

# DR-EIA

## Document Retrieval and Expert system for Environmental Impact Assessment

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### What is an Environmental Impact Assessment?

An Environmental Impact Assessment (EIA) is an assessment of impacts – positive and negative – that a proposed human intervention or project may have in a particular area. It represents a procedure for improving decision-making and helping to ensure that the development project under consideration is both environmentally and socially sound and sustainable. The EIA is concerned with identifying, predicting and evaluating the environmental consequences and social effects, both beneficial and adverse, of public and private (development) activities. It considers alternative policies and mitigation strategies, which aim to eliminate or minimise the negative effects, and optimise the positive ones.

EIA is an important tool within an Integrated Coastal Zone Management process, as it visualises long-term impacts and promotes sustainable development of coastal zones.

### DR-EIA project

A major challenge for the EIA community is the improvement in both the efficiency and the effectiveness of the EIA process in support of planning and decision-making. For this reason, in 1997 a start was made on the Document Retrieval and Expert System for Environmental Impact Assessment (DR-EIA). It originated from an idea of developing a computerised, internet-based tool, for expert staff at financing agencies in developing countries. The challenge was to develop an appropriate and cost-effective impact assessment tool in support of internet based, participatory decision making. The Netherlands Ministry of Foreign Affairs commissioned the development of the DR-EIA instrument, in order to stimulate the development of understanding of the use of EIA.

The target user group for DR-EIA are representatives from all stakeholder groups in the EIA process including project proposers, competent authorities, EIA experts and representatives of NGOs. The product consisting of a trainings manual, user manual and software package was first introduced to the international impact assessment community during the International Association for Impact Assessment (IAIA, 2001) conference in Cartagena, Colombia. Information at the DR-EIA website, which is maintained at [www.dr-eia.org](http://www.dr-eia.org).

### The product

The product consists of software-facilitated procedures for screening and scoping projects and plans in combination with databases that structure information on legal requirements. In this way the existing relationship that between proposed activities in a project, as well as physical changes because of these activities and their impacts can be described. A similar structure is used to identify social impacts that may occur as a result of a proposed project or plan.

In the present version, the DR-EIA instrument is suitable for planning and analysing projects on the land and in the water sector. Specific country modules have been developed for the Ministries of Environment of India and Bangladesh. The screening database holds information on many different financing organisations including EU, World Bank and Asian Development Bank. Apart from the procedures for screening and scoping, the instrument also facilitates writing terms of reference (ToR) for a full scale environmental impact assessment study based on the standards applied by selected financiers. One particularly interesting option is the “expert judgement based” procedure for screening and development of an EIA-ToR. This option is based on years of experience by an international team of experts working on the production of the DR-EIA instrument.

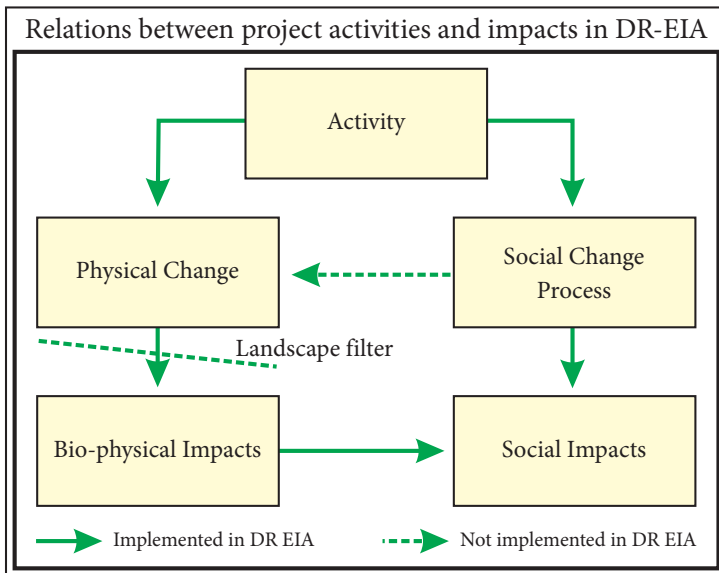


Figure 1: Relations between project activities and impacts in DR-EIA

**Instruction and learning tool**

DR-EIA is a valuable instruction and learning tool and has become part of training in Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) in the international MSc curriculum of UNESCO-IHE. Plans exist to continue development of the tool in an open-source environment. This is the preferred approach in view of the complexity of the work that still needs to be done.

One of the achievements of DR-EIA is that many countries are now developing internet-based procedures for policy and planning purposes, including EIA.

A demo of DR-EIA is available through the DR-EIA website at: [www.DR-EIA.org](http://www.DR-EIA.org)

**More information**

More information concerning structure, input and output of the DR-EIA instrument can be obtained through:

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Website UNESCO-IHE Delft: [www.unesco-ihe.org](http://www.unesco-ihe.org)

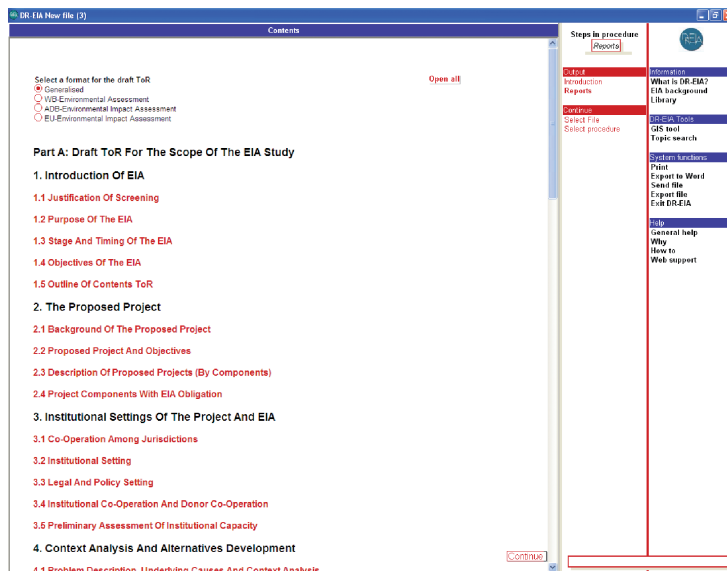


Figure 2: Terms of Reference for an EIS study , one of the outputs of DR- EIA)

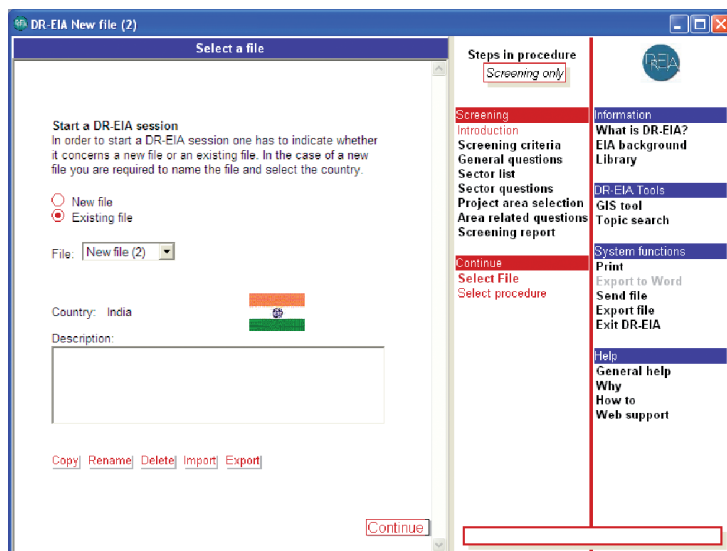


Figure 3: Implementing a project in DR-EIA