WORKING PAPER NO. 78

MAINSTREAMING ENVIRONMENT THROUGH JURISPRUDENCE

Implications of the Shrimp-Turtle Decision in the WTO for India and other Developing Countries

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APRIL, 2002

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April 2002

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FOREWORD

The issue of linkage between trade and environment has assumed great significance in recent years. In the WTO context, the use of trade instruments for environmental purposes has resulted in a number of disputes amongst the Member-countries. This study by Jayati Srivastava and Rajeev Ahuja has analysed the economic and systemic implications of the shrimp-turtle dispute in the WTO for India and other developing countries.

The study analyses the economic impact of the US embargo on shrimp exports from India and finds this to be negligible. It argues that since the cost of using the turtle excluder devices (TED) is not significant, it will not have any direct impact on the prospects of developing countries for expanding their exports of shrimps. However, the study has found that the final ruling in the shrimp-turtle dispute case has significant systemic implications for the WTO. It has ratified the rights of Member-countries to take unilateral measures for the protection of environment in respect of global commons and transboundary concerns. The ruling has also legitimised process related environmental requirements in the exporting countries.

The study argues that the dispute settlement process thorough its interpretations of the relevant GATT/ WTO clauses is setting a precedent for an inclusive role of the WTO in the field of environmental protection. This is detrimental to the interests of developing countries who lack resources and expertise to pursue their case effectively within the dispute settlement body. There is an urgent need to limit the proactive role of the dispute settlement body while pursuing multilateral negotiations and building consensus on the issue of trade and environment.

I hope that the analysis presented in this study will contribute to strengthening the standpoint of developing countries including India in future WTO negotiations.

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April 2002

EXECUTIVE SUMMARY

The study has analysed the economic and systemic implications of the shrimp-turtle dispute in the WTO for India and other developing countries. The case dates back to 1996, when the US, in a renewed initiative to protect sea turtles, which comes under the US Endangered Species Act, imposed a unilateral embargo on the import of shrimp from countries that did not certify to the use turtle excluder devices (TED) in their shrimp trawling vessels. India, Malaysia, Thailand and Pakistan challenged the US action on ground of being arbitrary and discriminatory.

The study has concluded that the economic impact of the US embargo on shrimp exports from India has been negligible. Moreover, the decision of the Appellate Body will not have any direct impact on the prospects of developing countries for expanding their exports of shrimps, as the additional cost of using the TED is not significant.

However, the study has found that the decision of the Appellate Body has significant systemic implications for the WTO. The decision has ratified the rights of the member countries to take unilateral measures such as market access requirement in order to protect environment as far as global commons and transboundary environmental problems are concerned, provided they are applied in a non-discriminatory manner.

The Appellate Body ruling has also legitimised process-related environmental requirements in the exporting countries even though the final product does not lead to any environmental fallout in the importing country. The Appellate Body has therefore widened the scope of Article XX (g) and to a certain extent mainstreamed environmental considerations into trade actions, even if environment of the importing country is not affected.

The study argues that the dispute settlement process, through its interpretation of relevant GATT/ WTO articles is setting a precedent for an inclusive role of the WTO in the field of environmental protection and sustainable development. In other words, through jurisprudence, environmental requirements are increasingly being incorporated in

the world trade regime and this is detrimental to the interests of developing countries who lack resources and expertise to pursue their case effectively within the dispute settlement body of the WTO. There is thus an urgent need to limit the pro-active role of the dispute settlement body in the interpretation of the relevant environmental clause of GATT/WTO, while pursuing multilateral negotiations and building consensus on the issue of trade and environment.

Mainstreaming Environment through Jurisprudence

Implications of the Shrimp-Turtle Decision in the WTO for India and other Developing Countries

Jayati Srivastava and Rajeev Ahuja*

The linkage between trade and environment has assumed a renewed importance in recent years. Particularly in the WTO context, the fundamental issue is the relationship between trade measures for environmental objectives and the free trade objective promoted by the WTO regime. Within the existing WTO rules, a number of states have invoked trade measures for environmental purposes but such actions have been challenged at the disputes settlement body of the world trade regime on a number of occasions which is playing a major role in the evolving environmental mandate of WTO.

Such environmental related trade disputes primarily relate to the interpretation of the General Exception Clause of GATT 1994 which enables member countries to depart from their obligations under the Agreement on environmental grounds. Specifically, it allows trade restrictions in case of measures necessary to protect human, animal or plant life or health and relating to conservation of exhaustible natural resources [GATT Article XX (b) and (g)], provided such measures do not cause unjustifiable discrimination and disguised restriction on international trade.

In this context, one of the most significant cases has been the shrimp-turtle dispute, officially known as *United States – Imports Prohibition of Certain Shrimp and Shrimp Products*. The study deals with analysing the implications of this case for India and other developing countries. It examines the implication of the case at two levels: (a) economic implications (the effect of US embargo on shrimp exports from India, the cost of using TED in harvesting shrimp, enforcement and compliance costs for India and other developing countries; and (b) systemic implications of the interpretation of the relevant

* We express our gratitude to Professor Anwarul Hoda for his critical and analytical comments on the study. We are grateful to Jose Cyriac, Chairman, MPEDA, Vijaykumar C. Yaragal, Trade Promotion Officer, MPEDA and Umadevi, Assistant Director (A&I), MPEDA in providing useful information. We are also

WTO articles by the dispute settlement mechanism in this case in the context of mainstreaming environment into the WTO.

The study is divided into five sections. Section I examines the existing WTO provisions on environment and summarises the debate relating to mainstreaming of environment into the WTO, particularly on trade related measures taken pursuant to multi-lateral environmental agreements (MEAs). Section II gives a background to the shrimp-turtle dispute including the importance of the turtles and the debate on Section 609 in the US Congress. Section III looks into the impact of trade sanctions on India to ascertain the effectiveness of trade measure as an instrument of environmental policy by looking at the pattern of shrimp exports from India to the US after the imposition of embargo. It also discusses the cost of using TED and its impact on the Indian shrimp industry. Section IV discusses the systemic implications of the decisions of the Dispute Settlement Panel, Appellate Body, and ruling on Malaysian appeal regarding the implementation issue and section V sums up the conclusions of the study, emanating from the case study.

I ENVIRONMENT IN THE WTO

Before discussing the shrimp-turtle case, it is important to delineate the existing WTO provisions on environment. The Marrakesh Agreement that established the WTO system has taken cognisance of sustainable development in its preambular paragraph, which stipulates that the multilateral trading system must recognise that "relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development." The

thankful to Anand Jain and Nitesh Sahay for providing competent research assistance.

Marrakesh Agreement also stipulated the establishment of the Committee on Trade and Environment (CTE) under the WTO.[1] Article XX of GATT 1994, which is one of the agreements in the WTO framework, enables WTO members to take measures "necessary to protect human, animal or plant life or health [Article XX (b)]; and measures "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption" [Article XX (g)]. The only condition prescribed is that such measures should not lead to arbitrary or unjustifiable discrimination between countries where similar conditions prevail and should not cause disguised restriction on international trade. Some other agreements in the WTO framework also contain provisions on environment are discussed below.[2]

The Agreement on Technical Barriers to Trade (TBT Agreement)

The TBT Agreement gives each country the right to set product and industrial regulation requirements (technical regulations)[3] on the exporting countries, for the protection of public health or safety, animal or plant life, health or environment, national security requirements, and for the prevention of deceptive practices. These technical standards are subject to the requirements of the MFN and national treatments and should be non-discriminatory, non-arbitrary and least trade-restrictive. In cases, where international standards exist, members shall use them as a basis of their technical regulation unless such international standards are ineffective to fulfil the legitimate objective, due to some reasons such as climatic or geographical factors or technological problems.

The Agreement on Sanitary and Phytosanitary Measures (SPS Agreement)

Subject to such requirements as risk assessment, non-discrimination and transparency, the SPS Agreement permits governments to set and maintain desirable levels of health and hygiene standards to ensure that food is free from risks arising out of additives, contaminants, toxins or disease-causing organisms in order to prevent the spread of plant, animal or other disease-causing organisms and to prevent or control

pests. The agreement encourages members to adapt their SPS measures to the areas that supply their imports. Like the TBT Agreement, governments are expected to harmonise their SPS requirements, i.e. to base them on international standards set by international organisations, such as FAO/WHO Codex Alimentarius Commission, the International Office of Epizootics and the International Plant Protection Convention. Governments are also permitted to set more stringent national standards in case the relevant international norms do not suit their needs. Such SPS measures must be based on a scientific justification or on an assessment of the risks to human, animal or plant life or health. The Agreement in the absence of scientific evidence recognises the right of governments to take precautionary provisional measures while seeking information.

As far as international standards (which found mention in both TBT and SPS Agreement) are concerned, developing countries argue that environmental standards differ from country to country and hence the solution lies in mutual recognition of only product-related standards rather than harmonisation of environmental standards. Although, the Agreements do not compulsorily mandate the use of international standards, in practice these standards are becoming a *de facto* requirement in international trade.

The Agreement on Agriculture

The Agreement on Agriculture contains provisions for a long-term reform in trade in agricultural products including reduction of production-linked domestic subsidies. It contains various provisions on the protection of the environment. The sixth preambular paragraph of the agreement states that the commitments made under the reform programme should give due regard to environment. In addition, Article 20 stipulates that non-trade concerns including environment should be taken into account during the negotiations on the continuation of the reform programme. Environmental concerns are particularly mentioned in Annexure 2 that enumerates subsidies, which are not subject to reduction commitments. The environment programmes and/or measures that are exempt

from cuts in subsidies include direct payments to producers and government service programmes for research and infrastructural works under environmental programmes.

As a safeguard to abuse, the direct payments in the form of subsidies must be based on clearly-defined government environmental or conservation programmes and the amount of payments should be limited to the extra costs or loss of income involved in complying with the programme. The members can amend Annexure 2 measures provided they cause minimal trade distortion and are taken under publicly funded government programmes.

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement)

The TRIPS Agreement provides rules for the protection and enforcement of intellectual property rights. Under this Agreement [Article 27(2&3)], governments can refuse to issue patents that threaten human, animal or plant life or health, or risk serious damage to the environment and for ethical or other reasons, they can also exclude plants or animals from patentability.

The General Agreement on Trade in Services (GATS)

GATS Article 14 contains general exceptions provisions similar to the ones that are given under GATT Article XX. The chapeau of that provision is basically identical to that of GATT Article XX and environmental concerns are addressed in paragraph (b) which is similar to paragraph (b) of Article XX. Under this, policies affecting trade in services for protecting human, animal or plant life or health are exempt from normal GATS discipline.

The existing WTO provisions and Agreements allow countries sufficient flexibility to raise their domestic environmental standards, and impose certain trade restrictions, in cases where its own environment is adversely affected provided it does not lead to discrimination and trade barriers. It does not cover the process-related

requirements in the exporting countries unless it contains any environmentally harmful effect within the product itself that is harmful to the importing country. This aspect has sought to be included by most developed countries (along with the environmental lobby), particularly the EU through eco-labelling, etc, but at the moment it is not part of the existing WTO provisions. Some process-related trade requirements and the use of unilateral trade measures in cases of global commons/global shared resources are however getting legitimised through the dispute settlement body of the WTO and has transformed the debate on mainstreaming environment into the WTO. This has been discussed later, specially in the context of the shrimp-turtle dispute in the WTO.

Principal Concerns and Debate Regarding Mainstreaming Environment into the WTO

The debate on the linkage between trade and environment in the WTO context[4] or mainstreaming environment into the WTO is multi-faceted and is currently dominated by some major issues, such as market access, competitiveness, legitimacy of unilateral action for achieving environmental objectives and finally, the compatibility of trade provisions in the multilateral environmental agreements (MEAs) with the WTO provisions on free trade rules.[5]

Market Access, Competitiveness and Unilateralism

The developing countries' main concern is that of market access. Unilateral trade measures for environmental purposes are regarded by them as another form of conditionality and as a means to raise protective barriers and restrict their market access. According to them, unilateral action for achieving environmental objectives contains an inherent danger of protectionism as environment can be a convenient alibi in the hands of domestic industry (faced with higher costs on account of environmental concerns) to impose import restrictions. They fear that legitimising unilateral action for environmental purposes in international trade will be detrimental to the market access and may also act as non-tariff barrier.[6]

The developing countries also fear that environmental pretexts may be used to impose certain environmental standards and force them to raise their domestic environmental standards, which may not be possible for them due to various socio-economic reasons and in effect amount to exporting/imposing environmental values.

The developed countries, on the other hand, feel that the countries with lower environmental standards have a competitive advantage since due to lax environment standards, production costs are lower in those countries and hence, exports are subsidised at the cost of environment. It is claimed that competitive concerns (such as high pollution abatement costs, etc.) may also act as a deterrent for pursuing environmental objectives. Besides, due to absence or low environmental costs in developing countries, polluting industries may actually migrate to developing countries.[7]

As far as specific member countries are concerned, the opinion on mainstreaming environment into the WTO is a divided one. India and many other developing counties do not want any change or expansion in the WTO mandate on environment. Speaking at the Doha Ministerial in November 2001, the Commerce Minister of India stated "on environment we are strongly opposed to the use of environmental measures for protectionist purposes and to imposition of unilateral trade restrictive measures. We are convinced that the existing WTO rules are adequate to deal with all legitimate environmental concerns. We should firmly resist negotiations in this area which are not desirable, now or later. We consider them as Trojan horses of protectionism."[8]

Echoing a similar viewpoint Brazil noted that "legitimate concerns, as are also those related to measures to protect health, the environment or national security, cannot be allowed to serve as pretexts for the imposition of disguised, discriminatory or arbitrary restrictions on trade.[9] Similarly, South Africa while agreeing that "there are linkages between trade, development and environment" feels that "the linkages are complex, the implications of negotiating rules in this area are not fully understood and, in many ways, the issues that arise go beyond the WTO's competence. Hence, we require time for deeper reflection and dialogue on these issues and their implication for the trading system. . . An unwise insertion of these matters into the work programme will be counterproductive."[10]

Hong Kong (China), likewise, while supporting the vital objectives of sustainable development, point out that progress towards meeting this objective must not be undermined by covert protectionism.[11]

Similar to the developing countries' contention, the US believes that no changes are required in the existing WTO provisions as current WTO rules permits Member countries to establish and pursue environmental protection and gives countries right to establish the levels of environmental protection that they deem appropriate. On the eve of Seattle Ministerial, the US declared "we must continue to recognise the right of Members to take science-based measures to achieve those levels of health, safety and environmental protection that they deem appropriate — even when such levels of protection are higher than those provided by international standards."[12] Unlike the developing countries, however, the US propagates legitimacy of unilateral action for environmental purposes. After the latest favourable ruling in its favour in the shrimp-turtle case, the US Trade Representative Robert B. Zoellick declared that the decision shows that "the WTO as an institution recognises the legitimate environmental concerns of its Members."[13] Given the fact that the US has been able to take unilateral action within the existing rules, it does not see any need for change, unlike developing countries who perceive any change as detrimental to their interest.

The EU on the other hand has the most ambitious policy on mainstreaming environment into the WTO. Its key agenda includes: clarifying the relationship between WTO trade rules and trade measures in the environmental agreements to give due recognition to trade-related environment measures agreed multilaterally and outlining a clear definition of MEAs. It also calls for greater clarity regarding the legal uses of precaution clause provided for in the SPS Agreement and to reinforce and enhance the legitimacy of the "eco-labelling growth industry."[14]

According to France, an important EU member, "the WTO must also be an instrument at the service of sustainable development."[15] Similarly, Germany called for a broad agenda to include new issues such as trade and environment in order to "strengthen the WTO and to adapt the world trading system to new challenges."[16] Canada too

concurs with the broad objectives of the EU policies and supports strengthening of the WTO provisions on eco-labelling, certification and standards issues to take into account the increasing use of voluntary international standards based on life cycle considerations.[17]

WTO-MEA Relationship

One of the important issues in the debate on mainstreaming environment into the WTO is the relationship between trade measures in the multilateral environment agreements (MEAs) and the WTO rules.

The debate is over the right of the WTO Member and right of the Member of an MEA in question. There is no contradiction in cases where a country that has signed an MEA with trade provisions is also a WTO Member. Problems may occur where environmental agreements provide for trade sanctions against the non-parties. The questions raised in this context are: does such trade prohibition amount to violation of WTO free trade rules? Can such a country take a member country of an MEA to the dispute settlement mechanism of the WTO on grounds of violating its rights under the WTO regime? For example, Montreal Protocol prohibits trade in controlled substances with non-parties and hence, can theoretically be challenged on the grounds of being discriminatory by a WTO Member country which is not a party to the Protocol. Although, none of these MEAs have been challenged in the WTO, there has been a concern on the potential of conflict with the WTO principles.[18]

As far as relationship between MEAs with trade provisions and WTO rules are concerned, proposals put forth by Member countries can be classified into four broad approaches. These range from maintaining the *status quo* to clarification of the WTO rules on MEAs to case by case waiver and amending Article XX:

(a) Clarification of WTO Rules

The argument that there is a need to clarify the WTO-MEA relationship is supported by Switzerland, Norway, Canada, Iceland, Japan and Korea. In order to clarify and confirm that the general principles of no hierarchy, mutual supportiveness and deference govern the relationship between the trade and the environmental regimes, Switzerland calls for an "interpretative decision to prevent unnecessary conflict between the WTO trade-related measures in MEAs." Also, for the sake of predictability and legal certainty, it advocates an introduction of a "coherence clause" or Understanding which could be adopted at the WTO Ministerial. It is opposed to any such interpretation through jurisprudence and underlines the role of Member countries. It is also opposed to amending Article XX since it will re-open the debate and undermine the balance arrived at after a lengthy negotiation among contracting parties.[19]

Canada also supports clarification of the provisions between WTO rules and trade measures pursuant to MEAs based on "principles and criteria" approach consisting of a number of criteria that MEA negotiators may use for determining the need for trade measures, and qualifying principles that the WTO must consider while reviewing relationship between trade measures under the MEA and WTO rules. This approach "would clarify existing WTO rules, possibly incorporated in some form of interpretative or ministerial statement, would assist both WTO panels in assessing the legitimacy of MEA trade measures and international MEA negotiators in contemplating the appropriate use of trade measures in particular MEAs." This should also be complemented with an effective dispute settlement and compliance procedures within the MEAs.[20]

(b) Amendment of WTO Rules

According to the EU, MEAs are the most effective way of tackling international environmental problems but holds that the current legal ambiguity regarding the possibility of challenge by the non-party (due to GATT/WTO incompatibility) is a major impediment in negotiating and forging new MEAs and also in undermining the effectiveness of existing MEAs with trade provisions. Going beyond and underlining the

need for clarification, the EU proposes amendment in the relevant WTO clauses to legitimately incorporate trade provisions under the MEAs.

This would ensure that the WTO would accommodate trade-related environmental measures and avoid the possibility of any dispute and provide greater predictability and certainty in the MEAs' negotiations. Specifically, it proposes to legitimise trade provisions in the MEAs by adding an amendment to Article XX. This could include either amending Article XX to include an understanding, allowing for trade restriction on environmental grounds under clearly defined MEAs,[21] or amending Article XX (b) to incorporate (in addition to measures necessary to protect the environment) a clause on trade measures taken pursuant to MEAs. Such an accommodation system would only apply to measures specifically mandated under MEAs.

In order to accommodate trade provisions under the MEAs and safeguard it against challenges by the non-parties, EU has suggested a possible solution in reversing the burden of proof under Article XX. The reversal of the burden of proof[22] would mean that the country challenging the measure would have to prove that measures imposed by the other party do not meet the conditions of Article XX.[23]

The EU also seeks **"**confirmation that WTO rules and MEAs are separate but equal bodies of international law and that MEAs are not subordinate to WTO rules and vice versa. Such a confirmation in the WTO is an essential step in developing a mutually supportive relationship between MEAs and the WTO."

(c) Maintaining the Status Quo

Many developing countries including India, Hong Kong (China), Brazil, Pakistan, Venezuela, Egypt, Costa Rica and Malaysia along with the US , Australia and New Zealand maintain that there is enough flexibility in the WTO to accommodate a mutually supportive MEA-WTO interface and hence, the rules need not be adjusted to further accommodate environmental concerns including those related to MEAs. According to developing countries, there are only a minority of MEAs with trade provisions and the

remote possibility of their dispute with the WTO rules should not warrant any fundamental change in the trading regime. They feel that the focus should not be on the hypothetical and non-issue of MEA but concrete issues[24], such as market access and trade in domestically prohibited goods. India argues that only multilateral agreements negotiation under the auspices of UN or its agencies should be considered as legitimate MEAs. According to Hong Kong (China), WTO and MEAs are separate sets of legal agreements and despite the overlap in membership between the two, are not identical in their goals and objectives. Hence, MEAs should not be used as a back door to circumvent the WTO rules.[25]

While maintaining the flexibility of the WTO rules to accommodate trade related environmental measures under the MEAs, New Zealand has proposed a voluntary consultative mechanism between party and non-party in order to ascertain the most effective instrument of environmental policy, prior to the use of trade measure. This is because the trade instrument may not always be the most effective way to achieve the environmental objective. "Over the longer term, it is proposed that MEA negotiators who represent countries which are Members of the WTO should consider including a voluntary consultative mechanism guided by first-best principles in new MEAs."[26] The proposal also envisages a clear drafting of the future trade provisions under the MEAs with trade provisions and an effective dispute settlement mechanism, along with setting up an informal mechanism of communication on this issue with WTO, UNEP, MEA secretariats, Member countries, NGOs and industry.

In their demand for maintaining the *status quo*, they have found an unlikely partner in the US which feels that WTO rules provide for sufficient framework to facilitate mutual supportiveness with MEAs and do not need any clarification or modification. According to the US, through evolving jurisprudence, trade measures for environmental purposes including those within the MEAs have broadly been accommodated within the WTO. It recognises the use of trade measures as an efficient instrument of environmental policy making but argues that that non-parties to MEAs should not be discriminated against if they take adequate complementary measures. Contrary to the developing countries' approach thus, the US has been supporting the

status quo since it wishes to pursue its unilateral agenda vis-à-vis MEAs. For example, it has been the strongest opponent of the Kyoto Protocol under the Climate Change Convention and by not ratifying the protocol has undermined the regime to a great extent. Any move to legitimise application of trade sanctions under such multilateral negotiated instruments dealing with global environmental concerns, to other countries (or non-parties) is therefore opposed by the US.

(d) Case by Case Waiver

Countries from the ASEAN propose a case by case waiver approach for reconciling trade measures under MEAs with the WTO rules. This approach maintains that trade measures in MEAs, subject to a commitment by the WTO Members not to resort to non-specific and unilateral or extra-jurisdictional trend can be granted a case-by-case yearly waiver under 'exceptional circumstances' provided for under Article IX.[27] They should however meet certain criteria including necessity, least trade restrictiveness, effectiveness, proportionality and degree of scientific evidence. This according to ASEAN would ensure that discriminatory trade measures against non-parties are not coercively used unless absolutely essential. Other benefits are that "it allowed for periodic review and preserved the WTO's role as a trade body. The majority decision required for an MEA to be granted a waiver would reflect agreement that the environmental issue in question was of multilateral concern, without there being a need for the WTO to arrive at a definition of an MEA."[28]

The debate on reconciling the trade provisions under MEAs with the multilateral trade regimes has cut across the developed and developing countries' divide and has placed US along with many developing countries, and the EU in the opposite camp as far as reforming the WTO rules are concerned.

As can be seen from the above, the approach of countries varies across a broad array of alternatives and in the absence of adequate and meaningful discussion among Member countries consensus on this issue looks elusive. The vacuum created due to lack of adequate discussion among member government has led the dispute settlement body of

the WTO to step-in and interpret the relevant provisions on the use of trade measures for environmental purposes.

A number of disputes over trade and environment interlinkages, particularly relating to Article XX have been raised under GATT 1947 and the WTO Agreement of which GATT 1994 is an integral part.[29] While decisions in the earlier cases took a restrictive view of the measures that could be taken under the exception clauses for environmental purposes, the ruling in the shrimp-turtle case has far-reaching implications as it virtually mainstreams environment in the world trade regime (see section IV).

II BACKGROUND OF THE SHRIMP-TURTLE DISPUTE

The shrimp-turtle dispute between the US on the one hand and India, Malaysia, Pakistan and Thailand on the other, dates back to 1 May 1996 when the US imposed a ban on the import of shrimp and shrimp products from countries which did not certify that the shrimp were caught by using turtle-excluder device (TED) in the trawling vessels and where the use of TED was comparable in effectiveness to those required in the US programmes.[30] According to the US, the measure was aimed at protecting the endangered species of sea turtles.

Description of Sea Turtles

Seven species of sea turtles are known to mankind. These are: the Green Turtle, the Loggerhead, the Hawksbill, the Flat Back, the Olive Ridley, the Kemp's Ridley, and the Leatherback.

Sea turtles migrate over long distances between their foraging (to meet their feeding needs) and nesting grounds (to meet their breeding needs). Sea turtles are found in the waters of tropics and sub-tropics. Leatherback is the only species of turtles that moves across both temperate and tropical waters. Adult females come to shores to lay eggs on the beach in nests that the females specifically dig for the purpose. The eggs take about 50–60 days to incubate, after which hatchlings dig their way out and head for the

sea where they mature and reach adulthood. It is believed that one in a thousand hatchlings survive to maturity and reach its reproductive age, which ranges between 10–50 years, depending on the species.

All species have been adversely affected by human activities, both directly and indirectly: directly by exploiting of the species for their meat, shells and eggs and indirectly through incidental captures of fisheries, destruction of their habitats and pollution of the waters. It is believed that unintentional capture of turtles in shrimp trawls is the most important factor leading to the possibility of extinction of the sea turtles. In the process of capturing shrimps, shrimp trawls also capture many large fishes and turtles as a by-catch. The turtles are released from the net when the catch is brought on board. However, many of the turtles get drowned before they are released. This is because sea turtles breathe air just as land animals do and must come to the surface every hour or so. But when turtles remain trapped in a net that is towed under water for hours, it leads to the drowning of turtles. Some of them get entangled in the net and get injured, and die after being released in the waters.

US Laws on the Protection of Sea Turtles

Five species of the sea turtle comes under the US Endangered Species Act (ESA) of 1973.[31] Of these five species, one (Loggerhead) is listed as threatened, meaning it is likely to become endangered in the foreseeable future, and four species (the Green Turtle, the Leatherback, the Hawksbill, and the Kemp's Ridley) are listed as endangered, meaning these are judged to be in imminent danger of extinction.[32] Among these, Kemp's Ridley is the most threatened with fewer than 1500 nesting turtles remaining in the wild. The Act prohibits taking (harassment, hunting, capture, killing or attempting to do any harm) of endangered sea turtles within the US territorial waters and high seas. Research carried out by the US on sea turtles found that incidental capture and drawing of sea turtles by shrimp trawlers was the main reason for the mortality of sea turtles and subsequently, the US National Marine Fisheries Service (NMFS) developed turtle

excluder device (TED), the use of which it was claimed, reduces turtle mortality during shrimp trawling by up to 97 per cent.

What is TED and how does it work? TED is a cage-like (panels of large mesh webbing or metal grids) structure that fits in the neck of a funnel-shaped trawl net. As the nets are dragged along the bottom, shrimp and other small animals pass through the TED and into the cod end of the net, narrow bag at the end of the funnel where the catch is collected. Sea turtles, sharks and fish too large to get through the panel are deflected out of an escape hatch. Use of TED is a necessary measure but not sufficient in itself for the conservation of the species. It must be accompanied by other complementary measures that will be discussed.

In 1981, NMFS encouraged voluntary use of TED and later in 1983 distributed TED free of cost. Despite these measures, since the shrimpers feared loss in the volume of the catch,[33] the use of TED was not common until they were made mandatory. In 1987, pursuant to the EPA, the US regulations required all shrimp trawlers in the US to use TED. Certain flexibility was given in some areas, such as following a tow time or those harvested with aquaculture methods as an alternative to the use of TED. The mandatory use of TED initially applied only to the US shrimpers. For violation of Federal requirements concerning the use of TED, criminal penalties such as fine and prison terns was introduced by the enforcement agencies.

Faced with penalties and jail terms for non-compliance, the demand for a flexible and or wider application of TED grew within the US shrimp industry. Since exporting nations' shrimpers were not required to use TED, the competitive concerns of the US shrimp industry fuelled the demand for parity. The US shrimpers argued that foreign shrimpers were affecting the price of the American producers since without the mandatory requirement to use TED, they were getting the larger catch and did not need to buy and incur extra cost on account of TED usage. The US shrimpers' margin of profit compared to the foreign shrimpers was also adversely affected, it was claimed due to the extra fuel cost caused by the drag in the net as a result of attaching TED on their trawlers.

The Debate within the US Congress leading to Section 609

Within the US, the use of TED was debated and the demands for flexibility and delaying the use of TED as well as for creating a level playing field were made within the US Congress. A number of bills were introduced by the US Congressmen primarily from the shrimping states.[34] The main arguments advanced in these bills were: to delay the use of TED within the US; to make TED mandatory for foreign shrimpers and alternatively, compensate the domestic shrimpers. The rights of the shrimpers and the objective of protecting the sea turtles have also come out well in this debate. A combination of competitive and parity concerns for the domestic shrimpers and environmental concern for the protection of sea turtles finally led to the enactment of the Section 609 by the US Congress.

In 1989, Congressman William J. Tauzin from Louisiana (one of the major shrimping states) speaking in the House of Representatives noted that "not only do the TEDs not work as the National Marine Fisheries Service claimed, but there is rapidly mounting evidence that continuation of their use will make the domestic shrimping industry an endangered or extinct species in our economic landscape. All the while, the United States is importing shrimp from nations that turn a blind eye to the destruction of turtle nesting areas and which do not require their shrimpers to use turtle excluder devices. . ."[35]

Similarly, while introducing the Turtle Protection Parity Act in 1989, Congressman Smith from Mississippi commented, "Our shrimpers face the added burden of a Federal regulation requiring them to use TEDs . . . which, if applied only to Americans, ignores the identical threat to sea turtles posed by foreign shrimpers. . . . Moreover, because TEDs reduce the catch of shrimp, resulting in additional work and expense to catch the same amount of shrimp caught previously, American shrimpers incur significant costs that are not imposed on their foreign competitors. In order to protect sea turtles and level the playing field between domestic and foreign shrimpers . . . this bill would have the twofold effect of protecting sea turtles from foreign shrimpers while preventing unfair competition to American shrimpers. Only shrimpers from

countries that also require the use of turtle exclusion devices would be allowed to enter the U.S. market. . . *It is important to American business competition, and it is important to our environment*. (emphasis added)."[36]

Likewise, Congressman Hayes of Louisiana while introducing a bill to amend the Endangered Species Act to ban the importation of shrimp into the United States from nations whose fishing practices, or other activities, adversely affect sea turtles and their ability to reproduce remarked. "Under the present system of sea turtle protection and enforcement, our domestic shrimping fleet is placed at a severe economic disadvantage. . . . That is an unfair and, worst yet, hypocritical way to treat both the turtles and shrimpers of the gulf coast."[37]

Later under the State, Justice, Commerce Appropriations Bill 1990, Section 609 sought to prohibit the importation of foreign shrimp from those countries which did not adhere to the same standards to protect the turtles as do the US shrimp producers. The aim of the bill according to its sponsors was twofold: an effective protection first for sea turtles, and alternatively help for the price of shrimp for our shrimpers in Louisiana. This corroborates the argument put forth earlier that parity and competitive concerns of the domestic shrimp industry as well as the protection of sea turtle, that is, environmental concerns were at work. It was not either/or but both.

It is significant to note that Section 609 was sponsored by Congressmen from the Gulf States, led by Senator John Breaux from Louisiana. He remarked, "*It is patently unfair on its face to say to the U.S. industry that you must abide by these sets of rules and regulations, but other countries do not have to do anything, and, yet, we will then give them our market.* If we must use TEDs then everybody else ought to have to use TEDs as well. If they do not use the TEDs if they are not required to do that which we are required, then we should not be required to import their shrimp. *I think if they do not measure up to the rules, then I think our people in Louisiana and Florida and elsewhere will be compensated by a higher price of shrimp. . . It is important that we start giving the same amount of care and concern to humans in this country, as we do to some of our*

endangered species. Humans are certainly no less valuable; in fact, they are much more valuable." (emphasis added).

Senator Johnston from Louisiana (co-sponsor of the bill) likewise, remarked, "It would be an outrage if this country imported shrimp from countries like Mexico who do not utilize these turtle-excluder devices while our shrimpers are being penalized. . . . If they fail to take the same kind of action. . . then after 1991 we may no longer import these shrimp from these foreign countries . . . What it will mean in practical terms, we think, if those countries do not take that action the price of shrimp obviously will go up because the supply will be down, so that Louisiana shrimpers, Texas shrimpers, Florida shrimpers will in effect have some form of compensation in the form of higher prices for their shrimp should these countries fail to take that action." [38]

Subsequently, in 1989 the US Congress enacted Section 609 of Public Law 101-102. It called upon the US government to initiate negotiations for the development of bilateral and multilateral programmes with other countries engaged in commercial shrimp farming likely to affect the turtle population. It also mandated that the shrimp harvested with technology that adversely affect the turtles, shall not be imported into the US from 1 May, 1996 unless the US President certifies to the Congress annually that the harvesting nation has a regulatory programme and an incidental take rate (turtle mortality rate) comparable to that of the US, or that its fishing environment does not cause threat to the sea turtles.

Here it must be mentioned that Section 609 was driven by the parity and competitive concern of the domestic shrimp industry together with the concern for the protection of the sea turtles. It was a result of a combination of domestic factors (environmental and shrimp industry lobbies) within the US with extra-territorial impact. Initially, campaign on the protection of sea turtles led to the compulsory use of TED within the US. Once TED was reluctantly adopted by the US shrimpers, demand for a level-playing vis-à-vis the foreign shrimpers grew. The resultant legislation Section 609 along with the protection of sea turtles was intended to provide a level-playing field to the domestic shrimpers. The pressure of the domestic environmental lobby exercised

through sustained campaigns and court case led the US government to apply Section 609 to all the shrimp exporting nations whose imports were prohibited unless accompanied by a certificate of using TED. Failing the certification requirement, unilateral embargo was imposed by the US. The dynamics of the US domestic politics exercised a fundamental role in imposing a domestic standard, TED, to all exporting nations.[39]

Implementation Measures under Section 609 and Subsequent Developments

To implement Section 609, the US Department of State issued guidelines in 1991 under which foreign nations were required to undertake measures to protect sea turtles. It mandated a commitment to use TED in all shrimp trawling vessels and alternatively, a commitment to engage in scientific programmes to reduce mortality of turtles. The geographical scope of Section 609 under the 1991 guidelines was limited to 14 countries in the Gulf of Mexico, Caribbean and western Atlantic region[40] (out of 65–85 countries that exported shrimp to the US) and these countries were given a three-year phase-in period to adapt to the new US regulations.

Although Section 609 called for bilateral and multilateral negotiations for the protection of sea turtles, the US government initiated and concluded the Inter-American Convention for the Protection and Conservation of Sea Turtles in 1996[41] with the countries in that region alone. The Convention aims to "promote the protection, conservation and recovery of sea turtle populations and of the habitats on which they depend, based on the best available scientific evidence, taking into account the environmental, socioeconomic and cultural characteristics of the Parties" and calls upon the member countries to adopt comprehensive measures requiring the use of TED; prohibit international trade in sea turtles and their products; promote the conservation of sea turtle habitats and nesting beaches; and engage in cooperative research efforts on sea turtle populations and the threats they face.[42] It did not initiate any negotiations with other importing countries until much later. This shall be discussed in a later section.

Since the ban did not apply to all the countries that exported to the US, in 1992 a group of US based non-governmental organisations (NGOs)/environmental lobby[43] led

by the Earth Island Institute, an NGO based in San Francisco, filed a case in the US Court of International Trade (CIT) against the Secretary of State and Commerce (Earth Island Institute vs. Warren Christopher). The plaintiff asked for a universal application of these regulations to all shrimp exporting countries in order to protect sea turtles protected under the US laws. They claimed that the effectiveness of the US law to protect the sea turtles was being undermined since trawlers in some of the largest shrimp exporting nations to the US including India, Indonesia, Thailand, Japan, Mexico, Malaysia, South Korea and Brazil killed more than 150,000 turtles a year.

Perhaps in response to the case, the US issued revised guidelines in 1993 which were relatively more stringent. The 1993 guidelines called for a mandatory commitment to use TED and eliminated the alternative means of protecting the sea turtles, that is the commitment to engage in scientific programmes provided for in the 1991 guidelines.

Nevertheless, in its 1995 judgment in the Earth Island case, the CIT found the 1991 and 1993 guidelines to be in violation of Section 609 as they limited the geographical scope of the law. It directed the US government to extend the geographical scope and to prohibit the importation of shrimp or product of shrimp, harvested with technology that adversely affects sea turtles by 1996.

In order to comply with the CIT ruling, the US State Department issued revised guidelines in 1996. The 1996 guidelines extended the application of Section 609/use of TED to shrimp harvested in all exporting nations and imposed a ban on importing shrimp from countries not certified as using TED. Unlike the earlier shipment by shipment certification procedures, the ban now applied at a country level, which in effect meant that a country as a whole needed to be certified. This was to ensure use of TED on a wider scale in order to make it more effective rather than select application to a group of exporters to the US.[44] The US department of state requested for a modification in the CIT judgment to entail a one year delay in extension for application of Section 609 to other importing nations, but this was denied.[45] It must also be highlighted that after the CIT ruling, the implementation of Section 609 under the 1996 guidelines became very rigid

and inflexible, forcing the shrimp exporting countries to seek redressal from the dispute settlement body of the WTO.

The 1996 guidelines extended the scope of Section 609 to all countries and required that by 1 May 1996 all countries must take measures to get certified as making use of TED or engaging in comparable scientific programmes with documentary proofs. Failing the required certification, the US imposed an embargo on imports of all shrimp and shrimp products from specific countries, which prompted the affected countries to take the matter to the dispute settlement body of the WTO.

Before we discuss the case in the dispute settlement body, it is important to look into the trade impact of the embargo on the Indian shrimp exports to the US and the cost of use of TEDs.

III TRADE IMPACT OF THE US EMBARGO ON INDIA

Sea Turtles in Indian Waters

In Indian coastal waters and the Bay Islands, five species of sea turtles are found. These are the Olive Ridley, Green Turtle, Hawkbill, Leatherback and Loggerhead. Except for the Loggerhead, the remaining four species nest (breed and lay eggs) along the Indian coastline.[46] Table 1 shows the nesting area, nesting season and nesting intensity of the species along the Indian coastline.

Olive Ridley is the commonest of all the five species of sea turtle and is found throughout the Indian coastal waters. Orissa — an eastern coastal state of India — with a long coastline is the main nesting site of Olive Ridleys. Of the four important arribada (mass reproductive congregation of the species) beaches of Olive Ridley in the world, the Orissa beach is one. Around the beginning of November every year, the species migrates to the Indian coastal waters where arribada occurs. Arribada takes place twice in a year: first during December–January and the second during March–April. Moderate nesting of Olive Ridleys also takes place in Tamil Nadu, Andhra Pradesh and West Bengal.

However, this annual nesting cycle observed in the case of Olive Ridley, is not found in the other species of sea turtles. The other species usually nest once in two or three years with seven to eight nesting spurts in a season.

Given the significant presence of the species in Indian waters, it is important to estimate their mortality rate. The Central Marine Fisheries Research Institute (CMFRI) had conducted investigations on incidental catch/mortality of marine turtles along the Indian coastline. Supplementing this data with its own investigations, the Expert Scientific Panel (ESP) set up by the Ministry of Agriculture, Government of India found that, except for the Gahirmatha coast, the incidental catches of turtles were "rare and confined only to a few pockets of the peninsular region." The ESP also found that that stranding of turtles were "few and confined to some maritime States." [47]

Table 2 gives state-wise estimates of turtles landed/stranded during 1997, 1998 and 1999. Table 2 shows that much of the landed/trapped/stranded of sea turtles occurred along the East coast, and along the coast of Kerala. Of the east coastal states, Tamil Nadu's contribution is quite high. This table does not include mortality at Gahirmatha coast. Along the 35 km stretch of Gahirmatha beach, mortality of the species is believed to be quite high. The number of sea turtles found stranded on this stretch was (5000 in 1997, 16000 in 1998 and 9047 in 1999) indeed high. In the absence of any other obvious/proximate cause, it is inferred that this high mortality must have been due to fishing operations off the Paradip coast. The ESP found that mortality is maximum during December–February when nesting takes place.

Importance of Fisheries Industry for India

Fisheries play an important role in the national economy, particularly in the generation of employment for the coastal population whose socio-economic conditions depend directly on this industry. In 1997, the industry provided (primary) employment (either full time, part time or on an occasional basis) to around 6 million people.

The industry's contribution to the country's GDP too is significant. It contributed on an average about 1.16 per cent to the country's GDP at current prices during 1997–98 to 1999–2000. In constant prices, its contribution to the country's GDP at 0.98 per cent was only slightly lower. The industry also significantly contributes to earning foreign exchange. During 1999–2000, the share of marine exports in total agricultural and allied product exports from the country was as high as 21 per cent. Even in the total exports from the country, the share of marine exports was 3.3 per cent.

The importance of exports to marine industry can also be gauged from the fact that in 1998–99, earnings from marine exports (at Rs. 4626.87 crore) was about 24 per cent of the industry's contribution (at Rs. 19, 555 crore) to GDP at current prices. With a coastline of 8041 km and with the Exclusive Economic Zone (that is, area within 200 miles from the sea coast) of 2.02 million sq km, India has a high potential for fish production. This potential was estimated to be around 8.4 million tonnes, of which only 5.26 million tonnes was exploited in 1998–99. Japan, EU and the US are important markets for marine exports from India.[48]

One significant development in the industry has been the growing role of aquaculture farming[49] especially since the 1990s. The number of hatcheries in the country has increased from just 16 in 1991–92 to 250 in 1997–98. Similarly, the installed capacity in the hatcheries has risen from 0.4 billion seeds/annum to 11.60 billion seeds/per annum over the same period. Andhra Pradesh has the maximum number of hatcheries (124), followed by Tamil Nadu (73). Aquaculture farming is likely to play an increasingly important role in the future expansion of exports. Only a limited proportion of aquaculture potential is currently being exploited in the country. With only 1,72,681 hectares area under aquaculture, the country is exploiting only 14.5 per cent of its brackish water resource, estimated to be around 1.2 million hectares. Furthermore, there is considerable scope for increasing the production even in the existing area under aquaculture. The rate of production of 0.658 tonnes per ha/year is lower compared to that of Thailand (2.5 tonnes per ha/year), USA (3.75 tonnes per ha/year), or Ecuador (0.85 tonnes per ha/year).[50]

Shrimp Exports

Frozen shrimp dominates the marine export basket of the country. In 2000, frozen shrimp exports accounted for about 71 per cent of earnings from marine exports from the country. However, this share by product weight was 28 per cent, reflecting higher value of shrimp exports. Japan is India's biggest export market for frozen shrimp exports. USA takes the second slot and is followed by the EU.

Depending on the process by which shrimps are obtained, these can be divided into cultured shrimps or captured shrimps. Production of shrimps by culture, called shrimp aquaculture, is almost 100 per cent for the export market. Shrimp aquaculture doesn't endanger sea turtles or any other species.[51] The US ban on shrimp imports didn't apply to shrimps produced through aquaculture.

Effect of Ban on Exports

In May 1996, the US imposed a ban on import of shrimps that were caught with methods endangering the lives of sea turtles. This section looks into the effect of the ban on shrimp exports from India to the US?

The effect of the ban must be viewed against the backdrop of the US share in total marine exports, and in particular, shrimp exports from the country. At the time of the ban, the average share of US (average of 1994–95 and 1995–96) in total marine exports from India was around 9.5 per cent in quantity terms and 10.5 per cent in value terms. In frozen shrimp exports, the US shares were 20.3 per cent and 8.3 per cent, respectively.[52]

Since the ban came into force from May 1, 1996, its effect, if any, must have been felt in the subsequent months. Therefore one needs to study if there was any significant effect on exports of shrimps to the US between 1995–96 and 1996–97.

There are two ways of examining this issue. One is to analyse the extent to which shrimp exports from India to the US market were affected during 1996–97. The other way is to examine its effect in terms of US shrimp imports from India (as well as the

other 3 countries that went to the Dispute Settlement Body of the WTO, namely Malaysia, Pakistan, and Thailand). We will look at it from both the sides.

Shrimps are exported from India in several forms, such as live, chilled, dried and frozen. Export of shrimps in forms other than frozen started only after 1993–94. As can be seen from Table 4, over 99 per cent of shrimp exports both in value and in quantity terms from India are in frozen form. Therefore, we confine our analysis of shrimp exports from the country to frozen shrimp only.

Table 5 shows India's frozen shrimp exports to major markets. In 1996–97, marine exports to the US increased both in quantity and in value terms. However, frozen shrimp exports to the US not only failed to grow in quantity terms, it showed a marginal decline from 16,556 metric tonnes in 1995-96 to 16,467 metric tonnes in 1996-97 (this decline did not show up in value terms). Even in terms of the share in total quantity of shrimp exports, the US share showed a decline from 17.3 per cent to 15.6 per cent during this period. Product quantity is a better measure compared to product value since the latter captures price variations due to demand and supply forces. Indeed, unit value of shrimp exports to the US shows an increase from $ 5.56 in 1995–96 to $ 5.7 in 1996–97.

The decline in quantity of frozen shrimp exports to the US must be viewed against the background of impressive shrimp exports both in quantity and in value terms from the country in 1996–97 (refer Table 5). Market-wise exports, as shown in Table 5, points to an impressive growth in frozen shrimp exports in 1996–97 mainly due to increase in exports to Japan.

What is more is that during 1996–97, when one would have expected the share of cultured shrimps in total shrimp exports from the country to have increased since the ban did not apply to cultured shrimp (and was applicable to captured shrimps only), the share of cultured shrimps in total shrimp exports actually declined (as shown in Table 5).[53] However, data on destination-wise export of cultured and captured shrimps is not available.

Besides, there are several points to be noted in Table 6.

(i) Forty per cent of the shrimp production, by culture or capture, actually gets lost during different stages of processing that involves beheading and cleaning. Around 50,000 tonnes of captured shrimps are exported. This is around 33 per cent of total shrimp production from capture.

(ii) Two years (from 1993–94 to 1994–95) were particularly good years for cultured shrimp production and exports. Higher shrimp cultivation during these two years was due to a number of reasons such as entry of new entrepreneurs in cultured farming in the early nineties, development of accessory industries (such as feed mills, farm equipments), and the absence of any disease or any major calamity.

(iii) For shrimp culture industry three years, from 1995–96 to 1997–98, were particularly bad when production and exports of cultured shrimps declined in India. In 1995–96, a viral disease affected shrimp culture leading to the economic loss of about Rs. 945 crore.[54] In 1996–97, a series of cyclones hit the Andhra Coast, and in 1997–98 the implementation of the Supreme Court guidelines led to the restrictions on the activities of existing farms.[55] It also made the setting up of new farms difficult.

Thus, shrimp production and exports from the country have been influenced by domestic developments as well as developments in the export markets.

Now we examine the effect of the ban on shrimp imports by the US. The US is the second largest importer of frozen shrimps in the world. India is the fourth largest supplier of shrimp to the US. Currently, India has become the third largest (after Thailand and Mexico) since supplies from Ecuador have dried up due to a disease problem affecting its industry.[56]

In 1996, the year in which the US imposed the ban, imports of shrimps from India showed a modest increase even in quantity terms (refer to Table 7).[57] From whichever side we look at the effect of the ban, one conclusion that can be reached is that the US ban didn't effect shrimp exports from India in general, and even to the US market in particular. Two reasons can explain the absence of any significant effect of the US

embargo. Since the US imposed a ban only on captured shrimps and not on cultured shrimp, there may have been some kind of switch from captured shrimps to cultured shrimps destined for the US market. The second reason could be redirection of exports away from the US and towards Japan since the ban was imposed only by the US and not by other major importing destinations. Was there any surge in frozen shrimp imports by the US from India in the months prior to the imposition of ban? Month-wise analysis of frozen shrimp imports by the US from India does not seem to suggest this.

Table 8 shows that shrimp exports from countries in the wider Caribbean region on whom US imposed ban in 1991 and allowed three years to comply with the implementation of TED, throws some additional light on our analysis. After the countries in this region complied with the US rules in 1994, the US imports of shrimps form countries in this region increased significantly in 1995, both in quantity and value terms. This is reflected in the combined share of the 11 (of the 14 countries for which data is available) in US shrimp imports. This share peaked in 1996 – the year in which the ban was imposed on all shrimp exports countries to the US.

The year 1994 was exceptionally good for shrimp exports to the US market by the 4 countries that went to the DSB as their combined share in total US imports of shrimps increased appreciably in both quantity terms (from 33.4 per cent to 38.2 per cent) and in value terms (37.2 per cent to 43.3 per cent). This is true for India as well. On the demand side US imports of shrimps increased during 1994. On supply side as well, conditions in India were favourable as there was significant increase in cultured shrimp production in 1993–94 and 1994–95.

Shrimp exports from India seem to be driven more by the supply side. This can be inferred from the fact that when EU imposed a ban (which lasted for about 4 months) on import of marine products from India on August 1, 1997, while India's exports to EU declined appreciably its exports to other markets particularly to Japan increased significantly.[58] Accordingly, the share of Japan in total shrimp exports from the country increased from 48 per cent in 1996–97 to 55.9 per cent during 1997–98. In the following year (1998–99), however, when exports to EU tended to regain its normal level, the share

of Japan in total shrimp exports too fell to 51 per cent. This shows quick redirection of exports to other markets if there is a problem with any one market. In fact, Malaysia, whose share in shrimp imports by the US is small, simply switched over to other markets when the US imposed a ban.

Given that US accounts for about 15 per cent of all shrimp exports from India, the US ban was expected to have only limited impact on total shrimp exports. It turns out that even this limited impact was actually not much as shrimp exports to US market did not significantly decline. The ban would have adversely affected exports if it had been uniformly imposed by all major importing countries.

Efforts by the Indian Government

In 1998 the Government of India, Ministry of Agriculture, constituted an ESP to conduct a study on the distribution of sea turtles, their incidental mortalities in fishing nets, use of TED in fishing waters, etc. The expert panel that went through several aspects of danger posed to turtles from the capture of shrimps in the Indian waters. It submitted its report in March 2000, in which it made a number of recommendations, including the mandatory use of TED for the protection and conservation of sea turtles in the Indian waters.

The ESP identified a number of steps that needed to be taken for the conservation and preservation of sea turtles in Indian waters. These steps involved preservation of the habitat (critical nesting areas), use of TEDs by trawlers in critical areas/periods, enforcement of prevalent laws and regulations for conservation of turtle species, mass awareness, training and extension programmes and research in frontier areas of marine turtle biology and ecology. Two recommendations made by ESP are: (i) declaration of mass nesting areas as marine sanctuaries, and (ii) use of TED in fishing nets. In particular, ESP recommended that the prohibition of fishing within a certain region (seaward radius of 20 km) of Gahirmatha (Marine) Wildlife Sanctuary be made permanent. This prohibition was only from February 18, 1998 to May 31, 2000. ESP also identified two areas in Orissa that needed to be protected along similar lines. These areas

are: the Rushikulya Marine Turtle Rookery and the Akashdia Island at the mouth of the Devi river.

On the use of TED, the ESP recommended that TED be made mandatory in all mechanised trawlers in areas of mass nesting and where higher incidental mortalities were recorded. It identified both the areas and the period as follows:

(i) Orissa: the entire coast during the period November to April.

(ii) West Bengal: The coast of Midnapur District during the period December to March.

(iii) Andhra Pradesh: The coast of Srikakulam, Vizianagram, Visakhapatnam and East Godavari districts during the period November to April.

(iv) Tamil Nadu: The coast of Nagapattinam, Tuticorin, Ramnathpuram and Tirunelvelli districts during the period December to April.

(v) Pondicherry: The coast of Pondicherry (excluding areas off the coast of Mahe, Karaikal and Yanam) during the period December to April.

(vi) Kerala: The coast of Kollam and Trivandrum districts during the period December to March.

After the ESP submitted its report, the Government of India together with the concerned state governments decided to implement the ESP recommendations through the amendment of Marine Fishing Regulation Act. They also decided that Coast Guard and State Governments would enforce use of TED and monitor/review the use of TED periodically.[59] As of now three states, namely Kerala, Orissa and West Bengal have made use of TED mandatory in all mechanised fishing vessels. Marine Product Export Development Association (MPEDA) was entrusted with the responsibility of the introduction (development and promotion) of TED.

MPEDA started commercial production of TED designed by Central Institute of Fisheries Technology (CIFT). As per the latest figures, MPEDA has so far fabricated and

distributed 1,150 units of TEDs. Area-wise distribution of TED identified by ESP is: (Orissa (320), Andhra Pradesh (325), Paradip (230), West Bengal (100), Tuticorin (75), Chennai (50), Kollam (50). These TEDs have been distributed free of cost and through the State Fisheries Department. However, commercial fishing with TED has not yet started.

Additional Costs

MPEDA estimated the total requirement of TED in the six areas identified by ESP to be around 4,500 units, and the cost of producing TED is Rs. 2,500 per unit. Even if TEDs are distributed free to the 4,500 fishing vessels it would cost only Rs. 1.125 crore. This is really a small amount for an industry (if the government imposes a tax to recover the cost) that exports Rs. 4,800 crore worth of products annually.

But the cost of producing TED is only one of the costs of introducing and using TED. There are other costs associated with popularising the use of TED, and more importantly, the cost of enforcing the use of TED by the fishing/shrimp vessels. This can be a significant amount, given that the fishing/shrimping vessel operators will have incentive not to use TED or not use it effectively (or install it superficially). This is because the use of TED actually increases fuel consumption by the vessels and hence, the cost of fishing shrimps. This incentive would also be high because the use of the device not only prevents capturing of turtles but also keeps off bigger fishes that the fishermen are interested in.

No authoritative estimate exists on the additional cost of fuel on account of TED usage, but talking to an MPEDA official has revealed that the cost increase is less than one per cent. As far as by-catch loss is concerned, again no authoritative estimate exists, but according to an MPEDA official, the loss could be up to 20 per cent. Such tangential costs may actually act as a major impediment to the effective use of TED.

In the light of this, the implementation of TED depends critically on the monitoring/enforcement on the part of government. Effective enforcement would have

financial implications for the government. For this reason implementation/enforcement of several laws lacks in the country. But the laws are very much in place.

The enforcement cost must be viewed in conjunction with the cost of other measures needed for the conservation and preservation of the species. This opens up the question of the extent to which developing countries can divert resources away for pressing needs and in favour of issues that are not of immediate concern to them. This is true not just of the protection of turtles but of other environmental issues as well. The economic implications aside, the case was raised in the dispute settlement body of the WTO against the unilateral trade embargo imposed by the US.

IV THE SHRIMP-TURTLE CASE IN THE WTO

The shrimp-turtle case in the WTO has gone through three main phases: Dispute Settlement Panel; Appellate Body, and Malaysia's Appeal on Implementation Issues under Article 21(5) wherein the matter was referred to the original panel on the implementation issue, that is, how far the US has complied with the dispute settlement ruling? The section below will discuss the passage of the dispute through these phases and its systemic implications for the WTO.

Main Arguments of the Complainants

India, Malaysia, Pakistan and Thailand, while challenging Section 609 of the US Public Law 101-162 and its implementing measures, claimed that these measures were violating the principles of *most-favoured nation treatment*, *general elimination and non-discriminatory administration of quantitative restrictions*. The complainant also argued that the US measure was not covered within the scope of exceptions under article XX (b) and (g) of GATT 1994.

The complainants raised a number of specific issues against the US policy. The complaint argued under Section 609 and the subsequent guidelines, identical shrimp and shrimp products from different nations were treated differently on the basis of production

process, which in this case was the harvesting method and related certification process imposed by the US. In other words, similar shrimp products from certified countries was allowed but were prohibited from non-certified countries even though the final product was the same. The certification process also resulted in an increased transaction costs.

The implementation of the embargo was inconsistent with the MFN principle since it granted longer phase-in period to domestic shrimpers (since 1987) and initially-affected nations (three year), compared to only four months granted to newly-affected nations. This constituted arbitrary and unjustifiable discrimination between countries where the same conditions prevail.

They argued that the use of TED was not the only and most effective device to protect the sea turtles and that TED is not a "multilateral environmental standard" and that "extending the same programme outside the United States was disguised restriction on international trade, because scientific evidence did not demonstrate that shrimp trawling was the principal threat or even an immediate threat to sea turtles elsewhere in the world." According to them the use of TEDs by many countries was due to the compulsion to adhere to this standard if they desired to export to the US and not because of their necessity to protect sea turtles.[60]

The complainants regarded the US action as an infringement on their domestic jurisdiction and against the principle of sovereignty over natural resources. For instance, India maintained, "there was no need for the United States to impose its own agenda on third parties through the use of far-reaching extraterritorial measures such as the one imposed by Section 609. This action constituted an unacceptable interference in policies within India's sovereign jurisdiction."[61]

The complainants argued that article XX (b) and (g) could not be used to take steps that affect the life, health of the people, animal and plants in the jurisdiction of other member countries. Based on the UN Charter and accepted practice of international law on sovereign equality of nation states and sovereignty over natural resources and non-interference in the domestic law of the other states, they argued for an imposition of jurisdictional limit in the interpretation of these articles.

They also contended that the term 'exhaustible natural resources' under article XX (g), was not applicable to living species like sea turtles and referred to finite natural resources and not to biological or renewable natural resources.

Since the US measure constituted an infringement of GATT Articles I, XI, and XIII, the complainant claimed that it nullified or impaired benefits accruing to the countries within the meaning of Article XXIII: 1 (a) of GATT 1994.

The US, on the other hand, claimed that the sea turtles are a globally shared resource because of their highly migratory character. According to it, conservation measures other than the use of TED were insufficient on their own to prevent the drastic decline in the population of sea turtles. It requested the Panel to ascertain whether Section 609 and its implementing measures fell within the scope of Article XX (b) and (g).

THE RULING IN SHRIMP-TURTLE CASE

Decision of the Dispute Settlement Panel

The dispute settlement panel of the WTO ruled that the US action amounted to prohibition or restriction because it imposed an embargo on import of shrimp and shrimp products from countries not meeting certain policy conditions (use of TED and certification requirement). The US action thus amounted to a violation of the GATT principle of general elimination of quantitative restriction.[62] Further, it ruled that the US action could not be justified under the chapeau of the general exception clause (GATT Article XX) because it caused discrimination between countries where the same conditions prevailed (between certified and not-certified countries). The US measure also amounted to unjustifiable discrimination because it meted out different treatment based on whether a country has adopted a TED.

The panel noted that chapeau of Article XX within its context and in light of the objective and purpose of GATT and WTO Agreement "only allows members to derogate from GATT provisions, so long as, in doing so, they do not undermine the WTO

multilateral trading system thus also abusing the exceptions contained in Article XX. Such undermining and abuse would occur when the Member jeopardises the operation of the WTO Agreement in such a way that guaranteed market access and non-discriminatory treatment within a multilateral framework would no longer be possible." To interpret Article XX as allowing countries to adopt unilateral measures conditioning access to their markets to certain requirements on the part of exporting countries, including the conservation programmes, would affect the security and predictability of the trading system as "market access for goods could become subject to an increasing number of conflicting policy requirements for the same product and this would rapidly lead to the end of the WTO multilateral trading system."[63] The risk of multiplicity of such requirements abates in multilateral negotiations and hence international cooperation should be sought on such issues before resorting to the unilateral action, according to the Panel.

Basing its ruling on this line of argument, the Panel ruled that even though the protection of the turtle is a serious issue, the unilateral measure taken by the US is clearly a threat to the multilateral trading system as it was applied without any attempt to reach a negotiated solution. The US measure was thus found to be outside the scope of measures permitted under the chapeau of Article XX. Since the US action did not fall within the scope of chapeau of Article XX, the panel adopting the "chapeau down" approach, did not look into the validity of the action under the sub-clause Article XX (b) and (g).

Here it must be mentioned that although the panel argued for the use of negotiated instruments in cases of transboundary environmental problems, it remained ambivalent about the validity of the unilateral decisions within the scope of Article XX. The panel noted, "our findings regarding Article XX do not imply that recourse to unilateral measures is always excluded, particularly after serious attempts have been made to negotiate; nor do they imply that, in any given case, they would be permitted."[64]

These points were clarified in the decisions of the Appellate Body under an appeal by the US.

Decision of the Appellate Body

The appeal by the US raised the following main issues and asked the Appellate Body to reverse the Panel's ruling.

(i) Article XX according to the US, allows states to take measures for the protection or conservation of environment and may result in reduced market access or discriminatory treatment under this article. Thus states' policies/ measures are pre-eminent to the GATT's goal of market access;

(ii) In view of the threat to sea turtles, it is justified for Section 609 to differentiate between countries using TEDs and those which do not;

(iii) While considering the legitimacy of the US measure within the scope of Article XX, the panel made a reference to whether it would lead to undermining the multilateral trading system. This according to the US was erroneous since Article XX neither defines/ mentions the term "multilateral trading system" nor conditions a Member's right to adopt a trade-restricting measure on the basis of hypothetical effect on that system; and

(iv) The preamble of the WTO concerning the "objectives of optimal use of world resources in accordance with the objective of sustainable development" was ignored by the panel which amounted to one-sided interpretation of the relevant articles and the WTO agreement.

In its decision, the Appellate Body rejected the panel's "chapeau down" approach. The purpose of the chapeau according to it was the prevention of the abuse of the exceptions during application and hence, specific paragraphs should be examined to determine whether the measure falls within one or the other paragraphs, following the chapeau. In other words, it looked into the requirements of the Article XX (g) first and followed it up with the appropriateness of the US action within the chapeau provisions.[65]

The Appellate body reversed the panel's findings and concluded that actions taken by the US fell within the scope of measures permitted under the chapeau of Article XX. It further concluded that the US measures "serves an environmental objective that is recognised as legitimate under paragraph (g)" and qualified for provisional justification under Article XX (g).[66] Although, it reversed the panel's ruling with respect to Article XX, the Appellate Body also found the manner of the application of these measures by the US as causing unjustifiable discrimination[67] and arbitrary discrimination[68] and hence, contrary to the requirements of the chapeau of Article XX.

The manner of the application of the US policies was found to be unjustifiable and discriminatory and the DSB requested US to bring its measures in conformity with the US obligations under the WTO. The cumulative effect of the application of Section 609 (through 1996 guidelines) was found to be discriminatory and unjustifiable because: (a) it required other countries to adopt essentially same regulatory programmes as that applied to the US shrimpers without looking into the suitability of that programme to different socio-economic condition of that country; (b) The unilateral and inflexible nature of the certification process without any involvement of the exporting countries and without due process of review, appeal and redressal added to the "disruptive and discriminatory influence of the import prohibition and underscores its unjustifiability"; (c) The different phase-in periods given to initially affected nation, three years for 14 countries in the Caribbean/Western Atlantic but only four months to newly-affected nations and the difference in the level of efforts by the US to transfer TED technology to other countries was considered as unjustifiable discrimination; (d) "The failure of the US to engage the appellees, as well as other Member exporting shrimp to the United States, in a serious across-the-board negotiations with the objective of concluding bilateral or multilateral agreement was considered as discriminatory and unjustifiable.[69]

Systemic Implications of the Appellate Body Ruling

In terms of its systemic implications, the Appellate Body's decision in the shrimp-turtle case has virtually mainstreamed environmental requirements in the WTO through its interpretation of the relevant WTO articles unlike the earlier rulings in such cases.

For example, in the Tuna-dolphin (Tuna-I) dispute of 1991 over the US embargo[70] on the import of Mexican yellow fin tuna on grounds of protection of dolphins, the Panel took a restrictive view of Article XX.[71] In its decision, the Panel ruled that the exceptions provided for under Articles XX (b) and (g) only covers measures relating to animal and natural resources within domestic jurisdiction and cannot be applied extra-jurisdictionally.

The Panel also did not consider the US action as 'necessary' under Article XX (b) – as argued by the US – since other multilateral measures to solve the problem were not exhausted. The Panel ruled that the US ban amounted to quantitative restrictions prohibited under Article XI and Article III concerning national treatment. The United States' argument that the restrictions were internal regulations allowed under GATT was rejected by the Panel on the grounds that these restrictions were only to be applied to "products" and not the "processes" by which products were produced. The ban imposed by the US on tuna import from Mexico amounted to discrimination since it differentiated between the way a product is made and hence a violation of GATT rules.[72]

In 1994, in a related case, known as Tuna-II, the EEC and the Netherlands went to the dispute settlement body against the secondary/intermediary embargo introduced by the US on countries that imported tuna from Mexico *en route* to the US. Similar to Tuna-I, The US measure was found to be in violation of WTO rules.[73] However, unlike Tuna-I, the Panel took an ambivalent view regarding extra jurisdictional application of the unilateral trade measures permitted under the General Exception clause.[74] It noted that in principle, measures could be taken "under other paragraphs of Article XX and other Articles of the General Agreement with respect to things being located, or actions occurring, outside the territorial jurisdiction of the party taking the measure."[75] It however concluded that Article XX (g) does not apply to measures that could only

achieve their protection goals indirectly by inducing other countries to change their internal policies. Such measures must be designed directly in order to protect the resource in question, the dolphins.[76]

The Panel also was ambivalent on the jurisdictional limitation of Article XX (b). It noted that "the text of Article XX (b) does not spell out any limitation on the location of the living things to be protected . . . that the conditions set out in the text of Article XX (b) and the preamble qualifying only the trade measure requiring justification ('necessary to') or the manner in which the trade measure is applied ('arbitrary or unjustifiable discrimination', 'disguised restriction on international trade'). The nature and precise scope of the *policy area* named in the Article, the protection of living thing is not specified in the text of the Article, in particular with respect to the location of living things to be protected." The US action was not found to be necessary for the protection of animal life or health within the scope of XX (b).

The Panel thus found US action not justified as it forced countries to change their policies and in effect imposed process based requirements. It noted that if Articles XX is "interpreted to permit contracting parties to impose trade embargo so as to force other countries to change their policies within their jurisdiction, the objectives of the General Agreement would be seriously impaired." The process-related requirements were thus deemed a violation of the WTO rules, a position which has been modified in the shrimp-turtle case.

All these cases took a narrow interpretation of Article XX and its related clauses on environment. In the shrimp-turtle case however, in a significant liberal interpretation of the environmental provisions within the WTO, the Appellate Body considered that the first preambular paragraph of the WTO Agreement as relevant for the interpretation of provisions contained in various WTO agreements, such as GATT Article XX. It remarked that the "objective of sustainable development in the preamble reflects the intentions of negotiators of the WTO Agreement. We believe that it must add colour, texture and shading to our interpretation of the agreements annexed to the WTO Agreement, in this case the GATT 1994." This position was a significant departure from the restrictive

interpretation of Article XX. The ruling in environmental terms is thus a step toward mainstreaming environment into the WTO compared to the earlier rulings.

It extended the meaning of the term "exhaustible natural resources" under Article XX (g) to include not just finite and non-living resources but living resources as well. It noted that this term is an evolving concept and that measures to conserve such resources, both living and non-living falls within the scope of this Article. The Appellate Body reasoned that even living natural resources under certain conditions are susceptible to depletion, exhaustion and extinction and are just as finite as petroleum, ore, etc.

The Appellate Body did not make any judgement on the implied jurisdictional limitation in Article XX (g), and if so its nature or extent of that limitation. However, as far as sea turtles were concerned, the Appellate Body found that "since sea turtles are highly migratory animals, passing in and out of waters subject to the rights of jurisdiction of various coastal states and high seas . . . there is sufficient nexus between the migratory and endangered marine populations involved and the United States for the purpose of Article XX (g). By implication, as far as transboundary environmental issues and global shared resources are concerned, the jurisdictional limit (as argued by the complainants) on Article XX (g) does not apply.

The Appellate Body also set a precedent for the legitimate use of process-related environmental requirements in international trade on transboundary environmental issues and global commons, provided its application conforms to other WTO principles of non-discrimination. It justified the US action within the scope of Article XX (g) even though it amounted to the US asking other countries to use its domestic standard — TED and dictated the process by which the shrimp were being caught. The rulings in terms of legitimising certain environmental requirements in international trade was significant as it reversed the traditional legal position which had been established in the earlier disputes raised during the time of GATT 1947 that the process by which goods have been produced in the exporting country could not be a reason for taking measures affecting their imports in another country.

It also recognised that a country could legitimately impose market access requirements on imports such as a commitment to adopt a comparable regulatory programme for the protection of environment. In other words, unilateral action within the scope of general exceptions clauses under XX were deemed justified by the Appellate Body provided adequate flexibility and 'good faith' measures such as negotiations, etc. were undertaken. It noted that "conditioning access to a Member's domestic market on whether exporting Member comply with, or adopt a policy or policies unilaterally prescribed by the importing Member may, to some degree, be a common aspect of measures falling within the scope of one or another of the exceptions" including Articles XX (b) and (g). "It is not necessary to assume that requiring from exporting countries compliance with, or adoption of, certain policies (although covered in principle by one or another of the exceptions) prescribed by the importing country, renders a measure *a priori* incapable of justification under Article XX."[77]

As far as unilateral trade measures are concerned, the Appellate Body made a mention of a number of international agreements and contended that the protection and conservation of the highly migratory species of sea turtles required the concerted and co-operative efforts of all relevant nations. It referred to Agenda 21 and many other international negotiated agreements to assert that in cases of transboundary environmental problems, the measures should be based on international consensus, as far as possible and that unilateral action should be avoided.

On the implementation question specifically, the Appellate Body asked the US to revise its guidelines[78] to introduce greater flexibility towards other foreign conservation programmes and also elaborated a timetable and procedures for certification decisions. These measures were to be complemented by the regional and multilateral negotiations with the governments of the Indian Ocean region on the protection of sea turtles in that region in addition to the technical training in the use of TEDs to countries within a reasonable period of time.

Decision on Malaysia's Appeal on Implementation Issues

In order to comply with the Appellate Body ruling, the US tinkered with the guidelines (under revised guidelines 1999) and implementation became an issue. In October 2000, on Malaysia's request, the matter was referred to the original panel on the implementation issue.[79] Malaysia argued that the existing import prohibition imposed by the US on shrimp and shrimp products not harvested in a manner determined to be harmful to sea turtles, amounted to non-implementation of the DSB ruling. It also argued that as per the DSB ruling, the US was not entitled to take unilateral import ban outside the framework of an international agreement; that the US should have negotiated an agreement on the protection and conservation of sea turtles before the imposition of trade embargo and pending the conclusion of an international agreement, the imposition of import ban amounts to violation of its obligations under the GATT 1994 by the US; and finally by not lifting the import prohibition on certain shrimp and shrimp products, the United States had failed to comply with the recommendations and rulings of the DSB. It argued that the revised 1999 guidelines still imposes US conservation policies and standards on other countries and hence, contrary to the sovereign right of Malaysia to determine its own policies.

The panel found that the prohibition on shrimp and shrimp products imposed by the US under Section 609 continue to be part of the US implementing measures (under the DSB ruling) which is a violation of the principle on the general elimination of quantitative restrictions (Article XI:I of GATT 1994). However, the US has defended its action under the General Exceptions Clause, which the panel corroborated.

The Panel found the United States' implementation of its sea turtle protection law to be fully consistent with the WTO rules under the General Exception Clause and in compliance with the earlier recommendations of the Appellate Body. The Panel looked into the compatibility of the implementation measures with the relevant provisions of Article XX and held that the implementing measures taken by the US were provisionally justified under Article XX (g). As far as chapeau provisions of Article XX concerning arbitrary and unjustifiable discrimination and disguised restriction on international trade

were concerned, the panel ruled that the US measures under the revised guidelines along with the ongoing serious good faith efforts was justified under Article XX of GATT 1994.

The Panel also ruled that the revised US guidelines, 1999 provide for sufficient flexibility, transfer of technology, review and appeal process and hence are in compliance with the DSB ruling.[80]

According to the Panel, the decision of the Appellate Body regarding the requirement of a multilateral agreement on the protection of sea turtles is that for negotiation of an agreement and not conclusion of an agreement.[81] It cited the Inter American Convention as a benchmark of 'serious good faith efforts' and the financial contribution and involvement of the US with the South-East Asian Memorandum of Understanding, 2000 (a non-legally binding text) signed by 24 countries as ongoing serious, good faith efforts by the US to implement the DSB ruling.

The Panel also addressed Malaysia's claim that by imposing a unilaterally defined standard of protection of sea turtles, the US action violates the sovereign rights of Malaysia to pursue its environmental policy. According to the Panel, since at present Malaysia does not export to the US, it does not need to comply with the US requirement. However, it noted that in the event that Malaysia did export to the US, (as per the Appellate Body interpretation of Article XX), WTO Agreement does not provide for any recourse in such a situation. The decision has therefore legitimised the imposition of certain market access requirement such as a comparable regulatory/conservation programme on the exporting country within the meaning of GATT Article XX. However, for the sake of sovereignty, the Panel did argue for the "conclusion of an international agreement to protect and conserve sea turtles which would take into account the situation of all interested parties."

The Panel noted that in the case of sea turtles, while a multilateral agreement is preferred, "the possibility to impose a unilateral measure to protect sea turtles under Section 609 is more to be seen, for the purpose of Article XX, as the possibility to adopt a *provisional* measure allowed for emergency reasons than as a definitive 'right' to take a

permanent measure."[82] It therefore justified the US embargo as provisionally justified, pending a multilateral negotiated agreement.

What is significant is the fact that the Panel ruled that the US measures (trade embargo) was justified under Article XX in view of the revised guidelines and the US ongoing efforts at reaching a multilateral agreement on the protection of sea turtles. Therefore, it went a step further than the appellate body ruling and concluded that it is justified both under Article XX (g) and also within the meaning of the chapeau of Article XX. It implies that if a nation allows sufficient flexibility and takes serious good faith efforts at reaching a multilateral agreement, it can impose process-related environmental conditions or dictate conservation programmes on exporting countries. The conclusion of a multilateral agreement is irrelevant in such cases.

At the same time, the shrimp-turtle case highlights the weakness in the DSB of the WTO as far as the implementation question is concerned. Pending the final decision and implementation, during the intervening period, an embargo/ trade restriction continues as a result of which export and market access of countries is affected. The shrimp-turtle case that began in 1996 had proved to be inconclusive until late 2000. The WTO dispute settlement machinery which is considered to be efficient in many ways provides considerable opportunities for delay in implementation as demonstrated in this case.

V CONCLUSIONS

Based on the discussion above, the study has reached the following broad conclusions on the economic implications of the issue.

The net effect of the US embargo has been negligible in India. The sanctions have simply resulted in shifting to alternative exports such as cultured shrimps and hence, the impact on exports has been insignificant. Since many countries did not mandate the use of TEDs, shrimp export to such countries was unaffected.

As far as cost of TED is concerned, the use of TED does not impose significant costs for the shrimp industry in India. However, the combined effect of the cost of TED increased fuel cost and the loss of by-catch may result in reluctance to the use of TEDs on the part of fishermen and the cost of compliance and enforcement on part of the government may be significant.

In terms of its systemic implications, the decision in the shrimp-turtle case has virtually mainstreamed environmental requirements in the WTO through its interpretation of the relevant WTO articles.

The decision has legitimised the imposition of unilateral trade prohibition and process-related conditions and extra-jurisdictional requirements to protect environment, certainly for the transboundary environmental concerns and may subsequently pave the way for such requirements becoming part and parcel of international trade. Such requirements however, may be used for protectionist purposes and may operate as a non-tariff barrier. In future, there is a likelihood of more trade embargos in the name of environment, especially in cases where countries fail to comply with certain environmental policy requirements. Thus, the outcome of the shrimp-turtle case has all the potential for strengthening the hand of protectionist lobbies, in the name of conservation and protection of the environment. The threat of embargo can also be used to make countries adhere to certain policies and regulations, which they would otherwise not adopt due to various socio-economic compulsions

The question is how far will such measures go? Will they confine themselves to global commons and transboundary environmental problems or will they gradually extend to other environmental issues since the global common and global shared resource is an evolving concept and may include water, soil, etc in future. By the same logic, if global warming is a global environmental concern, can Bangladesh and Maldives which are going to be adversely affected by climate change and global warming, impose any credible trade sanctions against the US? Trade embargoes are not weapons of the weak. Given the unidirectional export from developing countries to the developed countries, it

is unlikely that trade embargoes can ever be used effectively by developing countries for environmental or any other purposes.

The justification of market access requirements can also be used to coerce countries into adopting certain MEAs. In this case, the absence of MEA on the protection of sea turtle *per se* paved the way for the unilateral US action and its justification by the appellate body. At the same time, trade measure (embargo on imports) taken by the US contributed to the signing of the Inter-American Convention to protect the Sea Turtles in 1996, and other regional arrangements, such as Memorandum of Understanding on the Conservation and Management of Marine Turtles and Their Habitats of the Indian Oceans and South-East Asia in July 2000. This practice could well get generalised in future and trade embargoes could become an instrument for imposing MEAs on developing countries. Subjected to trade embargoes, the affected countries would be more pliable to such an agreement than they would be otherwise due to a variety of reasons. A case in point is the International Dolphin Preservation Agreement, adopted in 1998. This emanated at the Tuna-II dispute, 1994, the ruling of which was not accepted by the US. Subsequent to these rulings, Panama Declaration on how to regulate the incidental intake of dolphins was signed between Mexico, US, France, Spain and other concerned countries. The US, on its part, enacted the International Conservation Programme Act in August 1997, containing provisions on lifting trade embargo on tuna, provided a binding international agreement comes into force to implement the Panama Declaration and it resulted in a binding legal agreement on the preservation of dolphins.

In view of the above, there is an urgent need to discuss the issues rated to all the WTO clauses on environment in order to arrive at a consensus through multilateral negotiations. Without a wider debate on the issue, the scope of Article XX is getting modified through jurisprudence, to include unilateral trade measures for environmental purposes, which is detrimental to the interests of developing countries.

The pro-active role of the dispute settlement process which is loaded against the developing countries given the lack of resources at their disposal needs to be limited. It would seem advisable to bring about a formal reform in Article XX, so that limits are

placed on the ability of WTO Members to impose their domestic laws through unilateral trade measures even though for environmental reasons.

APPENDIX

The Dispute Settlement Procedure in the WTO

The WTO's procedures for resolving trade disputes between countries[1] are laid out in the Dispute Settlement Understanding (DSU). The main components of the DSU are the Dispute Settlement Body (DSB), the Dispute Settlement Panel and the Appellate Body. The DSB (otherwise General Council) is constituted of all member nations and is the linchpin of the WTO dispute settlement process. It has the sole authority to set up dispute settlement panels, select appellate body members and accept or reject the findings of the panel and monitor the implementation of the rulings by the panel.

A panel of experts established by the DSB on request of the complainant is known as the dispute settlement panel. The decisions of the panels are automatically adopted unless rejected by consensus at the DSB. Since it involves persuading all members including the adversary nations in a particular case, its decisions are rarely rejected.

In case of an appeal (allowed only on point of law), the matter is referred to the Permanent Appellate Body consisting of seven members that represents a broad range of the WTO membership. The members have a four-year term and are experts in the field of law and international trade. They are not affiliated to any government.

The approximate time taken at each stage of the dispute settlement process is given in the table below.

Time Frame for the Settlement of Disputes Through Various Stages	
Consultations, mediation, etc	60 days
Panel set up and panellists appointment	45 days
Final panel report to parties	6 months
Final panel report to WTO members	3 weeks
Dispute Settlement Body adopts report (if no appeal)	60 days
Without appeal	**Total = 1 year**
Appeals report	60–90 days
Dispute Settlement Body adopts appeals report	30 days
With appeal	**Total = 1year 3months**

[1] In case they fail to resolve the dispute through mutual consultation, which is the preferred method for resolving disputes. Member-countries are therefore free to resolve their

Relevant GATT/WTO Articles

Article 1*: General Most-Favoured-Nation Treatment*

With respect to customs duties and charges of any kind imposed on or in connection with importation or exportation or imposed on the international transfer of payments for imports or exports, and with respect to the method of levying such duties and charges, and with respect to all rules and formalities in connection with importation and exportation, and with respect to all matters referred to in paragraphs 2 and 4 of Article III, any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties.

1. The provisions of paragraph 1 of this Article shall not require the elimination of any preferences in respect of import duties or charges which do not exceed the levels provided for in paragraph 4 of this Article and which fall within the following descriptions:

   (a) Preferences in force exclusively between two or more of the territories listed in Annexure A, subject to the conditions set forth therein;

   (b) Preferences in force exclusively between two or more territories which on July 1, 1939, were connected by common sovereignty or relations of protection or suzerainty and which are listed in Annexes B, C and D, subject to the conditions set forth therein;

   (c) Preferences in force exclusively between the United States of America and the Republic of Cuba;

   (d) Preferences in force exclusively between neighbouring countries listed in Annexes E and F.

Article XI: ***General Elimination of Quantitative Restrictions***

1. No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party.

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disputes though mutual consultation at any stage of the dispute settlement process.

Article XIII: ***Non-discriminatory Administration of Quantitative Restrictions***

1. No prohibition or restriction shall be applied by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation of any product destined for the territory of any other contracting party, unless the importation of the like product of all third countries or the exportation of the like product to all third countries is similarly prohibited or restricted.

Article XX: ***General Exceptions***

Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:

(b) necessary to protect human, animal or plant life or health;

(g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption;

Article XXIII: *Nullification or Impairment*

1. If any contracting party should consider that any benefit accruing to it directly or indirectly under this Agreement is being nullified or impaired or that the attainment of any objective of he Agreement is being impeded as the result of

(a) the failure of another contracting party to carry out its obligations under this Agreement.

Section 609 of the US Public Law 101–162

Sec. 609. (a) The Secretary of State, in consultation with the Secretary of Commerce, shall, with respect to those species of sea turtles the conservation of which is the subject of regulations promulgated by the Secretary of Commerce on June 29, 1987--

(1) initiate negotiations as soon as possible for the development of bilateral or multilateral agreements with other nations for the protection and conservation of such species of sea turtles;

(2) initiate negotiations as soon as possible with all foreign governments which are engaged in, or which have persons or companies engaged in, commercial fishing operations which, as determined by the Secretary of Commerce, may affect adversely such species of sea turtles, for the purpose of entering into bilateral and multilateral treaties with such countries to protect such species of sea turtles;

(3) encourage such other agreements to promote the purposes of this section with other nations for the protection of specific ocean and land regions which are of special significance to the health and stability of such species of sea turtles;

(4) initiate the amendment of any existing international treaty for the protection and conservation of such species of sea turtles to which the United States is party in order to make such treaty consistent with the purposes and policies of this section; and

(5) provide to the Congress by not later than on year after the date of enactment of this section--

(A) a list of each nation which conducts commercial shrimp fishing operations within the geographic range of distribution of such sea turtles;

(B) a list of each nation which conducts commercial shrimp fishing operations which may affect adversely such species of sea turtles; and

(C) a full report on--

(i) the results of his efforts under this section; and

(ii) the status of measures taken by each nation listed pursuant to paragraph (A) or (B) to protect and conserve such sea turtles.

(b)(1) **In General.**--The importation of shrimp or products from shrimp which have been harvested with commercial fishing technology which may affect adversely such species of sea turtles shall be prohibited not later than May 1, 1991, except as provided in paragraph (2).

(2) **Certification Procedure:** The ban on importation of shrimp or products from shrimp pursuant to paragraph (1) shall not apply if the President shall determine and certify to the Congress not later than May 1, 1991, and annually thereafter that--

(A) the government of the harvesting nation has provided documentary evidence of the adoption of a regulatory program governing the incidental taking of such sea turtles in the course of such harvesting that is comparable to that of the United States; and

(B) the average rate of that incidental taking by the vessels of the harvesting nation is comparable to the average rate of incidental taking of sea turtles by United States vessels in the course of such harvesting; or

(C) the particular fishing environment of the harvesting nation does not pose a threat of the incidental taking of such sea turtles in the course of such harvesting.

Chronology of the Shrimp-Turtle Dispute

Date	Event
1973	Endangered Species Act (ESA) is formulated in the US for protection and conservation of endangered species. All sea turtles occurring in US waters are listed as endangered.
1987	US issues regulation that requires use of Turtle Excluder Devices (TEDs) in specified areas where shrimp trawling was causing significant mortality of sea turtles.
1989	Section 609 is added to ESA. It calls US to take initiative towards bilateral and multilateral agreements for protection and conservation of sea turtles. More importantly, it provides that shrimp harvested by means causing significant sea turtle deaths would not be imported in US.
1990	1987 Regulation becomes fully effective and is modified to require use of TEDs in all areas at all times where shrimp trawling interferes significantly with sea turtles.
1991&1993	US issues guidelines for implementation of Section 609. It was applicable only to countries of the Caribbean/Western Atlantic.
December 1995	US Court of International Trade (CIT) directs US to extend the implementation of Section 609 to all countries. Deadline given is May 1, 1996
April 1996	US issues new guidelines to comply with CIT order of December 1995.
October 8, 1996	India, Malaysia, Pakistan and Thailand request for consultations with United States
January 9, 1997	Request by Malaysia and Thailand for the Establishment of a Panel to examine their complaint regarding prohibition imposed by the US on the importation of certain shrimp and shrimp products.
January 30, 1997	Request by Pakistan for the Establishment of a Panel to examine its complaint regarding prohibition imposed by the US on the importation of certain shrimp and shrimp products.
February 25, 1997	Request by India for the Establishment of a Panel to examine its complaint regarding prohibition imposed by the US on the importation of certain shrimp and shrimp products. The DSB established two panels in accordance with request by Malaysia and Thailand, and Pakistan, agrees to consolidate these two panels into a single panel.
April 10, 1997	DSB establishes another panel in accordance with the request made by India and agrees to merge this panel too with the earlier panel established on February 25, 1997
May 15, 1998	Report of the Panel
July 13, 1998	US appeal certain issues of law and legal interpretation in the Original Panel Report.
September 9, 1998	Communication from the Appellate Body
October 12, 1998	Report of the Appellate Body: The Report finds that though Section 609 qualified for provisional justification under Article XX(g), it failed to meet the requirements of the chapeau of Article XX.
November 25, 1998	US inform the DSB of its intention to implement the recommendations and ruling of the DSB within a “reasonable period of time”.

January 21, 1999	The US and the other parties to the original dispute agree to a 13 month period of time for the US to comply with the recommendations and ruling of the DSB. This time period expired on December 6, 1999.
July 8, 1999	US issues Revised Guidelines for the implementation of Section 609.
July 15, 1999 September 8, 1999 October 15, 1999 November 9, 1999 January 17, 2000	Status Report by the United States Regarding Implementation of the Recommendations and Rulings
January 12, 2000	Understanding between Malaysia and the United States Regarding Possible Proceedings under Articles 21 and 22 of the DSU
October 13, 2000	Recourse by Malaysia to Article 21.5 of the DSU
June 15, 2001	Recourse to article 21.5 by Malaysia - Report of the Panel

Table 1: Details of nesting of Marine Turtles

Species	Occurrence	Nesting area	Nesting season	Nesting intensity
Green Turtle	Sporadic in coastal mainland and A&N Island	Gujarat (Kutch & Sourashtra)	-	Moderate
		Maharashtra (Thane)	July-Jan	Sparse
		Tamil Nadu (Gulf of Mannar & Palk Strait)		Sparse
		A & N Islands	Nov-Jan	Moderate
		Lakshadweep	June-Sep	Moderate
Hawksbill	-do-	Tamil Nadu	-	Extremely Low
		Andhra Pradesh	-	
		Orissa	-	
		Gujarat	-	Rare
		A & N Islands	April-Jan	Moderate
		Lakshadweep	-	Rare
Leatherback	-do-	Tamil Nadu	-	Very rare
		A & N Islands	Dec-April	Moderate
		Lakshadweep	-	stray
Loggerhead	Tamil Nadu (sparse)	Not known	Not known	-
Olive Ridley	Almost throughout the main land and Bay Islands	Gujarat	July-Sept	Moderate
		Maharashtra	-do-	Stray
		Goa	-do-	Stray
		Karnataka	-do-	Stray
		Kerala	-do-	Stray
		Tamil Nadu	Dec-Feb	Moderate

Andhra Pradesh	-do-	Moderate
Orissa	-do-	Mass nesting
West Bengal	-do-	Moderate
A & N Island	-do-	Stray
Lakshadweep	June-Sept	Stray

Source: Reproduced from Expert Scientific Panel Report 2000.

Table 2: State-wise Estimated Numbers of Turtles Landed/Stranded during 1997, 1998 & 1999 (barring the mortality at Gahirmatha coast

State	***Landed/trapped***			***Stranded***			***Total***		
	1997	**1998**	**1999**	**1997**	**1998**	**1999**	**1997**	**1998**	**1999**
West Bengal		28		96	97	60	96	125	60
Orissa	199	305	130	129	201	378	328	506	508
Andhra Pradesh	175	159	114	209	276	587	384	435	701
Tamil Nadu	1518	900	69	538	457	510	2056	1357	579
Kerala	270	182	69	4			274	182	69
Karnataka				10			10		
Goa	24					10	24		10
Maharashtra				18			18		
Gujarat									
Total	***2186***	***1574***	***382***	***1004***	***1031***	***1545***	***3190***	***2605***	***1927***

Source: Reproduced from the Expert Scientific Panel Report

Table 3: Share of Various Markets in India's Marine Exports (in m. Tones)

	1995–96	1996–97	1997–98	1998–99	1999–00
Total Exports	296277	378199	385818	302934	343031
Share of					
Japan	51789	64656	70955	67277	66990
	17.48	17.10	18.39	22.21	19.53
USA	26008	29792	32914	34472	36645
	8.78	7.88	8.53	11.38	10.68
EU	87212	71192	34875	54261	65402
	29.44	18.82	9.04	17.91	19.07
Middle East	9016	9672	17618	17274	13274
	3.04	2.56	4.57	5.70	3.87
South East Asia	112504	189456	218263	116610	147749
	37.97	50.09	56.57	38.49	43.07

Share of Various Markets in India's Marine Exports (in $ Mn.)

	1995–96	1996–97	1997–98	1998–99	1999–00
Total Exports	1111.46	1152.83	1295.86	1106.91	1189.09
Share of					
Japan	500.54	527.56	641.67	549.16	528.18
	45.03	45.76	49.52	49.61	44.42
USA	116.27	121.97	161.04	147.68	180.19
	10.46	10.58	12.43	13.34	15.15
EU	289.48	221.01	113.81	163.78	210.43
	26.05	19.17	8.78	14.80	17.70
Middle East	25.07	17.78	39.91	35.4	26.75
	2.26	1.54	3.08	3.20	2.25
South East Asia	159.06	239.00	314.23	183.27	212.58
	14.31	20.73	24.25	16.56	17.88

Source: MPEDA

Table 4: Shrimp Export (in m. tones)

	Live	Chilled	Dried	Frozen	Total	Fro./Total (%)
1993–94				86541	86541	100.00
1994–95	2		234	102335	102571	99.77
1995–96	10	213	358	95724	96305	99.40
1996–97	1	55	1102	105426	106584	98.91
1997–98	1	126	354	101318	101799	99.53
1998–99		115	223	102484	102822	99.67
1999–00	15	71	203	110275	110564	99.74

Shrimp Export (value in Rs. crore)

	Live	Chilled	Dried	Frozen	Total	Fro./Total (%)
1993–94				1770.73	1770.73	100.00
1994–95	0.2	0.01	1.13	2518.06	2519.4	99.95
1995–96	0.02	2.17	1.76	2356.81	2360.76	99.83
1996–97	0.02	1.83	3.24	2701.76	2706.85	99.81
1997–98	0.01	5.07	0.87	3140.56	3146.51	99.81
1998–99		5.1	0.69	3344.91	3350.7	99.83
1999–00	0.23	2.85	0.66	3645.22	3648.96	99.90

Source: MPEDA

Table 5 : Major Markets for Indian Frozen Shrimp and Shares (in $ mn.)

	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00
Total Exports		748.19	755.74	866.37	800.22	847.07
Share of						
Japan	471.78	452.71	473.12	588.6	506.34	481.77
		60.51	62.60	67.94	63.28	56.87
USA	134.36	62.1	93.9	129.03	111.17	147.28
		8.30	12.42	14.89	13.89	17.39
EU	132.7	157.23	135.98	54.38	88.24	122.02
		21.01	17.99	6.28	11.03	14.40
Others		76.15	52.74	94.36	94.47	96.00
		10.18	6.98	10.89	11.81	11.33

Major Markets for Indian Frozen Shrimp and Shares (in m. tones)

	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00
Total Exports	86541	101751	95724	105426	101318	102484	110275
Share of							
Japan	36564	43856	41955	50616	56640	52360	51945
	42.25	43.10	43.83	48.01	55.90	51.09	47.10
USA	16891	22842	16556	16467	19723	18046	21391
	19.52	22.45	17.30	15.62	19.47	17.61	19.40
EU	28417	24653	29397	29330	9195	17884	21728
	32.84	24.23	30.71	27.82	9.08	17.45	19.70
Others	1753	3319	3566	3260	5954	5357	5797
	2.03	3.26	3.73	3.09	5.88	5.23	5.26

Source: MPEDA & Marine Products Export Review

Table 6 : Shrimps Exports from India

Year	Total Shrimp Exports			Contribution of Cultured Shrimp				
					Product exported			
	Annual shrimp landings	Quantity (mt)	Value (Rs. Mn)	Total production (mt)	Weight (mt)	% of total weight of shrimp exported	Value (in Rs. Mn)	% of total value of shrimp exported
1990-91	253626	62396	6633.2	35500	23075	36.98	3764.0	56.77
1991-92	290267	76107	9661.6	40000	26000	34.16	5447.6	55.81
1992-93	281766	74393	11802.6	47000	30550	41.06	7662.5	64.93
1993-94	266727	86541	17707.3	62000	40300	47.14	12889.3	72.79
1994-95	321234	101751	25102.7	82850	53853	52.92	18662.3	74.35
1995-96	265284	95724	23560.0	70573	47922	50.96	15316.9	64.09
1996-97	315153	105426	27017.8	70686	45945	43.58	16425.6	60.80
1997-98	291590	101318	31405.6	66868	43454	42.90	20860.0	66.42
1998-99	304541	102484	33449.0	82634	53816	52.41	25110.0	75.07
1999-00		110275	36452.2	86000	54000	48.96	27820.0	76.32
2000-01		111874	44815.1	113700	65894	58.90	38700.0	86.35

Source: MPEDA

Table 7: Share In US Shrimp Imports (in $ mn.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total US Imports	1856.67	2017.43	2169.58	2667.78	2580.89	2457.5	2953.59	3112.41	3138.45	3757.3	3626.8
Of which											
India	67.44	60.52	82.43	142.26	109.96	118.59	138.68	150.85	160.76	239.58	264.75
	3.63	3.00	3.80	5.33	4.26	4.83	4.70	4.85	5.12	6.38	7.30
Thailand	432.49	524.31	701.43	981.05	981.09	888.41	920.95	1088.06	1196.97	1498.4	1266.05
	23.29	25.99	32.33	36.77	38.01	36.15	31.18	34.96	38.14	39.88	34.91
Malaysia	21.22	16.69	12.14	11.46	8.91	5.63	2.94	4.48	6.69	12.66	14.94
	1.14	0.83	0.56	0.43	0.35	0.23	0.10	0.14	0.21	0.34	0.41
Pakistan	16.64	11.16	11.82	21.22	13.01	14.09	11.11	6.85	9.65	7.46	10.94
	0.90	0.55	0.54	0.80	0.50	0.57	0.38	0.22	0.31	0.20	0.30
Sum Of Top 4	537.79	612.68	807.82	1155.99	1112.97	1026.72	1073.68	1250.24	1374.07	1758.1	1556.68
	28.97	30.37	37.23	43.33	43.12	41.78	36.35	40.17	43.78	46.79	42.92

Share In US Shrimp Imports (In Mn Kg.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total US Imports	244.76	270.09	272.6	284.83	270.89	264.21	294.08	315.44	331.71	345.08	400.38
Of which											
India	17.51	17.7	19.12	22.59	17.72	18.95	20.01	20.15	21.82	28.37	32.88
	7.15	6.55	7.01	7.93	6.54	7.17	6.80	6.39	6.58	8.22	8.21
Thailand	45.48	53.86	66.8	80.79	77.8	72.72	73.4	92.26	114.5	126.45	136.08
	18.58	19.94	24.50	28.36	28.72	27.52	24.96	29.25	34.52	36.64	33.99
Malaysia	3.52	3.3	1.97	1.65	1.22	0.82	0.32	0.73	0.83	1.09	1.49
	1.44	1.22	0.72	0.58	0.45	0.31	0.11	0.23	0.25	0.32	0.37
Pakistan	5.29	3.13	3.10	3.84	2.26	2.43	1.35	1.45	1.38	0.98	1.5

	2.16	1.16	1.14	1.35	0.83	0.92	0.46	0.46	0.42	0.28	0.37
Sum of Top 4	71.8	77.99	90.99	108.87	99	94.92	95.08	114.59	138.53	156.89	171.95
	29.33	28.88	33.38	38.22	36.55	35.93	32.33	36.33	41.76	45.46	42.95

Source: www.st.nmfs.gov (US Govt. Website)

Table 8: Shrimp Exports to US (value in $ mn)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Belize	1.14	2.6	3.92	4.52	5.87	4.29	7.4	11.12	22.8	22.11	20.62
Brazil	23.66	35.48	29.16	33.77	15.77	6.53	4.86	7.38	14.89	53.13	63.64
Colombia	36.63	24.58	25.5	29.3	24.84	26.51	28.54	20.98	27.27	32.81	31.18
Costa Rica	6.96	5.05	8.37	12.14	12.74	15.51	15.87	10.83	15.18	14.18	10.28
Guatemala	15.58	12.81	20.73	27.02	18.47	29.6	19.05	18.81	16.05	15.76	19.12
Guyana	16.31	13.56	14.5	16.86	18.1	22.22	25.67	29.72	28.1	40.37	53.19
Honduras	42.02	53.76	67.24	77.03	66.61	69.56	70.18	67.15	67.26	84.18	72.57
Mexico	181.92	146.14	211.45	254.02	342.87	327.72	374.1	382.52	386.1	403.01	380.96
Nicaragua	3.36	1.79	8.17	17.55	29.71	25.3	28.66	31.3	37.18	44.14	36.27
Panama	47.24	48.39	51.36	64.86	77.49	68.57	87.13	91.55	68.93	64.65	70.45
Venezuela	27.2	16.11	29.83	40.61	41.52	47.86	76.16	47.7	93.57	141.5	78.7
Sum	402.02	360.27	470.23	577.68	653.99	643.67	737.62	719.06	777.33	915.84	836.98
US Shrimp Imports	1856.67	2017.43	2169.58	2667.78	2580.89	2457.5	2953.59	3112.41	3138.45	3757.33	3626.8
Share	21.65	17.86	21.67	21.65	25.34	26.19	24.97	23.10	24.77	24.37	23.08

Shrimp Exports to US (in m. tones)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Belize	135.31	312.19	549.63	512.45	598.98	501.2	736.82	1386.14	2240.51	2238.49	2761.94
Brazil	3753.4	5504.25	4452.7	4632.3	1887.66	905.58	551.46	821.73	1911.93	5895.66	9818.58
Colombia	4571.54	2793.78	3240.47	3126.42	3112.19	3036.67	3252.53	2128.52	2734.28	2796.61	3159.73
Costa Rica	685.37	548.09	1243.79	1165.69	1257.58	1526.33	1792.34	831.32	1186.12	1091.87	1028.9
Guatemala	2217.03	2173.17	3288.52	3662.12	2710.87	4163.05	2165.49	2369.49	1816.1	1653.57	2686.5
Guyana	2811.66	2502.93	2614.47	3095.23	3282.7	3998.4	4287.86	5631.13	5701.19	8632.57	11689.65
Honduras	5877.73	7620.5	9511.56	9047.74	8443.56	8871.94	8176.76	8614.26	7402.32	7880.06	9684.68
Mexico	16647.47	13662.08	20384.55	22940.99	33101.29	30786.79	33958.48	35434.91	35046.11	29047.43	30016.68
Nicaragua	473.18	252.22	1016.63	2098.54	3587.5	3371.31	3431.23	3798.07	4331.66	4826.92	5033.68
Panama	5926.18	5491.78	6333.99	7023.86	8582.88	8660.43	10540.43	10190.36	7757.2	5850.55	6884.23
Venezuela	3464.07	1843.47	3547.87	4295.2	4821.66	6857.74	8663.24	5721.63	12058.8	14884.81	9517.22

Sum	46562.94	42704.46	56184.18	61600.54	71386.87	72679.44	77556.64	76927.56	82186.22	84798.54	92281.79
US Shrimp Imports	244757.7	270085.3	272601.7	284828.3	270891.4	264207.2	294077.7	315442.4	331706.5	345076.8	400337.1
Share	19.02	15.81	20.61	21.63	26.35	27.51	26.37	24.39	24.78	24.57	23.05

Source: *www.st.nmfs.gov*

Notes

[1] The CTE is governed by the principle that the WTO is not an environmental agency but principally, a trade body, i.e., its role is limited to only those environmental policies which have implications for trade and that in case of dispute between environment and trade instruments, the principles of WTO system must be upheld; *Marrakesh Agreement and the Decision, 1994*, http://www.wto.org/english/tratop_e/envir_e/hist2_e.htm

[2] In addition to these, the Agreement on Subsidies and Countervailing Measures (SCM Agreement) contained provisions on environment. The agreement deals with the three different categories of subsidies having impact on international trade. " (i) prohibited subsidies are subject to an accelerated dispute settlement procedure and a Member found to grant or maintain such a subsidy must withdraw it without delay; (ii) actionable subsidies, i.e. subsidies other than prohibited and non-actionable subsidies, can in principle be granted or maintained, but may be challenged in WTO dispute settlement or subject to countervailing action if they cause adverse effects to the interests of other Members; and (iii) non-actionable subsidies (i.e. non-specific subsidies and defined specific subsidies) are not subject to countervailing action nor to dispute settlement challenge." Under the non-actionable category of subsidies, the Agreement on Subsidies and Countervailing Measures allows up to 20 per cent subsidies to implement new environmental laws or measures. In other words, up to 20 per cent of the cost of adaptation would be considered a non-actionable subsidy. The Agreement however has lapsed after a five-year period on 1 January 2000, since no discussion took place on this issue.

[3] These include measures for pollution abatement, waste management, energy conservation; standards and labelling (including eco-labels); handling requirements; economic instruments and regulations; measures for the preservation of natural resources, and measures taken for the implementation of multilateral environmental agreements.

[4] These issues are part of a larger and more enduring debate on the impact of trade liberalisation and environment. The liberal economists believe that environmental objectives and trade goals are complementary and that environment is one of the many factors of production which affects a country's competitive advantage. For example, a country rich in wildlife will have a competitive advantage for trade in tourism and wildlife products. The revenues so generated can be used for the sustainable use of wildlife and nature resorts. The environmental lobby sees a negative relationship between trade liberalisation and environment. It is argued that trade liberalisation on its own will not be adequate for sustainable development. Due to lack of adequate policy incentives, markets may fail in the environmental field and lead to undesirable consequences. Therefore, in order to establish complementarities between trade liberalisation and environment, governments must adopt a combination of policy instruments, such as taxes, regulation, public projects, macroeconomics management and institutional reforms. They demand a comprehensive assessment of the environmental impact of the present trade system and reforming the WTO to incorporate environmental concerns.

[5] Other issues of concern are the relationship between the multilateral trading system and environmental policies with trade impacts (such as charges and taxes for environmental purposes; and other requirements relating to products, including standards and technical regulations, packaging, labelling and recycling); transparency of trade measures used for environmental purposes and environmental measures with significant trade effects; the issue of exports of domestically prohibited goods; relationship between TRIPS Agreement and trade in services. Of late, trade restrictions on account of precautionary principle also are becoming a subject of intense debate. EU argues for evolving a common understanding to mitigate risks on human health and environment in case of scientific uncertainty, particularly with respect to genetically modified organism.

[6] Studies have found that emerging environmental requirements in developed countries do have some effect on market access and competitiveness. Such environment requirements are sector specific and are affecting trade in sectors such as fishery, forestry products, leather and footwear, textiles and clothing.

Studies indicate that about one-third of the value of total exports and about half of the value of manufactured exports of developing countries originate in sectors where environmental requirements are emerging. Among Asian developing countries, 60 per cent of their manufactured exports in value terms originate in such sectors. A number of product requirements such as the use of specific chemicals and eco-labelling apply to these sectors which serve as a non-tariff barrier and also involve additional costs. The small and medium enterprises (SMEs) face more formidable compliance cost. (UNCTAD, *Asian and Pacific Developing Economies and the First WTO Ministerial Conference: Issues of Concern*, NY: UN, 1996, pp. 193–194; CTE, *The Study of the Effects of Environmental Measures on Market Access: Communication from India*, WT/CTE/W/177, 27 October 2000.

[7] Empirical studies conducted by UNCTAD and OECD have indicated that 'eco-dumping' does not have any competitive effect. The initial fear about migration of polluting industries to countries with 'low' environmental standard, the so-called 'pollution haven', have proved to be unfounded. The competitive effect of environmental regulations has also been found to be minor.

[8] WTO Ministerial Conference, Fourth Session, Doha, 9–13 November 2001, Statement by Statement by the Honourable Murasoli Maran, Minister of Commerce and Industry, India, WT/MIN(01)/ST/10, 10 November 2001.

[9] WTO Ministerial Conference, Fourth Session, Doha, 9–13 November 2001, Statement by H.E. Mr Celso Lafer, Minister of Foreign Relations, Brazil, WT/MIN(01)/ST/12, 10 November 2001.

[10] WTO Ministerial Conference, Fourth Session, Doha, 9–13 November, 2001, Statement by H.E. Mr Alexander Erwin, MP, Minister of Trade and Industry, South Africa, WT/MIN(01)/ST/7, 10 November 2001.

[11] WTO Ministerial Conference, Fourth Session, Doha, 9–13 November, 2001, Statement by Mr Chau Tak Hay, Secretary for Commerce and Industry, Hong Kong (China), WT/MIN(01)/ST/18, 10 November 2001

[12] US, *Preparation for the 1999 Ministerial Conference: Trade and Sustainable Development, Communication from the United States*, 30 June 1999.

[13] 'US Wins W7TO Case on Sea Turtle Conservation: Ruling Reaffirms WTO Recognition of Environmental Concerns'*, USTR Press Release*, 22 October 2001 at USTR website: www.ustr.gov

[14] *Trade and Environment: What Europe Really Wants and Why*: *Memorandum Doha*, 11 November 2001, Europa Website at www.Europa.eu.in

[15] WTO Ministerial Conference, Fourth Session, Doha, 9–13 November 2001, Statement by H.E. Mr Laurent Fabius, Minister for Economy, Finance and Industry, France, WT/MIN(01)/ST/15, 10 November 2001.

[16] WTO Ministerial Conference, Fourth Session, Doha, 9–13 November 2001, Statement by H.E. Dr. Axel Gerlach, State Secretary, Federal Ministry of Economics and Technology, Germany, WT/MIN(01)/ST/11, 10 November 2001.

[17] Canadian Department of Foreign Affairs and International Trade, http://www.dfait-maeci.gc.ca/

[18] Factually speaking, out of nearly 200 MEAs, about ten per cent of MEAs have trade provisions. Some of the MEAs deal with transboundary and global health and environmental problems caused by international trade and other economic activities. MEAs also address the environmental impact of cross-border economic activities, such as trade and investment. For example, the Basel Convention on Transboundary Movement of Hazardous Wastes seeks to prevent damage to health and environment caused by transboundary shipments of hazardous waste. The Convention on Prior Informed Consent for Trade in Dangerous Chemicals aims at mitigating the dangers posed by international trade in chemicals. Some of the other important MEAs with trade provisions are Montreal Protocol on Substances that

Deplete the Ozone Layer, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Kyoto Protocol on Climate Change and Cartagena Protocol on Biosafety.

[19] WTO, *Trade and Environment Bulletin*, 30 July 1999, p. 5

[20] Canadian Department of Foreign Affairs and International Trade, http://www.dfait-maeci.gc.ca/

[21] According to the EU, "an MEA is a legally binding instrument the aims of which include environmental protection, open to all countries concerned, and relevant to the aims set out in the headnote of GATT Article XX and sub-paragraphs (b) and (g). To avoid lacunae, relevant regional agreements, such as regional fisheries agreements, should also be covered."

[22] At the moment, the onus falls on a WTO member defending a measure under GATT Article XX to prove that the measure, if deemed incompatible with other GATT provisions, nevertheless meets the requirements laid down in Article XX. The EU proposal on reversing the burden of proof would does not jeopardise the right of any WTO Member to resort to dispute settlement nor alter in any way the substantive requirements of GATT Article XX.

[23] CTE, *Resolving the Relationship between WTO Rules and Multilateral Environmental Agreements: Submission by the European Community*, WT/CTE/W/170, 19 October 2000.

[24] WTO, *Trade and Environment Bulletin*, 30 July 1999.

[25] WTO, *Trade and Environment Bulletin*, 30 July 1999.

[26] CTE, *The Relationship between the Provisions of the Multilateral Trading System and Trade Measures for Environmental Purposes, including those Pursuant to Multilateral Environmental Agreements: Communication from New Zealand*, WT/CTE/W/180, 9 January 2001.

[27] In order to be approved, waiver require consensus or three-fourth majority of the WTO members.

[28] *Trade and Environment Bulletin*, 27 September 1996.

[29] Some of the prominent ones, apart from the shrimp-turtle dispute, are *US restriction on the import of Mexican Tuna (Tuna-1)* (not adopted but circulated on) 3 September 1991*, and US restrictions on Imports of Tuna (Tuna-II)* (not adopted but circulated on 16 June 1994 and *Gasoline Case of Venezuela and Brazil against the US (adopted on),* 20 May 1996.

[30] Exemptions were allowed if the shrimp products were harvested in a manner which did not adversely affect the sea turtles. These include, shrimps harvested by aquaculture methods, use of TED comparable to the effectiveness to those required in the US programmes, fishing that does not involve mechanical devices, or vessels with gears, which in accordance with the US programme do not need to use TEDs and shrimp farming carried out in the region where sea turtles do not occur.

[31] All the seven species of sea turtles are listed in Appendix I (on species threatened with extinction which are or may be affected by trade) of the Convention on International Trade in Endangered Species (CITES) and except flatbacks are also listed in the Convention on Migratory Species of Wild Animals (CMS) and the IUCN Red List of Endangered and Vulnerable Species.

[32] According to ICUN Status (from the ICUN Red List of Threatened Animals), 2 species of turtle (the Hawksbill Turtle and Kemps Ridley) are critically endangered, 4 are endangered (Green Turtle, Loggerhead Turtle, Olive Ridley and Leatherback Turtle) and remaining one (Flat Back Turtle) is vulnerable.

[33] The NMFS and environmental groups argue that although the actual catch depends on a number of factors, the proper use of TED in actual trials does not cause more than 3 per cent loss in the shrimp catch.

[34] All these bills were not passed by the US Congress but they point to the importance given to the issue within the US.

[35] US Congressional Records, Mr. Tauzin, *Increasing the Populations of Threatened and Endangered Species*, House of Representatives - 21 July 1989, p. H4045.

[36] US Congressional Records, Mr. Smith, *Turtle Protection Parity Act of 1989*, House of Representatives, 14 June 1989, p. H2529.

[37] US Congressional Records, Hon. James A. Hayes, *If We Mean Protection, Let's Require Protection*, House of Representatives, 11 October 1989, p. E3376.

[38] US Congressional Records, Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations**,** 1990, Senate – 29 September 1989, p. S12267– S12191.

[39] Although the revised guidelines mitigated this problem to some extent, the US embargo continues to subject exporting countries to import prohibition failing the stipulated US requirements such as the use of TED.

[40] Mexico, Belize, Guatemala, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Venezuela, Trinidad and Tobago, Guyana, Surinam, French Guyana and Brazil.

[41] The Convention has been signed by twelve countries: Belize, Brazil, Costa Rica, Ecuador, Honduras, Mexico, Nicaragua, Peru, the Netherlands, United States of America, Uruguay, and Venezuela. It has been ratified by nine countries (Brazil, Costa Rica, Ecuador, Honduras, Mexico, Peru, the Netherlands, United States of America, and Venezuela) and has entered into force.

[42] Website of the Inter-American Convention for the Protection and Conservation of Sea Turtles, http://www.seaturtle.org/iac/intro.shtml

[43] Apart from the Earth Island Institute, other NGOs were the American Society for the Prevention of Cruelty to Animals and the Humane Society of the United States and Sierra Club.

[44] It contained a provision wherein with effect from 1 May 1996, all shrimp products were to be accompanied by Shrimp-Exporter's Declaration form attesting that shrimp and its products were harvested in conditions that do not affect the sea turtles. In 1996, CIT in another case ruled that the embargo applied to all shrimp and shrimp products from countries which were not certified and the provision in the 1996 guidelines of a declaration form also were contrary to Section 609. It thus ruled that unless the exporting nation used TED that is comparable to the US programme, shrimp should not be imported into the US. In 1998, the US Court of Appeals for the Federal Circuits vacated this ruling on procedural grounds (since the plaintiffs had earlier withdrawn the case) and the imports from uncertified nations were allowed subject to a number of safeguards.

[45] *Report of the Panel on United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/R, 15 May 1998, pp. 5–6.

[46] C S Kar and S. Bhaskar, 'The Status of Sea Turtles in the Eastern Indian Ocean' in K A Bjorndal, ed. *Biology and Conservation of Sea Turtles*, Smithsonian Institution Press, Washington D. C., 1982, p.365–372.

[47] Government of India, *Study on the Distribution of Sea Turtles, Their Incidental Mortalities in Fishing Nets and Use of Turtle Excluder Device in Fishing Trawlers: Report of the Expert Panel*, New Delhi: Ministry of Agriculture, 2000.

[48] Among these markets, Japan tops the list both in value and in quantity terms, and is followed by the EU, which in turn is followed closely by the USA. See Table 3.

[49] Aquaculture is defined as the rearing of aquatic organisms under controlled or semi-controlled conditions.

[50] For more details on the Indian fisheries industry refer to the *Handbook of Fisheries Statistics 2000*, New Delhi: Department of Animal Husbandry and Dairying, Ministry of Agriculture.

[51] However, increase in aquacultural production in the country has given rise to local environmental problems. For this reason, a case against aquaculture producers was filed in the Supreme Court of India that came out with a set of guidelines for the producers. Also, shrimping through aquaculture is susceptible to viral diseases. Hence, appropriate health management measures are needed to sustain the aquaculture industry. For more details on these issues see GOI, *Aquaculture and the Environment—An Environment Impact Assessment Report, Submitted to the Supreme Court of India*, Chennai: Agriculture Authority, Government of India, 2001 and *Supreme Court Judgement in the case Related to Aquaculture*, 11December 1996.

[52] The importance of US as export destination is growing as reflected in its recent shares. In 2000–01, the share of US in total marine exports from India was 11 per cent in terms of quantity and 15 per cent in terms of value. Its share in frozen shrimp exports from the country was 19.4 per cent and 17.4 per cent in quantity and value terms, respectively.

[53] This was in large part due to a series of cyclones (two of them quite severe) that hit coastal Andhra Pradesh—the state that leads in cultured farming. The cyclone adversely affected production of cultured shrimps in the state. Since cultured shrimps production and exports declined in 1996–97, an increase in exports to the Japanese market must have been met through captured shrimp exports.

[54] Shankar, K.M. et. al., 'Monoclonal Antibodies in Fish and Shellfish Health Management in India' in *Naga: The ICLARM Quarterly*, vol.23, no.4, October–December 2000.

[55] *Supreme Court Judgement in the case Related to Aquaculture*, 11 December 1996.

[56] In the Eastern Hemisphere, India is the fourth largest shrimp aquaculture producer, after Thailand, China and Indonesia. With a growth rate of about 300 per cent over the last decade, India is amongst the major shrimp producing countries.

[57] This result is in contrast to the above finding (on export of shrimps to the US) that shows a modest decline in exports to the US. The difference in the two results could be due to: (i) the difference in fiscal year and calendar year, and (ii) the fact that in the above analysis we confined ourselves to only frozen shrimp exports from India. The difference, which in any case is not much, may be due to the increase in exports of shrimps to US in other forms. Indeed, Table 4 shows an increase in dried shrimp exports from the country in 1996–97. This may have gone to the US market but absence of data doesn't permit us to make that point strongly.

[58] The EU imposed a ban on marine imports of marine products from India on the ground that India was not following EU directives on quality standards and monitoring. The ban was lifted on 23 December 1997, following steps taken by the government to enforce standards of hygiene in the marine products units.

[59] MPEDA, *Installation of TED in Mechanised Trawls: Note prepared by MPEDA*, 2001.

[60] *Report of the Panel on United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/R, 15 May 1998, p. 131.

[61] Indian position as stated in the *Report of the Panel on United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/R, 15 May 1998, p 8.

[62] The validity of the US action under the most favoured nation treatment and the non-discriminatory use of quantitative resections were not looked into by the panel since US policies were found to be violating Article XI(1).

[63] *Report of the Panel on United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/R, 15 May 1998., pp. 290–291.

[64] ibid, p 298.

[65] In the 1996 Gasoline Case between the US vs Venezuela and Brazil too, the Appellate Body stated that "it is important to underscore that the purpose and object of the introductory clause of Article XX is generally the prevention of 'abuse of the exceptions of Article XX.'" According to it "in order that the justifying protection of Article XX may be extended to it, the measure at issue must not only come under one or the other of the particular exceptions—paragraphs (a) to (j)—listed under Article XX; it must also satisfy the requirements imposed by the opening clauses of Article XX. The analysis is, in other words, two-tiered: first, provisional justification by reason of characterisation of the measure under Article XX (g); second, further appraisal of the same measure under the introductory clauses of Article XX. " It held that Article XX must be applied on a case by case basis with careful scrutiny of the specific facts of the case in question. The Panel in the shrimp-turtle case however reversed that approach and noted that "as the conditions contained in the introductory provision apply to any of the paragraphs of Article XX, it seems equally appropriate to analyse first the introductory provision of Article XX."

[66] The US requested invocation of Article XX (b) only if the US Section 609 and the implementing guidelines fall outside the scope of Article XX (g). Since the Appellate Body found the US policies within the scope of Article XX (g), it did not analyse the validity of such measures under Article XX (b).

[67] The policies relating to the use of TED were designed and shaped unilaterally by the US Department of States with no participation from the exporting countries. The process of certification, and its implementation was also carried out by the US agencies. Moreover, the US measures forced countries to adopt regulatory programmes which were essentially same as that applied in the US without any regard to different conditions in other countries. Also, some countries were given different phase-in periods. The cumulative effect of the US policies thus was considered to be causing unjustifiable discrimination.

[68] The lack of flexibility and unbending requirement forcing countries to adopt essentially the same regulatory programmes as that in the US, lack of transparent and predictable certification process with no formal provision for a review or appeal was interpreted as amounting to arbitrary discrimination.

[69] *Report of the Appellate Body* on *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, 12 October 1998, para 165–166.

[70] The embargo applied to both Mexico (called primary nation embargo) and the countries that bought from Mexico and after handling/processing/canning exported to the United States (intermediary nation embargo). Mexico went to the Dispute Settlement Panel of the WTO arguing that the US action violated national treatment clauses under Articles III as well as prohibition of quantitative restrictions under Article XI and amounts to discrimination based on geographic area and hence, was also a violation of Article XIII. The US justified its action under the General Exception Clauses of Article XX (b), (g) and (d), which allows states to take action in order to protect animal life and to preserve non-renewable natural resources. With regard to geographic distribution, the US maintained that the embargo did not discriminate on the basis of the origin of the tuna but with respect to the sea in which such tuna was caught. The US thus argued the embargo was GATT consistent.

[71] The US justified the import restriction as a measure to protect dolphins' population citing its domestic legislation called Mammal Protection Act (MIPA). The Act prohibits catch and importation of such tuna into the US which had been caught in the Eastern Tropical Pacific by using *purse seine* net ships or on high seas using drag nets, the use of which causes dolphin mortality. The only exception to this

restriction according to the US would be when at the end of the season, the number of dolphins killed by the tuna exporting state were not more than 1.25 times of the number killed by US fishermen during the same season.

[72] The US did not accept the ruling and the matter was sorted out by mutual agreement between Mexico and the US.

[73] Similar to the Tuna - I, the panel ruled that the US measure (primary and intermediary embargo) was a violation of Article XI (1) and Article III.

[74] Two earlier Panels (*Panel Report on Canada –Measures Affecting the Exports of Unprocessed Herring and Salmon*, adopted on 22 March 1988 and *Panel Report on United States – Prohibition of Imports of Tuna and Tuna Products from Canada*, adopted on 22 February 1982) have considered Article XX (g) to be applicable to policies related to migratory species of fish and made no distinction between fish caught within or outside the territorial jurisdiction of the contracting party invoking that provision. In the Herring and Salmon case, the Panel also held that salmon and herrings are "exhaustible natural resources" within the meaning of Article XX (g).

[75] *Panel Report on United States – Restrictions on Imports of Tuna,* circulated 16 June 1994, not adopted, DS29/R, para 5.16.

[76] In the Gasoline Case, the Appellate Body found that adherence to the baseline requirement was directly linked to the quality of clean air and hence substantial relationship between the measure in question and the policy of conservation was established. The action therefore falls within the scope of Article XX (g). The US action, according to the ruling however failed to meet the requirements of the chapeau of Article XX on grounds of being discriminatory as the United States, in an effort to improve its air quality, applied stricter rules on the chemical characteristics of imported gasoline than it did for domestically-refined gasoline.

[77] *Report of the Appellate Body* on *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, 12 October 1998, para, 121.

[78] By 1999 December, which was the deadline for implementation of the ruling by the US. In 1998 the CIT vacated its 1996 decision, following which the Department of State resorted back to allowing shipment by shipment imports.

[79] Malaysia took recourse to Article 21.5 of the DSU and requested establishment of a panel to look into the implementation issues.

[80] It was noted that revised US guidelines allow for "inquiry into the appropriateness of that regulatory programme for the conditions prevailing in the exporting countries" vis-à-vis non-TED based programmes and where shrimp trawling does not harm the sea turtles. Although Malaysia has not sought certification on the basis of its sea turtles conservation programme through means other than the use of TED, there were instances of such certification being issued by the US under its revised guidelines. For example, according to the US, once Australia established the low incidences of sea turtles during shrimp farming in the Spencer Gulf, exemption was granted. Similarly, Pakistan was certified on the basis of adopting a combination of measures – use of TED and trawling prohibition. The Panel also ruled that "by allowing exporting countries to apply programmes not based on the mandatory use of TED, and by offering technical assistance to develop the use of TEDs in third countries, the US has demonstrated that Section 609 is not applied as to constitute a disguised restriction on trade."

[81] *Report of the Panel on United States—Import Prohibition of Certain Shrimp and Shrimp Products: Recourse to Article 21.5 by Malaysia*, WT/DS58/RW, 15 June 2001, pp 80–81

[82] ibid., pp 85–86.