



CENTRE FOR SCIENCE AND ENVIRONMENT

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ADVANCED TRAINING PROGRAMME 2012

One month training programme on Environment and Social Impact Assessment

16 January-16 February, 2012



Environment Impact Assessment (EIA) and Social Impact Assessment (SIA) are important tools to foresee and address potential environmental, social and economic problems at an early stage of project planning and design. A well conceptualized and executed EIA/SIA report allows project proponents to reduce the negative aspects of the project. It also enables stakeholders to understand the project and its likely consequences, and allows them to participate and intervene in various stages of project development.

Centre for Science and Environment (CSE), with an objective to enhance the capacity of the stakeholders involved in EIA, launched its first EIA training programme in 2006. More than 20 EIA training programmes have been conducted since. They have received a positive response from students, academics, NGOs, regulatory institutions, environment consultants and industries. CSE has also conducted EIA training programmes in South Asia in collaboration with regulatory agencies such as the Central Environment Authority (CEA) Sri Lanka, Department of Environment (DOE) Bangladesh and National Environment Commission (NEC) Bhutan.

The month-long EIA/SIA training programme is intended to add value to the knowledge and expertise of the participants.

PROGRAMME OBJECTIVES AND EXPECTED OUTCOME

The objective of this training programme is to build capacity of the participants so that they can make reports and assess EIA/SIA process more effectively.

On completion of the month long programme, the participants should be able to gain the following:

1. Better understanding of the environmental and social impacts of development projects
2. Knowledge of laws related to environmental and social assessment
3. Exposure to all aspects of EIA/SIA, from theory to practice
 - Development of a comprehensive Terms of Reference (ToR)
 - Data requirement, data collection protocol, data validation and interpretation
 - Tools, thumb rules and methodologies to evaluate environmental and social impacts
 - Environment Management Plan (EMP) and Resettlement and Rehabilitation Plan
4. Use of GIS and Remote Sensing in Environment planning and management
5. Review EIA reports and identify strengths and weaknesses
6. Increased ability to play an active role in post-EIA monitoring

All this, brought to the participants through lectures, class exercises, role playing and site visits

CONTENTS

The month-long EIA/SIA training programme comprises the following modules:

Module 1: Environmental laws, rules and guidelines

The objective of this module is to make the participants aware about the environmental laws and regulations and the various key provisions pertaining to:

- Water and Air Acts
- Forest and Wildlife Acts
- Environment Protection Act, 1986
- Environment and Forest clearance processes, including interpretation of circulars and office memorandum (OM) issued under Environment Ministry
- CRZ notification 2011
- Recent judgments on EIA and National Green Tribunals (NGT)

Module 2: Environment Impact Assessment - Screening, Terms of Reference (ToR)

The objective of this module is to understand how Terms of Reference (ToR) are prepared and how impacts are identified, assessed and evaluated. The module focuses on:

- The concept of EIA, brief overview about EIA Notification, 2006 and amendments
- Screening process
- How to prepare Terms of Reference (ToR) for development projects
- Data collection and its significance
- Protocol for evaluation of impacts
- Pollution load calculation
- Format for reporting Environmental Management Plan (EMP) and good practices involved in EMP reporting
- Overview on accreditation of EIA consultants

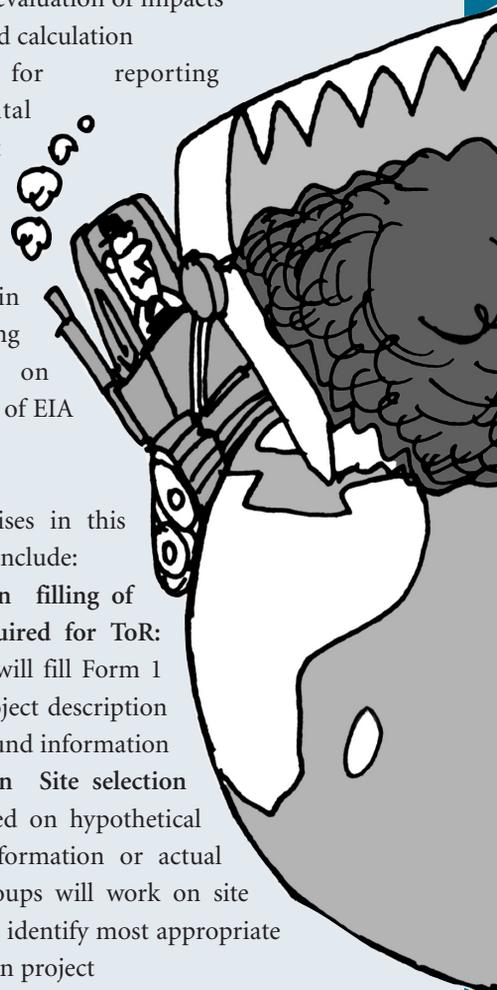
The class exercises in this module will include:

- **Workshop on filling of Form 1 required for ToR:** Each group will fill Form 1 based on project description and background information
- **Workshop on Site selection criteria:** Based on hypothetical data and information or actual site visit, groups will work on site selection and identify most appropriate site for a given project
- **Workshop on making ToR:** The group will make Terms of Reference (ToR) for a given project based on project description and background of site. Each group will make a presentation on ToR

Module 3: Protocol for designing network for monitoring and assessment of water, air, soil, meteorological parameters and geology

The objective of this module is to strengthen the data management system with reference to air, water, soil, noise, geology and hydrology. The module covers the following aspects:

- Protocol for designing network for monitoring and assessment of ground and surface water quality, sample collection, storage, preservation and checklist for field visit



- Protocol for designing network for monitoring and assessment of ambient air quality and noise.
- Soil classification, characteristics of soils and their environmental significance, protocol for evaluating significance of impact
- How to assess meteorological parameters and their importance in impact assessment
- How to assess the hydrological impact, crucial parameters for hydrological assessment, data interpretation and impact evaluation
- Significance of geology, importance and its reporting in EIA

- How to collect and assess the river flow data, case studies on how impact on river is determined in EIA
- Approaches to environmental data analysis and data validation

Module 4: Industrial Chemicals and their fate

The objective of this module is to disseminate information amongst participants regarding the various industrial chemicals, how they impact the environment and how impact can be minimized. This module also covers workshops on preparation of water balance, material balance and their importance.

Module 5: Biodiversity Impact Assessment (BIA)

The module focuses on how to conduct an effective biodiversity impact assessment, its significance, types of data and their importance in BIA, methodology for data collection, interpretation of data, preparation of conservation plan and case studies, crucial components for Greenbelt design/engineering and selection of plant species for greenbelt

Module 6: Air Pollution and Water Quality Modelling

This module will cover:

- Air pollution modelling: Types of models used for industrial, mining and highway project, limitations,

input parameters and their significance and demo on ISCST 3 model

- Water quality modelling: Types of models, limitations, input parameters and their significance

Module 7: Social Impact Assessment

The module focuses on assessment of social impacts, importance of SIA and how it is conducted, how land acquisition is dealt with and various infrastructure and development projects, legislations including the new LARR Bill. The module will also cover how to prepare an entitlement matrix and how to make a Resettlement and Rehabilitation plan. The module covers:

- Land Acquisition Act, Land Acquisition R&R bill 2011, State laws/policies on R&R
- Overview on Social Impact with respect to development projects
- Assessment and TOR for conducting SIA
- Data collection, assessment and preparation of R&R plan

Module 8: GIS and Remote Sensing

The module outlines the basic of GIS and remote sensing and their application in environmental planning and management

Module 9: Protocol for preparation of structure of EIA/EMP report

The module focuses on how to prepare the structure of EIA/EMP report. The module will also cover how to report information on pollution control equipments with reference to air, water and noise in an EIA report

Module 10: Green Buildings, Rain Water Harvesting and Waste Water Treatment

The module focuses on the current, eco-friendly state-of-the-art methods adopted for sustainability focusing primarily on:

- Concept of a green building and criteria and component in green building design
- Rain water harvesting concept, component and design including workshop on planning and design of rainwater harvesting structure
- Concept of Decentralized Wastewater Treatment (DWWT), case studies and workshops on planning and design of DWWT
- Criteria for designing a wastewater treatment plant and how an EIA practitioner should present it in an EIA report and criteria for selecting option for recycle and reuse

Module 11: Solid and Hazardous Waste Management (HW)

The module focuses on waste classification,



characterization, best approach for management of HW and reporting in an EIA document.

Module 12: Sector Specific EIA

This module focuses on the preparation of EIA/EMP reports, what impact parameters should be assessed for the specific sectors as well as how to proceed with the Environment Management Plan for a particular sector. The module concentrates on the following sectors:

- **Mining:** Mining laws, issues and challenges, mine plan, mine management, mine closure and case studies on mine reclamation and best practices
- **Industrial (Cement, Pharmaceutical, Distillery):** Overview of process, state-of-the-art technologies for pollution abatement and control and criteria for review of EIA report
- **Thermal power plant:** Overview of process, issues and challenges, state of the art technologies and case studies and criteria to review EIA report
- **Hydropower:** Overview of process, terminology, issues and challenges and failure and success stories, dam break analysis, catchment area treatment plan
- **Road and Highway project:** Issues and challenges and state of the art practices for management of environmental and social challenges with case studies

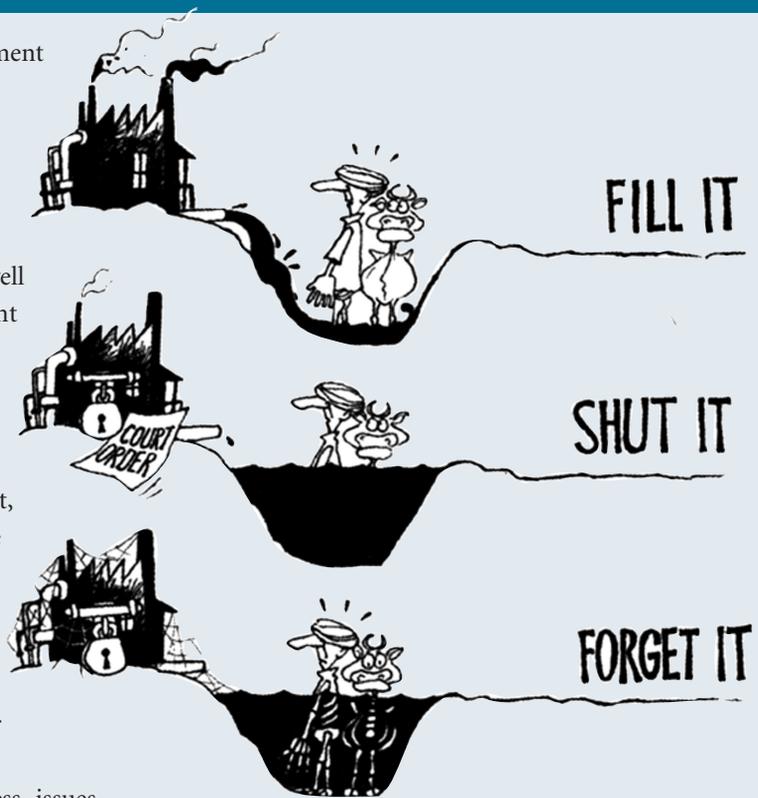
Note: This module would also include role playing exercise wherein at the end of each session, based on EIA report, participants in each group will make a presentation to a hypothetical committee; similarly, other groups will identify shortcoming/gaps and suggest areas for improvement

Module 13: Risk Assessment

Assessment of risk is a major task involved during preparation of any EIA report. This module would focus on the protocol for onsite and offsite Emergency Plan.

SITE VISITS

The month-long EIA training programme is designed in a manner that encourages learning in a practical manner. The participants will be taken to thermal power/cement plant, which was accorded environmental clearance 10 years ago. Based on the site visit, interaction with local people and environmental compliance conditions, the participants will prepare a progress report.



PROGRAMME DETAILS

Date and Place

January 16 – February 16, 2012,
Centre for Science and Environment,
41, Tughlakabad Institutional Area, New Delhi-110062

Who should participate?

The programme is designed for professionals from: Regulatory Institutions (such as SPCB, EAC/SEAC), EIA/SIA consultancies, industries, universities, NGOs as well as students

Language Requirements

English will be the medium of communication through the training. Participants are expected to have a good command on the language

Last date for Applying

January 3, 2012

Fee Structure

Non-Residential - Rs 35,000 (30% discount for NGOs and students)

Residential - Rs 35,000 + Rs 10,000

CONTACT PERSON

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