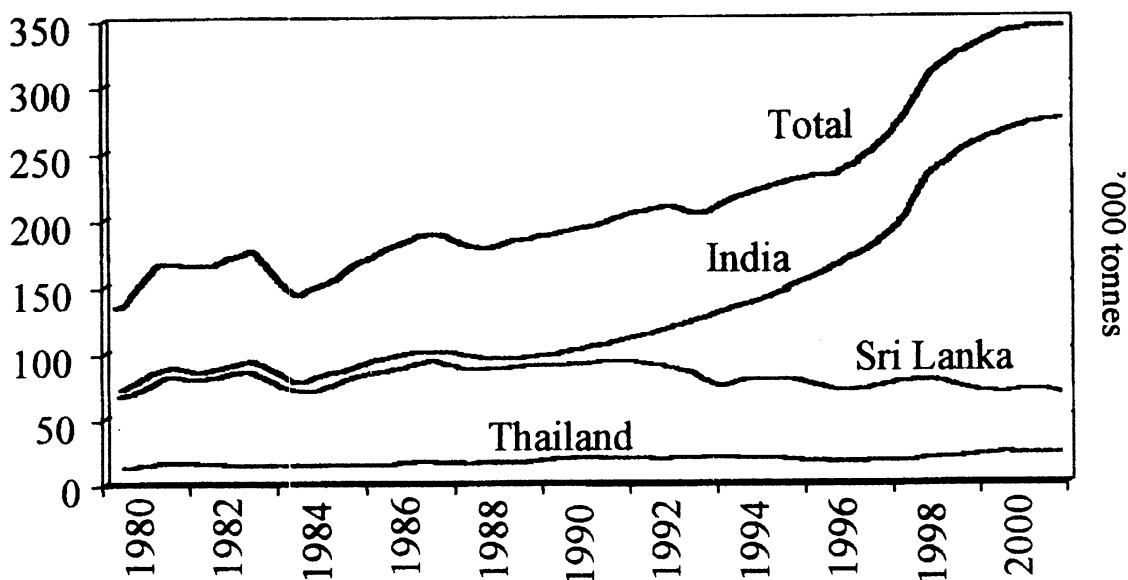
*Source:* FAO Statistics, December, 2001

They imported 20.65 T.M.T. of yarn while the developing countries imported only about 3 T.M.T. in the year 2001. Again as expected the developed countries imported about 36.15 T.M.T.

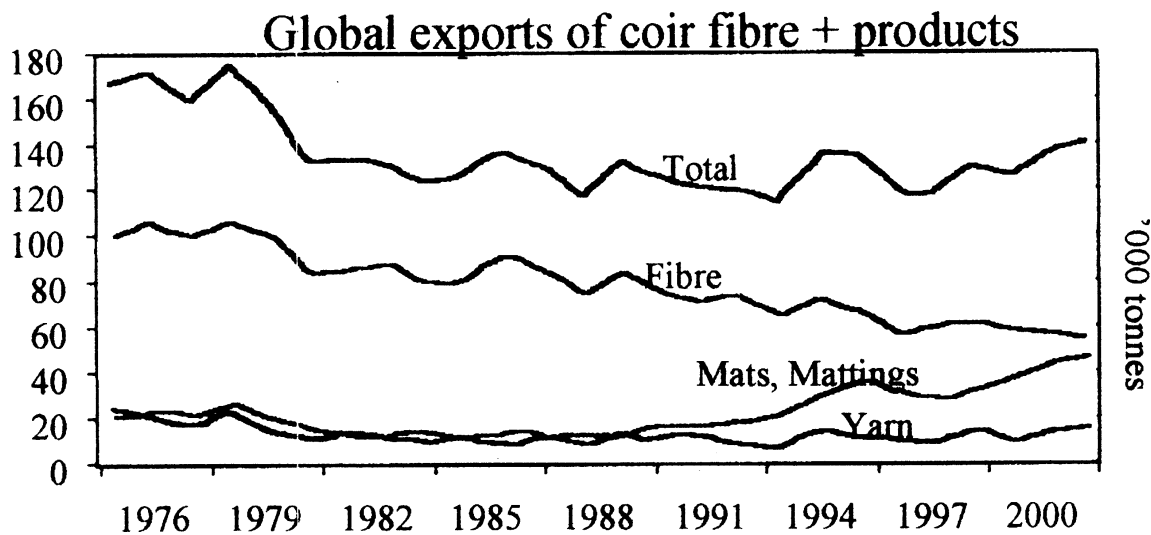
of coir mats, mattings and rugs whereas the import of developing countries was only 1.5 T.M.T. The prominent markets are the North America, E.U. Countries, Australia, Japan, Korea etc. The traditional coir products like, coir mats, mattings, rugs, carpets still dominate the market as is evident from the export performance of India which is the major exporter of coir products. India exports to about 72 countries. The major market destination is USA with about 37%, the European Union Countries with about 47% and the remaining countries of the world accounting for the rest of its coir exports. No reliable data is available about the consumption of coir fibre and products in the domestic markets of the producing countries. The non-availability of detailed data of production and consumption makes it difficult to assess the market potential, as well as the demand and supply position of coir products. It is more true of the developing countries to which coir exports have been extremely low, although one would expect an expanding market for the product.

4. There is scope for development of coir industry in the coconut growing countries of Asia-Pacific. But, there has not been much of an institutionalised effort on the part of international development agencies to promote coir industry, amongst the major coconut producing countries of the Asia-Pacific Region except in India, Sri Lanka and may be Philippines. The Asian and Pacific coconut community (APCC), which is an independent regional intergovernmental organisation, now consisting of 14 countries, have more or less focussed its entire attention to the development of coconut farming, development of coconut based products like coconut oil, copra, desiccated coconut, cream, powder etc. with noteworthy achievements. But the coir industry some way or other has not been able to draw serious attention that it deserves, from the APCC.

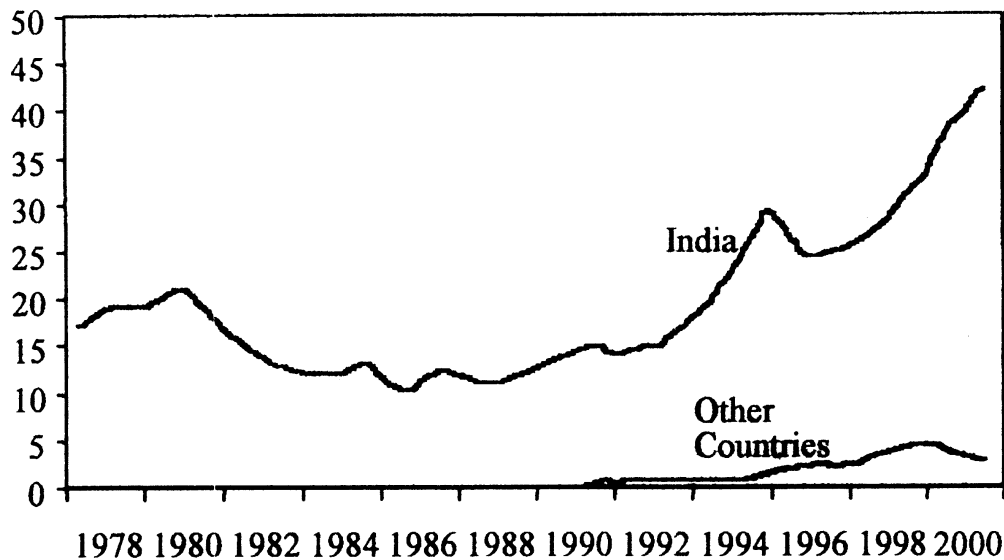
**Production of Coir Fibre**







### Mats Mattings Exports



5. The main objective of developing coir industry is to diversify and expand production and trade of value added products through better utilisation of abundantly available raw material, keeping in mind the market trends - both domestic and international. Apart from that there is a great socio economic relevance to it. The industry is a source of livelihood for a large number of people who generally belong to the socio-economically weaker strata of the society in many producing countries. In India alone, about half a million people depend on this industry for their livelihood. This is an agro-based sector with export potential which can provide employment particularly to the rural folk at affordably low levels of investment. Development of this industry will in turn help improve the livelihood and food security of the people engaged in it.

6. An apprehension in the minds of planners and decision-makers has been, whether there is enough market for coir products if all the major coconut producing countries enter the fray? The main challenge is of demand generation, market development, and of course rational growth of coir industry based on mutual co-operation, may be through an institutionalised mechanism. There has been no comprehensive study to know the actual global demand for coir products and the demand-supply gap, if any. So far the coir products have remained in a limited area of application as a floor covering material produced by a couple of developing countries who could not effectively lobby for the product. The USP of coir as an eco-friendly product for varied applications has not been fully harnessed. Diversified products like wood substitutes, packaging material, garden articles automobile accessories, and as a long term biodegradable geotextiles for soil bio-engineering have not been popularised for commercial exploitation. There has been no major break through in product development and diversification, say as in the case of jute. Manufacturing of products exclusively out of coconut fibre has its own limitations on account of the peculiar properties of the coconut fibre. But, exquisite products for varying application can be made out of coir, blended with other natural fibres as well. Such product diversification through R&D efforts will add value and better marketability. Bilateral and multilateral funding support from aid agencies may look at this aspect more closely and urgently for action.
7. A CFC study held in the mid-nineties has identified rubberised coir, needle felt, geotextiles and coir peat as products with good scope for promotion. Rubberised coir has application as vehicle and furniture upholstery material, mattresses, packaging material, and even for acoustic and insulation purposes besides its use as geotextiles. The annual value of global sales of rubberised coir is estimated to be above US\$ 500 million. Coir needle felt is generally used as mattress material, plant liners and other high end garden articles. This is also being used as insulation pads, geotextiles and organic mulch. Coir geotextiles are used in different forms like woven, non-woven, stitched blankets etc. for various soil bioengineering applications. According to an estimate the world market demand for geotextiles now is about 1400 million sq.metres. The share of coir geotextiles seems to be only 0.8% of the total geotextiles market. Coir is generally being used in slope stabilisation, and river embankment protection where heavy flow of water is a major challenge. But its use in other soil bioengineering applications has not been fully harnessed and appreciated. Coir Geotextiles is in fact an engineering material rather than a consumer product so much so it requires a technology based promotion strategy. The characteristics of specific erosion problem, selection of suitable techniques and coir geotextile materials including vegetation, testing and analysing the wide

array of products and their application are all relevant for a successful technology based promotion of coir geotextiles. The growing awareness about the need for protecting soil, especially the topsoil which sustains life on earth, in the developed countries as well as in the developing countries is a welcome sign. With a new Farm Policy, pruning of agricultural subsidies, replacing it with a technical assistance programme for water and soil conservation and new norms under NPDES Phase II in the USA the demand for geotextiles is bound to go up. This opportunity has to be harnessed. The Coir Geotextile producing countries can jointly embark on generic promotion of the product in a mutually beneficial manner. The wide market for a long term biodegradable geotextiles which is legitimately that of coir geotextile should be exploited sooner than later through co-operative efforts. This would ensure bulk utilisation of raw material and generation of new employment opportunities.

8. The coir pith or coir dust, which is the spongy residual material, is a the by-product of fibre extraction which has caught the imagination of the horticulturists. It has immense potential as a soil conditioner and moisture-retaining medium for horticultural applications. It is widely being used in nurseries as a plant grow out medium especially in hydroponics. Its demand is on the increase due to the restrictions being imposed on mining of peat moss. With quality assurance, this product can find a ready market, either as such or as composted material. But the potential end users are not fully aware of its advantages, and the promotional efforts have not been adequate. There is dearth of testing facilities and recognised certification agencies in the producer countries. Other garden articles like plant liners, baskets, grow bags, shredded husks, and bit fibres are also in demand for orchid and other cut flower cultivation in the large and growing Market Garden sector.
9. Inadequate knowledge about the product, and its end uses, non-availability of local skill, lack of accessibility to technology etc. have led to the sub-optimal utilisation of abundantly available coir fibre. In the face of competition, mainly from synthetics, the natural fibres have suffered in global market. But according to an FAO report, coir has suffered somewhat less than sisal in competition from synthetics. At the same time it is also a fact that although the prices of coir and coir products have risen nominally, in real terms, it has not kept pace with inflation. Therefore there may be genuine apprehension about the outcome of expanding the production base of coir leading to unhealthy competition and collapse of prices. This can possibly be prevented through appropriate supply side management and effective cooperation among producing countries. It is time to think of setting up an institutionalised mechanism for bringing the coir producing countries of the world together under an International Agreement similar to such arrangements existing for other commodities like Coffee, Rubber, Spices

etc. It can be under the Treaty Section of the United Nations and can even be for a specific period. **An international forum of this kind can promote product development and diversification through R&D, Market Development, Quality improvement, Transfer of Technology, Human Resource Development and exchange of market intelligence. It may undertake generic promotion programmes, help prevent unhealthy competition, offer directions for production, including a supply side management and take up issues of common interest.** One such important issue is that of tariff and non-tariff barriers that the coir products are facing in international markets. The duty applicable on import of coir and coir products ranges between 4 to 35 percent. The major item of export from India viz. The Handloom Mats and Mattings attract duty upto 8.6 C/m<sup>2</sup> for import to USA. The import duty to Austria comes to 8.4%, to Portugal, Ireland, UK, and Finland @ 8%. In the case of Coir Yarn, even though import duty is removed for import to EU Countries, the countries in the East European Region and East Asian Region levy duty at a flat rate, ranging upto 20%. In the Latin American Region it is about 9 to 12%. The total export of coir cordages and ropes from India comes to a mere Rs.14.52 Million, where as it attracts duty upto 10.8% in import to EU countries. The total export of Coir Geotextiles from India comes to Rs.69.50 Million (01-02). A duty @ 5.8% is being levied on import of coir geotextiles to the EU Countries. This stands in the way of promoting the export of Coir Geotextiles. The Coir Pith is a natural substitute of natural peat and is widely used in the field of horticulture etc. The total export of pith from India during 2001-02 was Rs.10.58 million. The pith attracts a duty @ 9% on import to the countries in the LAC region and rates ranging from 5 to 25% to the countries in the South Asian and West Asian Region. In fact there should be nil duty on these products because they are eco-friendly products mostly from the developing countries. The non-tariff barriers are mostly in the form of technical barriers. The coir geotextiles do not have prescribed internationally accepted standards. Because of this problem the end-users are hesitant to accept coir geotextiles as a standard material for soil bio-engineering applications and the producers are unable to know what exactly are the specifications required by the end-users. Similar is the case with the sanitary and phytosanitary standards for coir pith. Therefore, it is essential to prescribe international quality standards for coir geotextiles and coir pith. Such issues like tariff and non-tariff barriers can be taken up more effectively by a common forum than individual countries.

10. Having recognised the need for a common forum, I suggest that the APCC take up the initiative for bringing the coir producing countries together under one umbrella for common good. Alternatively, India as the major producer of coir and coir products can take the initiative for

this move if other coir producing countries agree. Once it is agreed in principle to give shape to such a forum for strategic alliance, the details can be worked out. The APCC can offer the secretarial assistance to begin with, or until such time that the forum can stand on its own. Let the XXXIX Cocotech meeting consider this issue and offer necessary directions on the proposed mechanism for strategic alliance.