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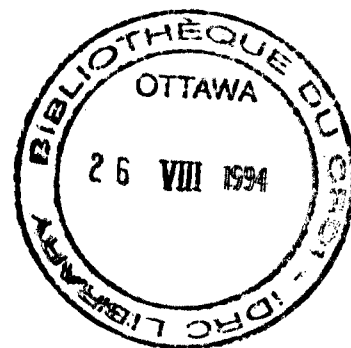
**Centre for Information and Research on Global Warming
Tata Energy Research Institute**

**Final Report for the Year 1992-93
August 1993**

**Prepared for the
International Development Research Centre, Canada,**

**By the
Tata Energy Research Institute**

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Database

At present the Global Warming Directory, which is an associated product of the database is being prepared. Comprising four sections namely Sources, Sinks, Impacts and Mitigation strategies, it is being developed comprehensively for India with global data on limited parameters to facilitate comparison. The section on *sources* provide the GHG emissions from energy, industry, agriculture and forestry sectors. *Sinks* includes data on the carbon sequestered in the Indian forests. The section on *impacts* has information on the impact of sea level rise on India. The section on *mitigation strategy* explores technological options available for higher efficiency of energy-use and to address the greenhouse effect.

Research Activity

1. UNEP Greenhouse Gas Abatement Costing Study (Phase II)

The UNEP GHG abatement Costing project is intended to clarify the economic issues involved in assessing the costs of limiting GHG emissions and to propose approaches for carrying out comparable costing studies. Phase One of the project consisted of a broad review of the subject, exemplified by four country reviews and a methodological discussion. The aim of Phase Two has been to develop and test a methodological approach through a set of national case studies. As far as possible, these national studies use common (or compatible) assumptions for a large number of parameters.

The India country study is being conducted by TERI. Under this study, the TEESE model, which has been developed in-house and has been updated for this project, is being used to arrive at a least cost strategy to limit CO₂ emissions in 2009-10 and in 2019-20. The study began in October 1992 and is ongoing.

2. Research Papers

A number of research papers (7) were written for the post-UNCED Seminar on Environment and Development Policy issues in Asia. Some of these have subsequently been accepted for publication in various journals and the proceedings of the Seminar has been released in the form of a book entitled "The Road From Rio".

3. *TERI prepared the theme paper entitled "Climate Change: Incremental Costs and Capacity Building, "* for the GEF-TERI-USAID Workshop on Incremental Costs held in Delhi in February 1993. The paper discusses issues relating to the development of a methodology to calculate incremental costs, the incorporation of other costs (macro -economic and transactions costs), the institutional structure of the GEF and capacity building measures required in developing countries.

Other Activities

1. The second documentary on global warming will be completed by the end of June 1993. The name of the film is "Global Warming: Cool Solutions." The film is a follow up on the first film of global warming produced by TERI and deals primarily with strategies to prevent the possible occurrence of global warming and climate change. The strategies that the film tries to highlight are those that would fall in the "no regrets" category, in other words these would have positive economic effects in the future that relate to sustainable development in general.
2. A book entitled "Climate Change: An Indian Perspective" is under preparation and is slated to be released in October 1993.
3. Members of the Centre provided instruction on global environmental issues to participants during the course of the Leadership in Environment and Development (LEAD) programme held under the auspices of the Rockefeller Foundation.

Information services and support

1. During the year under review, the Information Centre continued to act a major repository of information, both of the published and unpublished variety. The collection was enhanced by adding about 300 reprints of journal articles, conference presentations etc to the existing collection.
2. Dissemination activities included the preparation of 10 reading lists on new literature relating to global warming, two issues of TISGLOW, the circulation of select articles to members of parliament, decision makers in government and support to researchers including those working towards higher degrees in universities and research institutes.

3. A major activity that was launched was related to increasing awareness about global warming and climate change among school children. Information on TERI's first film on global warming was widely circulated to all schools under the Central Board of Secondary Education system. The response was overwhelming and as many as 60 schools bought a copy of the film. Information support was provided to children to carry out projects on topics relating to global environmental problems.
4. In order to make the activities of the Centre sustainable in the long run, a subscription fee has been attached to TISGLOW with effect from October 1992. A break-up of subscribers who have paid the subscription fees is enclosed (Appendix 1). Requests for subscription from developing countries, especially from Africa, Asia and Latin America are still being serviced *gratis* in order to facilitate greater interest and research on this vital topic, especially from a developing country perspective, in these countries.
5. The reprint collection has crossed 1,500 and the database, which was originally in Sci-mate has been converted to the well known CDS/ISIS software in order to facilitate the greater accessibility of data and permit online searches.
6. The Centre provided information and documentation services to the Leadership Programme on Environment and Development conducted by TERI for the Rockefeller Foundation.
7. Students, researchers and scientists continued to be provided with literature and information on a variety of topics and a total of 195 queries were responded to in the period under consideration.

Workshops and conferences

1. Post-UNCED Seminar on Environment and Development Policy Issues in Asia (October 8-10, 1992). This workshop was held as a follow-up to the Rio Summit, to assess and discuss policy options relating to sustainable development in Asia. A large number of academics, policy analysts and policy makers from both Asian and other countries attended the Seminar. The international organizations represented included IIASA, the World Bank, UNDP, USAID etc, as well as some national governments. A number of papers were presented at the Seminar and the proceedings will

come out as a book by the end of June. A declaration entitled "Compact for Sustainable Development in Asia."

2. GEF-TERI-USAID Workshop on Measuring Incremental Costs of Climate Change (February 8-9, 1993). This workshop was held as part of the PRINCE programme. The issues discussed were methodology and conceptual issues, country studies, private sector involvement, issues relating to cost effectiveness and discount rates, and capacity building. There were about 70 participants, including approximately 50 from overseas.
3. UNEP-Riso GHG Abatement Costs Collaborative Project Workshop was held in Delhi in February 1993 to discuss progress on the national GHG abatement costing studies. Approximately 30 persons from the participating countries came to Delhi for this week long technical workshop, hosted by TERI.
4. TERI organised a week long workshop on behalf of the Asian Energy Institute (AEI) on National Energy policies: Implications of and opportunities from the Climate Change Convention at Bangalore in July 1993. The participants included the representatives from research organisations in Asia as well as representatives from the United Nations Development Programme, Energy Research Foundation, Netherlands, Fondazione Eni Enrico Mattei, Italy, Global Industrial and Social Progress Research Institute (GISPRI), Japan, Organisation of Economic Co-operation and Development (OECD), France, Ministry of Environment and Forests, India and the Government of Karnataka.

Future Activity

1. A Seminar entitled "Climate Change: An Indian Perspective," is scheduled to be held in September 1993. This is being organised by TERI for the Ministry of Environment and Forests.
2. A continuation of modelling work as a follow-up to the UNEP/Riso Project.
3. A total of 6 proposals are currently under consideration with potential sponsors.

Appendix 1: Users of TISGLOW by country (April 1993, paid subscriptions)

1.	Australia	02	17.	Jamaica	01
2.	Argentina	01	18.	Japan	02
3.	Austria	01	19.	Kenya	02
4.	Bahrein	01	20.	Malaysia	01
5.	Belgium	01	21.	Netherlands	09
6.	Brazil	01	22.	Norway	03
7.	Canada	11	23.	Phillipines	01
8.	Costa Rica	02	24.	Saudi Arabia	01
9.	Denmark	02	25.	Singapore	01
10.	England	01	26.	Sweden	04
11.	Finland	01	27.	Switzerland	04
12.	France	01	28.	Thailand	02
13.	Germany	04	29.	United Kingdom	13
14.	Hungary	01	30.	U.S.A	36
15.	India	54	31.	West Indies	01
16.	Italy	02		Total	167