



Energy Security Dialogue

Greening tourism infrastructure

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The growth in the construction sector in India, and increasing energy consumption in residential and commercial buildings has brought to the fore the need for sustainable building design and construction. The stakeholder dialogue 'Greening Tourism Infrastructure,' organised in collaboration with the Travel and Tourism Association of Goa (TTAG), sought to examine elements of green building design, and the potential they hold for promoting sustainable energy consumption and environment-friendly operation of the hotel industry in Goa. It also aimed at identifying scope for sustained pilot projects which involve stakeholders from the hotel industry. This dialogue followed another on 'Green Building Design: Potential for Sustainable Energy Consumption' organised as part of the project on October 24, 2007, in Goa, which led to the identification of the hotel industry in Goa as a possible space for intervention.

The workshop focused on the following questions:

- What principles should guide the establishment of energy-efficient hotels, particularly in places of tourist interest such as Goa?
- Who are the stakeholders involved?
- How to integrate sustainable design within existing design practices?
- What are the gaps in implementation?
- Are enough people trained to offer environmental design solutions? Are products available?
- What role does the government need to play to facilitate establishment of green hotels?
- What is the way forward? What role does TERI need to play to steer the process?

The workshop foregrounded strategies to further sustainable tourism, cut down consumption of valuable resources, and create awareness in order to affect change.

Key takeaways

- There exist information gaps, and people in the industry are unaware of the possibilities offered by sustainable building, and the benefits that accrue from it. Even though now there is growing awareness of the need to factor in sustainability into construction activities, often when technical expertise is sought

from consultants, architects etc., the required inputs are not readily available. Poor quality of after-sales service may also prove to be a deterrent.

- Even though environmental auditing is mandatory for all big hotels under the Environment Protection Act, an apparatus for implementation needs to be put in place. It was suggested that a study of hotels should be undertaken to assess the current energy performance of different hotels, and energy performance standards should be set against which hotels may assess themselves. Energy and water auditing should be regularly conducted: greening the industry should become a part of the philosophy of the organisations involved.
- Information and finances are often inaccessible for small hotels. The participants emphasised the need for government support to small hotels. Knowledge-sharing between hotels should also be made common practice.
- User-friendliness of technology and financial viability were identified as areas that need to be focused on for ensuring a move towards sustainable operation of the tourism sector. The government must step-in to incentivise the use of greener technologies. Banking institutions must be informed of the interest subsidies offered by IREDA and MNRE.
- Waste and water management should focus on the three Rs – reduce, reuse and recycle. For water use optimisation, it is important for hotels to install efficient plumbing fixtures and put in place effective drainage systems. Also, various mechanisms are available to recycle used water and treat rainwater for use for washing, gardening and filling up of artificial water bodies. TERI's Enhanced Acidification and Methanation (TEAM) process was discussed as one method of waste management which generates manure, and biogas for cooking and lighting.
- Goa was the first state in the country to install a solar-wind hybrid system, and easy loans offered by agencies such as IREDA could help boost the use of renewable sources of energy.
- Regulation and government policy must be directed towards promoting green hotels. Like renewal of tourism licenses for hotels in Goa is dependent on Pollution Control Board Clearance, initiatives for environment protection and efficient use of energy should be factored in while determining hotel classifications. Installation of sewage treatment plants and other waste management techniques should be made mandatory for large hotels which produce large quantities of waste that make the installation viable.
- There should be accountability within the hotels, whereby chief engineers and architects are answerable to the management on issues related to increase in energy and water consumption.
- The effectiveness of green building as a cost-saving measure needs to be highlighted.
- The tourism industry's activities should be charted around responsible management of resources for community development; effective protection of the identity of the landscape; and promotion of sustainable architecture. An authentic hotel certification process and industry initiatives towards off-setting carbon are of critical importance.

Suggested areas of engagement

- Provision of technology consultancy by TERI to hotels in Goa that undertake to operationalise the TEAM process for organic waste management (GEDA could undertake to finance TEAM installation in one hotel while TTAG could help identify a property where this can be set up as a pilot-scale demonstration unit for other hotels to see how the technology works).
- A survey on hotels in Goa, and the scope offered here for reduction in emissions.
- Setting up of a Green Cell within TTAG that will address the green agenda during quarterly meetings and also act as a facilitator that helps connect hotels to vendors selling and promoting green products, technologies etc.
- A stakeholder dialogue which brings together not only hotel industry players but also architects and technology consultants from the region.