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Coastal tourism, environment, and sustainable local development explores the interface between social and environmental issues relating to coastal tourism. That coastal tourism is highly dependent on nature is not sufficiently understood. This results in an emphasis on promoting tourism without attention to the supporting systems and a classic 'golden goose' problem can ensue. The societal implications of this phenomenon can be serious as tourism can push out other prevalent activities, result in changed skills of the local populace, and effect a change in priorities. This suggests the need for cross-disciplinary perspectives to measure and monitor impacts and manage a coastal tourism that 'lasts'.

This publication is among the products of a research project entitled 'Measuring, monitoring, and managing sustainability: the coastal dimension', supported by the European Union's INCO-DC programme over the period 1998–2002. It has involved three Indian and four European institutes. The contributions reflect a range of disciplines, including sociology, economics, biology, chemistry, hydrology, geography, and botany. The objective is to highlight (1) the interface between social and environmental issues in a coastal tourism context, (2) the issues that need to be considered in planning and managing for coastal development within a sustainability framework, and (3) the need for coastal policy-making to be more stakeholder-sensitive.

This publication provides a comprehensive, accessible account of the analyses, results, and decision tools developed to measure, monitor, and manage coastal tourism developments along sustainable paths and opens up fresh perspectives for the development of sustainable strategies. This book should be of interest to coastal planners, professionals in the tourism industry, researchers, and those interested in developing a 'sustainability science'.

# Coastal tourism, environment, and sustainable local development

#### **Editors**

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### Foreword

ost coastal regions in the world are characterized by fragile ecosystems, essentially because they represent the interface between the land and the sea. Additionally, the attraction for tourists that coastal areas present can become a source of stress that needs to be carefully regulated and managed. Tourism by its very nature differs in the intensity of harmful impacts produced on ecosystems in comparison with those from much larger populations who actually live in ecologically stressed areas. The inhabitants of most ecologically stressed locations in the world hold a lasting stake in their surroundings and, therefore, not only display concern for the sustainability of natural resources on which their livelihoods depend, but are able to come up with innovative solutions that help to manage any stresses that develop. Tourism, which is based on floating populations, often representing an unsustainable and exploitative relationship between tourists and the ecology of such locations, needs to be analysed as a sector in its entirety, understood with all its complex linkages and then effectively regulated.

This book is an attempt by three Indian and four European institutions working in partnership to assess the complex interrelationship between tourism, local economic activities, and the resultant footprint of human actions on a fragile coastal ecosystem. While there is a general awareness of the importance of these issues, an analysis and full understanding of the complex inter-relationships between different variables characterizing the health of coastal ecosystems is absent in many such areas of the world. To that extent, therefore, this readable and deeply insightful publication would go a long way in bringing about a better understanding of the issues involved in tourism and coastal zone management. It is only on the basis of such research that a proper tourism policy applicable to such areas and regulatory measures for creating sustainable development choices could actually be achieved.

R K Pachauri Director-General, TERI

### Preface

his book reports on part of a collaborative research project – 'Measuring, monitoring, and managing sustainability: the coastal dimension' - that set out to understand how societal driving forces impact ecosystems. The collaboration involved three Indian (The Energy and Resources Institute, National Institute of Oceanography, and Goa University) and four European research institutes/ universities (Universidade Nova de Lisboa, Laboratorio Nacional de Engenharia Civil, Instituto Cartografic de Catalunya, and Universita Degli Studi di Trieste) as partners and was supported by the European Commission's Programme for International Cooperation with Developing Countries under its Fourth Framework over the period 1998-2002. The research was interdisciplinary, combining the social with the natural sciences. The objective was to integrate across disciplines, examine the environment-development interface, and bridge the divide between the natural and social sciences, building on the strengths and constraints of both. This Indo-European collaboration was able to initiate dialogues on many fronts, across cultures, disciplines, and stakeholders.

Societal drivers and coastal ecosystems are the two main parameters studied to examine aspects of change and sustainability on the coast. Since the canvas was large, we decided to focus on what contributed most to the variations observed. To help us make this decision, an expert workshop comprising planners, researchers, and activists, was held in 1999. This workshop identified five main development drivers as being dominant on the Indian coast: industry, tourism, port activity, urbanization, and intensive agriculture/ aquaculture, other than the primary drivers, which are population growth and migration. The project focused on three of these drivers: tourism, aquaculture, and industry. It was necessary to adopt a comparative approach across dimensions and locations to identify the relative significance of the different drivers of change and to determine those that are in the foreground as against those that are in the background of the transformations under way. This book reports on the 'tourism' driver.

The decision to focus only on tourism here was deliberate, as coastal tourism has not received sufficient attention in the literature on the subject, and because it provides perhaps the richest domain for studying the confluence of globalization, population movements, conflicts in coastal resource use, and impacts on ecosystems. Moreover, most studies on tourism that do exist are in keeping with disciplinary boundaries, the socio-economic effects being examined separately from the environmental ones.

Our study provides us with the insight that sustainability in coastal areas needs to be studied as a contest of different interests and parties, competition for uses, and development processes. The dynamics observed among households, economic units, and the environment lead us to the conclusion that despite the significant economic weight of the socio-economic drivers, new approaches must be adopted to involve local populations in development processes to ensure that their needs and aspirations are addressed. This means that whatever path development takes in a community, region, or country, it must have the support of the population affected by it. We would like to suggest that the participation of all legitimate stakeholders in a more participatory model of development would move us towards a more sustainable coastal development and better coastal management.

The work reported here would not have been possible but for the support and encouragement of the respective directors and heads of our institutes and universities. We are most grateful to them and to all our other colleagues who supported this work but are not directly mentioned here. We would also like to thank the European Union, and in particular, Prof. Tilak Viegas and Dr Cornelia Nauen for supporting our collaborative work.

For comments and feedback on our project, we would like to thank the coastal researchers, NGO representatives, policy-makers, and activists, who participated in our workshops in 1999 and again in 2002. Their enthusiastic support for the task we had undertaken was very encouraging. For commenting on parts of the manuscript and for extensive discussions, we are most grateful to Mr Alito Siqueira, Prof. Ancheri Sreekumar, Prof. Peter Ronald de Souza, and Dr S Sreekesh. Our gratitude also goes out to Ms Mudita Chauhan-Mubayi for her patient and painstaking editing, Mr R Ajith Kumar for design and typesetting, Mr R K Joshi for preparing the graphics, Ms Archana Singh for the cover design, Mr P K Jayanthan for the index, and Mr T Radhakrishnan for supervising the production. And to all our families, a big 'Thank you!' for their unstinted support of our work.