

Expert Meeting on Definitions and Dimensions of  
Environmental Goods and Services in Trade and Development

Room XX, Palais des Nations, Geneva, 9-11 July 2003

INDIA

***SEMINAR ON  
TRADE LIBERALISATION IN  
ENVIRONMENTAL GOODS AND SERVICES***

*(Organised by  
Ministry of Commerce and Industry, Govt. of India,  
UNCTAD  
and TERI)*

**Summary Report**  
*May 16, 2003, New Delhi*

**Seminar on  
Trade liberalisation in environmental goods and services**  
(Organised by Ministry of Commerce and Industry, Govt. of India, UNCTAD and  
TERI)

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**Contents**

I. BACKGROUND AND CONTEXT .....	3
II. LIBERALISATION IN EGS AND SUSTAINABLE DEVELOPMENT.....	4
III. ENVIRONMENTAL GOODS .....	5
IV. ENVIRONMENT-FRIENDLY PRODUCTS .....	6
V: LIBERALISATION IN ENVIRONMENTAL SERVICES .....	7
ANNEX: AGENDA .....	9

For more information and presentations made at the meeting see:  
<http://www.teriin.org/events/docs/envgoods.htm>

## **I. BACKGROUND AND CONTEXT**

1. Liberalisation of trade in environmental goods and services (EGS) is an important issue both from a sustainable development and a trade point of view. During the fourth WTO Ministerial Conference, held in Doha in November 2001, the WTO Members agreed to negotiate on substantial aspects of trade–environment linkages, including in the area of EGS.

2. The call for trade liberalization in EGS in the Doha Ministerial Declaration is guided by the principle that the protection of the environment and trade can and must be mutually supportive. The ongoing negotiations therefore are expected to result in:

- Support for the member countries to take measures to improve their environment while aiding their development by way of production and promotion of trade in EGS, including environment-friendly products;
- Strengthening or developing the domestic EGS industry; and
- Facilitating and adopting environmentally friendly technologies...

...all in a cost effective way.

3. Against this backdrop, the Ministry of Commerce and Industry, Government of India, The Energy and Resources Institute (TERI), and United Nations Conference on Trade and Development (UNCTAD) organized this one-day seminar aimed at addressing a series of issues related to trade liberalization in EGS. Over 70 participants from all over India, representing industry, research institutions, Government agencies, and NGOs, attended the seminar. The seminar was part of the project “Strategies and Preparedness for Trade and Globalization in India”, implemented jointly by UNCTAD and the Ministry of Commerce and Industry and funded by the UK Department for International Development.

4. In the inaugural session it was highlighted that trade liberalization in EGS will provide an opportunity for India to improve availability of such goods and services, and produce at lower costs. As a result of the growing awareness among the population and stricter regulations there has been an increase in the demand for EGS in India. Though the EGS industry is growing at a fast pace, most of the time it falls short of funds and appropriate technology.

5. India has taken autonomous initiatives with respect to liberalization in this sector. India already allows 100 per cent foreign direct investment (FDI) in this sector. In the area of environmental services, India could make offers under Mode 3 and Mode 4, but it should be borne in mind that many services, such as wastewater treatment and municipal solid waste disposal, are under government control. Thus, there is need for appropriate negotiating strategies to ensure a judicious balance between economic, social and environmental interests.

6. As far as negotiations in goods are concerned, the starting point is the identification of "environmental goods". Proposals by developed countries have so far focused to a large extent on end-of-the-pipe pollution control equipment. Since the

developing countries are net importers of these goods, it is imperative that a careful assessment is done before opening up the sector. The Indian tariffs on environmental goods range between 25 and 40 per cent, but may be reduced to 10 to 20 per cent. Whereas, the tariffs in developed countries are virtually zero. He highlighted the need for analysing non-tariff barriers in detail in this sector.

## **II. LIBERALISATION IN EGS AND SUSTAINABLE DEVELOPMENT**

7. According to private sector estimates the size of the Indian environmental market is in the order of 4.1 billion US dollars, and it is growing at a fast rate of 12 per cent per annum. Due to an increased awareness over the years the prospects for the industry seem bright, especially because the government agencies are looking to the private sector for many issues.

8. Although there is tremendous scope for growth, especially in areas like wastewater treatment and biomedical waste management sector, Indian companies are still grappling with technological issues. The advanced technologies are very important in the industrial and the municipal sectors, but high cost acts as an impediment for growth. It is here that trade liberalization can prove to be beneficial, especially if it can ensure technology transfer at favourable terms. A strengthened regulatory framework and increased technology cooperation can make the Indian environmental sector more efficient and competitive.

9. On the other hand, an overview of global EGS industry suggests that the market in most developed nations is saturated. The companies from these countries are looking towards developing countries, including India, as new markets for their products and services.

10. For a country like India, that has autonomously liberalized the sector by allowing 100 per cent FDI, these issues are all the more important. It was highlighted in this session that there is need for further studies as to whether binding commitment in the WTO would lead to an increase of FDI and welfare. It was also mentioned that tariff barriers have gone down in most of the cases, but India is concerned about the sophistication with which developed countries apply non-tariff barriers, including in the name of environment.

11. It was highlighted that liberalisation in this sector could help India in taking measures to improve the environment, as well as to enhance production, and trade of environment-friendly goods, etc. However, investments and funds are important in achieving these objectives, and perhaps more important is the inflow of technology with liberalization. Thus, negotiations on the issue of free trade should begin with a balanced definition of environmental goods. Many developing nations have different viewpoints on this.

12. For deriving export gains from trade liberalization in this sector it is imperative for India to enhance competitiveness of domestic industry. The most important aspect in this regard is diffusion of appropriate technologies, which is not that simple i.e. a technology good for one nation may not be good for the other. Negotiations can solve this issue by identifying barriers to trade and setting market opening goals. Developed nations could play a big role in technical and capacity-

building support especially in a transition economy. Building partnerships between small and medium and large firms is essential or else liberalization would wipe out the small and medium firms.

13. With regard to negotiations on environmental goods, the importance of a list versus definition was noted, i.e. whether to first generate a list and then modify it or whether to first get the definition in place and then generate a list. The implication should be carefully considered before categorically adopting one approach. On one hand, the problem of proceeding with the list is that without realizing there could be some serious infringements of established GATT principles. On the other hand the definitional approach might be very difficult to balance the interests of different nations.

### **III. ENVIRONMENTAL GOODS**

14. It was highlighted that the concept of cleaner technology is not static; it is a moving target and is relative to baseline. So despite being desirable it is not practical to include cleaner technologies in the list of environmental goods because what is cleaner today may not be so tomorrow. For most of the developing countries it is very important to maintain balance between adoption of cleaner technology and maintaining the competitiveness of the economies.

15. As far as capital equipments are concerned even with a list approach a broader agreement on major categories of equipments is important, e.g. whether to include only end-of-the-pipe pollution control equipments or to expand it to include renewable energy equipments and monitoring and analysis equipments. It is also important to have a broader understanding as to what are goods used for environmental purposes.

16. The two lists prepared by the APEC and the OECD secretariat thus far, can only be taken as indicative as they neither include all the equipment that are used in pollution control, nor the goods included are exclusively used for pollution control. It was pointed out that given the skewed structure of global environmental industry the proposals that have come so far include goods that may not necessarily benefit a country like India both from trade and well as environmental point of view.

17. From trade negotiation point of view the APEC list is more practical as it includes goods, which are distinguishable by the Harmonized System of custom codes. However, from the environmental point of view, an analysis done by TERI was cited. According to this analysis, only 16 out of the 109 items listed in the APEC classification could be predominantly used for environmental purposes. Some other equipment, mentioned in the list, is used for environmental purposes but it is, to a large extent, used for other purposes. These include filtering machinery for gases, gas analysis equipments, etc. However, equipments such as fans and blowers, vacuum pumps, etc. are generally industrial equipments that may or may not have any use in environmental protection whatsoever.

18. An analysis of the APEC list reveals that applied tariffs in India for most of the products range from 10 to 25 per cent, whereas in countries like Canada and the United States they are between 2 and 5 per cent. Therefore, there is little that Indian exporters can expect in term of duty reduction in developed markets. India's exports

in the items included in APEC list are to the tune of 610 million US dollars as against its imports of 1.34 billion US dollars. The only sub sector where Indian exports exceed imports is renewable energy.

19. The push for a reduction in tariffs on environmental goods, whichever way they may be defined, needs to be seen in the context of the negotiations in the NGMA on a reduction of tariffs. Though the Doha mandate very categorically seeks a reduction or as appropriate elimination of tariff peaks, the developed countries are stonewalling any effort to address tariff peaks in their tariff schedules. They have been arguing that tariff peaks will get automatically redressed and even eliminated as we move towards a zero tariff regime. It was mentioned that in case of environmental goods, only specific pollution control equipments should be considered for special treatment.

20. It was noted that most of the WTO members prefer the end-use criteria for selection of environmental goods, and oppose criteria related to processes and production methods. However it is important to note that most of the products suggested by developing countries are essentially the ones not being used for environmental purposes e.g. environmentally friendly products. They are being suggested on the ground that they are environmentally friendly by virtue of their nature. This goes against the argument that the list of capital equipments should be restricted only to those equipments that are specifically used for pollution control i.e. they don't have multiple uses.

21. As far as trade in cleaner technologies is concerned tariff barriers is really not an issue. However non-tariff barriers are a significant concern. Moreover the most important issue for countries like India is to have access to them at affordable prices. The main issue is easier access and affordable access to environmental technology to ensure widespread use of these in a developing country context.

#### **IV. ENVIRONMENT-FRIENDLY PRODUCTS**

22. India has a relatively successful renewable energy (RE) sector that contributes 3 per cent to the country's total electricity production. The Government of India has plans to raise this contribution to 10 per cent by the year 2012. Indian exports in this sector in 2002 were 41.4 million US dollars against imports of 33.0 million US dollars. India exports these RE products to Europe and USA. Also there is a huge potential for exports to China and ASEAN countries, which need to be explored.

23. Panellists noted that the segment of renewable energy could fit in environmental goods with the twin aims of protection of environment and promotion of sustainable development. There is a need for careful study of the export potential, and the effect of liberalization on this sector. Within the renewable energy sector India has good export potential in the area of solar energy products. Between the two sets of solar energy – solar thermal and solar photovoltaic – India has established the infrastructure for solar thermal systems. In the light of these developments, tremendous amount of engineering and manufacturing expertise has come into India.

24. The tariff barriers in developed markets are not significant but the non-tariff barriers need to be addressed. Africa, Gulf, and ASEAN countries levy significant

duties on Indian products. China has a huge market for wind turbines but because of unreasonable trade barriers there has been inability to convert this to our advantage. One of the difficulties the Indian industry faces in general is non-recognition of Indian testing of goods, which increases the export costs.

25. India has made considerable progress in developing this sector but many components are still imported from other countries. Therefore apart from dealing with trade barriers, there is a need to address the bottlenecks that are mainly related to domestic policies. Serious efforts need to be made aiming at lowering cost of capital, establishing manufacturing base and creating ancillary industries for exports in this sector.

526. In the category of environmentally friendly products a presentation was made on Indian jute industry. Jute is an environmentally friendly products as the fossil fuel content is small compared to other fibres. Jute is an economically profitable crop as it uses 10% less energy compared to others and it absorbs a larger amount of carbon dioxide from the atmosphere after subtracting all the damage. Because of the increasing awareness towards environment and jute being an environmentally friendly product, it has tremendous potential for trade.

27. India exports around 20 per cent of its jute products with 80 per cent being absorbed in the domestic market. But the Indian industry faces a lot of NTBs. For instance, the US requires some kind of visa; Egypt requires some kind of certification of Egyptian standard, Syria has imposed some 2 per cent as legislation fee, etc. There are some tariff barriers also, e.g. Argentina (31 per cent) and Egypt (28 per cent) has imposed high import barriers. But countries like the United Kingdom, Japan, and Australia have relatively low import barriers. In international trade in jute, India and Bangladesh are the two major players. Bangladesh being an LDC (least developing country) enjoys preferential access to many markets. But since the Indian jute industry is technologically stronger and growing stronger, India should lobby for abolition of all tariffs and establish a trade advantage.

28. However it was highlighted that in the environmentally friendly products, issues such as non-product related PPM (process and production methods) standards are extremely important. Efforts should be made to select such products while avoiding PPM issues. It was pointed out that India might also have advantage in traditional knowledge-based products.

## **V: LIBERALISATION IN ENVIRONMENTAL SERVICES**

29. It was mentioned that basically there are two major types of environmental services, infrastructure (which consist of water management, waste disposal and sanitation) and environment-related commercial services. Developed nations already have deep liberalization commitment on environmental services. India like many other developing countries does not have any commitments so far.

30. It differentiation between infrastructure and commercial services is important because of the need for regulation in the former prior to liberalization. The developing countries should look into the GATS agreement to take advantage of the special

flexibility and other provisions that developing nations have. Thus development can only be sustained if a proper sequence to the liberalization process is followed.

31. The issue of regulation is very crucial for a country like India. Liberalizing is not a feasible option unless there is some efficient regulatory agency in place. Liberalization brings in competition and this may force an established company to look for other markets and some companies might not like this, as then they would lose their monopoly. So this entire issue of market regulation has to be dealt with based on balanced and fair discussions.

32. About the global structure of the industry it was mentioned that the service providers from OECD countries, which dominate the environmental services sector, are large integrated firms of equipment and services. Given their technological and management expertise necessary measure should be taken to ensure healthy growth of domestic service industry that is still at the infant stage. From the trade point of view the significant barriers in service trade are basically in mode-3 and mode-4.

33. The studies undertaken so far on the environmental industry are either based on market potential approach or revenue-generated approach. However in the case of India these studies only reveal the market potential and not the expected revenue that could be generated. Data by the Central Statistical organisation (CSO) reveals that the Indian environmental industry has the potential of some 2.5 to 3 billion dollars.

34. It was also noted that it is developing nations that are experiencing double-digit growth rates whereas markets in the developed nations are saturated and growth has come down by 2%–3%. Therefore Indian companies need to look for markets in other developing nations such as Africa, South East Asia, and so on. Growth prospects also exist in commercial support services such as environmental consulting, auditing, analysis, and training. Since environmental services are related to a whole gamut of other services, market access barriers to those sectors will obviously reflect on this. There are significant barriers in terms of movement of employment of nationals.

35. India needs foreign capital to increase availability of manpower and technology services to improve cost competitiveness. But allowing foreign companies in the industrial sector (the non-goods sector) might have an adverse effect on the Indian industry. India has tremendous potential in environmental consultancy but there are no specific studies conducted for market barriers etc., therefore further research in these areas is required.

## **FOLLOW UP**

36. The workshop provided for an exchange of views among Government officials, representatives of the EGS, including producers of environment-friendly products, academic institutions and NGOs. Under the project, the organizing institutions will promote networking and further consultations among interested stakeholders.

## ANNEX: AGENDA

<b>16-May-03</b>	
08:30 - 09:30	Registration
09:30 - 10:00	<p><b>Inauguration</b></p> <p>Welcome address  <b>Dr R K Pachauri</b>  Director-General, TERI</p> <p>Book Release,  "Trade and environment: Issues and options for India"</p> <p>Remarks  <b>Dr Veena Jha</b>  UNCTAD, New Delhi</p> <p>Remarks  <b>Mr S N Menon</b>  Additional Secretary, Ministry of Commerce and Industry</p> <p>Inaugural Speech  <b>Mr R P Rudy</b>  Minister of State, Commerce &amp; Industry</p>
10:00 - 11:30	<p><b>Session I: Trade liberalisation in EGS sector and sustainable development</b></p> <p>How will liberalisation in sector ensure mutual supportiveness between sustainable development and environmental protection?</p> <p>Whether and how the developing countries can derive long-term exports gains from trade liberalisation?</p> <p>A holistic approach to EGS would require funding, technology coupled with liberalization in environmental goods and services. How to achieve this in the context of compartmentalized negotiations in WTO?</p> <p>How can development of domestic industry in this sector, in developing countries be ensured?</p> <p>What should be the overall approach for negotiations, agreement on definition, list or broader categories of goods?</p> <p>Chair  <b>Dr Pradipto Ghosh</b>  Additional Secretary, Prime Minister's Office  <a href="#">Mr Rene Vossenaar</a>  UNCTAD, Geneva  <a href="#">Mr R Gopalan</a>  Joint Secretary, Ministry of Commerce and Industry  <a href="#">Mr K Balakrishnan</a>  Regional Director, US-AEP, New Delhi  <a href="#">Dr P Khanna</a>  Director, Indian Institute of Environment Management, Mumbai</p>
11:30 - 11:45	Tea

11:45 - 13:00	<p><b>Session II: Trade liberalization in environmental goods: end of the pipe equipments and cleaner technologies</b></p> <p>What type of goods could be considered as environmental goods?</p> <p>How to address the issues of multiple uses and tariff classification in environmental goods?</p> <p>Whether it is practical to make cleaner technologies, which is a relative concept, part of such liberalisation?</p> <p>How to ensure that the developing countries will also get share of trade gains?</p> <p>To what extent APEC and OECD lists, cover products of export interest to developing countries and to what extent the products mentioned there in are used for environmental purposes? Could they be a basis for negotiations?</p> <p>Chair  Mr S N Menon  ICRIER  <a href="#">Mr Sandeep Singh</a>  TERI  Mr S Nigam  Economic Advisor, DIPP, Govt. of India  Dr Veena Jha/ Mr Rene Vossenaar  UNCTAD, New Delhi</p>
13:00 - 14:00	Lunch
14:00 - 15:30	<p><b>Session III: Trade liberalization in environmental goods: environmentally friendly products and renewable energy equipment</b></p> <p>Whether renewable energy goods as a category should be included in environmental goods or not? Is there a potential export interest for India?</p> <p>Which are the other goods of export interest to developing countries?</p> <p>Which environmentally friendly goods can be included in the list of environmental goods? How to address the issue of like products and non-product related PPMs?</p> <p>Are tariffs or non-tariff barrier the main obstacles to export of environment friendly products? What are the NTBs for environmental friendly products?</p> <p>Chair  Mr Prabir Sengupta  Director-General, IIFT  <a href="#">Mr P Jayakumar</a>  Tata B. P. Solar, New Delhi  <a href="#">Mr Chintan Shah</a>  Suzlon Ltd, Pune  <a href="#">Mr P K Benerjee</a>  Indian Jute Manufactureres Assciation, Calcutta</p>

15.30 - 15.45	Tea
15:45 - 17:00	<p><b>Session IV: Liberalisation in environmental services</b></p> <p>How liberalisation in goods can and/or should supplement liberalisation in services?</p> <p>Which sectors are important for developing countries and what are the issues in expansion of current classification of services in the WTO.</p> <p>What kind of barriers are services providers (In particular from developing countries) are facing in other markets?</p> <p>Issues in liberalization of basic services.</p> <p>Implications of foreign service suppliers in environment services.</p> <p>Issues of qualifications and mode 4 in engineering and consultancy services for environmental sector. Potential for exports under mode 4 for developing countries.</p> <p>Chair        Ambassador C. Dasgupta        Distinguished Fellow, TERI  <a href="#">Mr Luis Abugattas</a>        UNCTAD, Geneva  <a href="#">Ms Aparna Sawhney</a>        Indian Institute of Management, Bangalore  <a href="#">Mr A K Chaturvedi</a>        EQMS Ltd, New Delhi</p>