I. BACKGROUND
1. The relationship between Trade-Related Aspects of Intellectual Property Rights (TRIPS), the environment and the promotion of sustainable development is an integral part of the work programme of the Committee on Trade and Environment (CTE). This Committee is charged by Ministers at Marrakesh with making appropriate recommendations on any modifications of the provisions of the multilateral trading system that are required for the promotion of sustainable development and shall in so doing give, *inter alia*, special consideration to the needs of developing countries. The issue discussed in this paper is the relationship of the TRIPS Agreement to access and transfer of technology and the development of environmentally-sound technology.

2. India had stated last year in the discussions held in the CTE that there appeared to be a real problem in reconciling WTO provisions on intellectual property protection, as laid down in the TRIPS Agreement, with the objectives and provisions on transfer of technology incorporated in some MEAs. Based on the discussions on this issue, the CTE reported to the Ministers that further work is required on this issue. Such further work would consider whether and how these provisions relate, *inter alia*, to facilitating the access to and transfer and dissemination of EST&Ps.

II. INTRODUCTION

3. This paper is focused on the development, access and transfer of environmentally-sound technologies and/or products (EST&Ps) produced with such technologies, which are covered by IP protection. The need for such coordination arises as there are technologies, incorporating one or the other type of IP, which directly affect the environment. The TRIPS Agreement does not fully address the question of encouraging the global use of proprietary EST&Ps. This gap needs to be filled at least in the limited context where proprietary EST&Ps are mandated to be used by third countries under national or international law. This is because if such technologies are in the public domain, in terms of not being covered by any type of IP protection, one can expect a certain amount of competition in the market place to lead to easy access and reasonably low prices of EST&Ps, especially given the volumes required for mandatory global consumption. If, on the other hand, these are proprietary technologies covered by IP protection, the scope for competition is rather limited. It is obvious that WTO Members are expected to abide by the TRIPS Agreement. Some have pointed out that protection of IP is required for generating EST&Ps and TRIPS envisages such protection. Therefore it is obvious that the issue that needs to be examined in the context of the provisions of the TRIPS Agreement involves reconciling, on the one hand, the development or generation of such technologies with, on the other hand, their easy access and wide dissemination, on "fair and most favourable terms".

4. The question of easy access to and wide dissemination of proprietary EST&Ps through the transfer of such technologies and sale of such products on "fair and most favourable terms" is of particular interest to developing countries. This paper limits the discussion to only three important situations, namely:

(a) where proprietary EST&Ps are mandated to be phased in directly or indirectly by an MEA (an MEA referred to here in terms of its definition as is being discussed under Item 1 of the work programme of the CTE);

(b) where proprietary EST&Ps are related to national environmental standards or measures affecting imports into a country having such standards, especially imports from developing countries; and

(c) where proprietary EST&Ps are related to multilaterally agreed environmental standards or measure affecting imports into a country having such standards, especially imports from developing countries, even if these are voluntary in nature.

The reasons for selecting these three situations and the likely solutions to the issues raised are
described in Sections III to VI that follow.

III. PROPRIETARY EST&PS AND MEAS

5. Certain existing MEAs, and some future MEAs under negotiation, contain obligations to phase out certain substances or technologies which are prejudicial to the environment and replace them with specified substitute EST&Ps within a specified time limit. Such MEAs may contain certain measures to help developing countries such as longer time limits, a multilateral fund to finance such substitution, including for transfer of technologies and an obligation to transfer such technologies on "fair and most favourable" terms and conditions. Unfortunately, longer time limits are not strictly contingent upon obtaining the required financial assistance on technologies and developing countries are invariably faced with fast approaching deadlines with no hope of either adequate financial assistance to purchase the substitutes technologies/products or of transfer of substitute technologies on "fair and most favourable" terms and conditions.

6. Since the motivation of the IP owner is most unlikely to coincide with the environmental objective of the MEA, the higher costs of substitute EST&Ps in IP-related monopoly situations may lead to developing country members of the MEA not being able to meet the necessary time schedules specified in the MEA. This is because the result of the mandated use of EST&Ps by an MEA is likely to result in an increased demand for them, while the presence of IP-related monopolies is likely to lead to restrictions in supply. Thus, there would be assured markets for these IP owners with higher price levels but restricted supplies to the users. This situation would affect producers and users, particularly from developing countries, who do not have access to adequate financial resources, and affect the efforts of these countries to adapt their economic activity to meet the agreed multilateral objective of sustainable development.

7. Therefore, the dilemma faced by developing countries is that while compliance with MEAs by all its members is to be ensured to meet global environmental objectives, the necessary access to the mandated proprietary EST&Ps is made more difficult by the new rules of the multilateral trading system.

IV. PROPRIETARY EST&PS AND MANDATORY NATIONAL ENVIRONMENTAL STANDARDS OR MEASURES AFFECTING IMPORTS, ESPECIALLY IMPORTS FROM DEVELOPING COUNTRIES.

8. The discussion of issues under this Item is relevant to the situation where proprietary EST&Ps are incorporated in national environmental standards and measures affecting imports into a country having such standards, especially imports from developing countries. It is easy to understand that the exporters, particularly from developing countries, who do not have the requisite financial or technical resources to devote to substitute technologies, would be adversely affected if such mandatory national environmental standards or other measures are imposed on domestic and imported products alike. In this situation, safeguarding of existing market access would hinge on the easy access to EST&Ps on "fair and most favourable" terms.

9. Existing market access is not likely to be retained merely because developing countries are allowed to participate in the pre-notification procedures of evolving mandatory national environmental standards or measures. Thus, transparency procedures are not the solution to the problem faced by developing countries in finding a rapid and reasonably low-cost resolution to such non-tariff barriers imposed in their export markets. The time and cost factors are of special importance in such situations and arguments for commercial pricing have again to be weighed against the certainty of increased sales in the domestic as well as in third country markets, due to the incorporation of proprietary EST&Ps in mandatory national environmental standards and measures.
V. PROPRIETARY EST&PS AND MULTILATERALLY SET VOLUNTARY ENVIRONMENTAL STANDARDS OR MEASURES

10. We are aware that there are, at present, no multilaterally set environmental standards that are universally or even widely subscribed to. However, this paper attempts to deal with issues linked to the development, access and transfer of proprietary EST&Ps at present, and anticipated to occur in the future. The very same problems described in Section IV of this paper may face developing countries when complying with multilaterally set voluntary environmental standards and measures in their export markets. Even if such standards are adopted on a voluntary basis in the importing country, the exporting country may have to comply with these in order to safeguard its existing market access. There is a difference between voluntary, nationally determined environmental standards and measures, and those that are multilaterally determined. In the situation where these are multilaterally set standards, the onus should lie on the international community to ensure that in return for incorporating proprietary EST&Ps into an international standard, the owner of the IP be obliged to grant easy access to its technology on "fair and most favourable terms", as such a person benefits in terms of the larger size of the market.

VI. POSITIVE MEASURES TO BE CONSIDERED BY THE CTE

11. In all the three situations listed above, positive measures should be considered and recommended by the CTE to reconcile the rules of the multilateral trading system to meet environmental objectives. This would be in line with the consultations and recommendations of this Committee to Ministers, as contained particularly in paragraph 173 of WT/CTE/1. What should these positive measures be and how should they be implemented by the international community?

12. In deciding on positive measures, the distinction between copiable and non-copiable technologies made in the Secretariat document WT/CTE/W/22 must be borne in mind. We would go further to make the more relevant distinction between the technological capabilities of different countries to copy proprietary EST&Ps. Thus, there may be some proprietary EST&Ps that most countries have the technological capability to copy, and there may be yet other cases where the technology is so novel and so closely held that no country can hope to copy it in a reasonable period of time. In the case of proprietary EST&Ps which are considered copiable by certain countries, a certain amount of flexibility may be necessary in applying the provisions of the TRIPS Agreement. Certain measures may be required to be taken for the transfer of technologies and sale of products in cases where voluntary transfer is either not taking place or is not taking place under "fair and most favourable terms", nor is the sale of final products on reasonable terms.

13. One solution envisaged under the TRIPS Agreement is use without the authorization of the right holder, including compulsory licensing for patents. As we pointed out in our earlier contribution, it is in this context that Members may find the provisions of Article 31 of the TRIPS Agreement extremely cumbersome. While grant of compulsory licences on grounds of encouraging transfer of environmentally beneficial technologies is TRIPS-compatible, as Article 31 does not restrict the grounds on which compulsory licenses may be granted, thus allowing the grounds for transfer of technology for environmentally beneficial technologies, some TRIPS provisions, in particular Article 31(b) regarding efforts to obtain prior permission; Article 31(g) regarding termination of such licence; Article 31(h) regarding taking into account the economic value of the licence; and Article 31(l) regarding strict conditions for dependent patents, may prove to be hurdles in the quick and effective transfer of such technologies where environmental standards and measures need to be complied with within fixed time limits. In view of this, the Committee could examine whether Article 31 of the TRIPS Agreement can be applied in such a way so as to serve environmental interests.

14. If it is not possible or desirable to recommend any amendment of Article 31 of the TRIPS
Agreement, another measure which could be examined by this Committee in order to balance the protection of IP and the encouragement of use for the benefit of the environment could be the reduction in the terms of protection for the IP. For example, while the term of protection for a patent under Article 33 of the TRIPS Agreement is a minimum period of 20 years from the date of filing, Members may be allowed, through a suitable provision in the TRIPS Agreement, to reduce this to a much shorter term of protection so as to allow free access to patented EST&Ps within a shorter period in order to deal rapidly with environmental problems. This allows the necessary incentive to potential owners of IP to generate EST&Ps, while allowing users of such EST&Ps competitive access in the three situations listed above within a reasonable period. This solution is highly recommended by India as this could typically be considered a "win-win" solution which safeguards the interests of generating EST&Ps as well as of wide dissemination of at least those that are copiable.

15. In the extreme case, where neither compulsory licensing nor shortening of the term of protection are feasible, Members may have to revoke or cancel patents already granted in order to allow for free production and use of such technologies as are essential to safeguard or improve the environment, at least under the three situations listed above. This is TRIPS-compatible as no grounds for revocation of patents are prescribed under TRIPS, thus leaving Members free to invoke any grounds. However, such revocation can only be done in consonance with the provisions of the Paris Convention and must be subject to judicial review. In accordance with Article 5A(3) of the Paris Convention, Members will have to explore the route of compulsory licensing before revocation is resorted to on grounds of preventing abuses which might result from the exercise of the exclusive rights conferred by the patent, including for example, failure to work the patent. Since this may not be grounds for compulsory licensing in this case, this provision may not be relevant. This means that all WTO Members are free to use the route of revocation in the public interest even if the TRIPS Agreement does not permit easy and effective use of compulsory licensing nor the shortening of the term of patent. However, revocation of patents is a drastic solution and it may be in the interest of those who wish to safeguard IP protection to allow other more reasonable solutions to this very real problem.

16. Even assuming that the TRIPS Agreement can allow for the copying of proprietary EST&Ps for certain countries and for certain copiable technologies, we must, in the interest of reconciling IP protection under the TRIPS Agreement with mandatory environmental measures, examine possible solutions in this Committee for such other countries and for such other technologies where the EST&Ps have to be considered non-copiable in the requisite time period. India suggests that in these cases, the following obligation could be imposed on the IP owner availing of the provisions of the TRIPS Agreement:

"The owners of the EST&Ps shall sell these technologies and products at fair and most favourable terms and conditions, upon demand, to any interested party which has an obligation to adopt these under national law of another country or under international law."

17. If, in so doing, a loss is incurred by the IP owner, it can apply through its own government to the international organization, or an international standardization body, or to the relevant national government imposing the measure, for an appropriate subsidy. The case of the applicant should be considered on its merits and the subsidy granted or rejected, taking into account all relevant circumstances.

18. At present, it is for developing countries to ask for financial assistance under multilateral financial mechanisms to cross subsidise payment for the transfer of technology. Given the lack of motivation for providing funds for such purposes, experience has shown that this is not a very practicable or even feasible solution. This has become more evident from the results of the review of implementation of Agenda 21 in the recent UN General Assembly Special Session. It may be more practical to place the onus of responsibility on national governments and international bodies responsible for the imposition of mandatory environmental measures to subsidize or compensate owners of such EST&Ps for any losses incurred, thus persuading them with more favourable financial terms to widely
disseminate proprietary EST&Ps. While imposing such an obligation on owners of proprietary EST&Ps in such situations under the TRIPS Agreement, the CTE should begin work on coordinating between international organizations and national governments to ensure effective financial mechanisms. In the absence of such mechanisms and with the positive obligation on IP owners, as suggested above, the onus would anyway lie on the Members of the WTO to comply with this provision of the TRIPS Agreement.

19. In the case of multilaterally set standards, the Committee should discuss the issue of the competent international standardization organisations in engaging in negotiations with IP owners to either agree to incorporation of their EST&Ps into the standards or measures and allow easy and reasonably priced access on "fair and most favourable terms" to all interested parties in exchange for such incorporation (as this would virtually guarantee a much expanded market), or allow the organisation concerned to lower the international standard or measure to include several competing technologies/products.

VII. CONCLUSION

20. This proposal has brought out the relationship between WTO provisions on intellectual property rights and the environment, and addressed the need for the CTE to examine and recommend positive measures in order to achieve the environmental objective of encouraging the global use of environmentally-sound technologies and products that benefit or protect the environment, at least in the limited cases where these are mandated to be used under an MEA or by national authorities, or where standards or other environmental measures are laid down by multilateral bodies.

21. These are only some points raised as a basis for further discussion on the market access cluster in the context of Item 8 of the work programme of the CTE and does not preclude India from modifying these or raising other points in relation to this subject in the present or future meetings of the CTE. It is reemphasized that environmental concerns should not have trade-distorting effects.