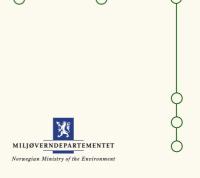


# environmental impact assessment



#### Environmental Impact Assessment (EIA)

as a tool to integrate environmental concerns and considerations into the decision-making processes of governments at all levels has become more and more wide-spread throughout the world. EIA is now implemented in the legal systems of most countries, including Norway.

EIA is defined as the analysis and evaluation of possible environmental impacts of proposed decisions or activities likely to cause significant effects on the environment. The assessments will help to arrive at informed decisions, set development conditions and serve as a basis for follow-up and monitoring of the implementation of decisions.

While EIA is related to the possible environmental impacts of a proposed *project*, strategic environmental assessment (SEA) is related to the possible environmental effects of a proposed *plan* or *programme*, and in some instances also *policies* and *legislation*.

The Norwegian Parliament adopted the first general legislation on EIA in 1990, as part of the Planning and Building Act. Provisions related to offshore oil and gas activities are contained in the petroleum legislation, administered by the Ministry of Petroleum and Energy. The most recent EIA provisions were adopted in 1999, when the field of application was expanded and a corresponding devolution of tasks to local authorities was introduced. The present EIA provisions implement the EU Directive on Environmental Impact Assessment and the requirements of the UN ECE Convention on Environmental Impact Assessment in a Transboundary Context (the Espoo Convention).

However, the Norwegian provisions put stronger emphasis on the participation of the public and authorities concerned in the early stages of the procedures.

For a number of years, an Administrative Order issued by the Government has provided guidelines as to when and how environmental impacts shall be addressed in policy documents (e.g. White Papers to Parliament), legislative bills etc.

By 2005, Norway is planning to include provisions on SEA in the Planning and Building Act and other relevant legislation, based on the EU Directive on Environmental Assessment of Certain Plans or Programmes and the UN ECE Protocol on Strategic Environmental Assessment.

### **EIA Procedures in Norway**

The Norwegian legislation relating to EIA provides detailed procedures to be followed for specified types of projects. These are projects that may have an envi-



ronmental impact either through size, production volume etc., or through the proposed location.

The provisions cover impacts on the environment, natural resources and society. In most cases, the EIA process is closely integrated with the land use planning process.

When planning a project that is subject to EIA, the developer must at an early stage submit a notification document to the competent authority, with a copy to the Ministry of the Environment (this is the only stage where the MoE is directly involved in the process). The notification shall include a proposal for a study programme, which forms the basis for the EIA report. The study programme is open for public consultation, in particular in relation to issues and alternatives that should be assessed in the EIA report, and shall be formally approved by the competent authorities.

The EIA process shall focus on the issues necessary for decisions on the projects, including the relevant alternatives to the project. The EIA report should always include a "do nothing" alternative (the zero option). The EIA provisions allow local and regional environmental authorities, NGOs and other relevant organisations as well as the general public to participate in the process.

Once the EIA report has been drawn up there is further consultation and a public meeting with i. a. the developer and responsible authority present. Here, those who may be affected can properly evaluate whether the impacts of the project have been satisfactory assessed. The public debate and any comments received can help the developer to adjust the plans for the project.

The responsible authority can not legally grant permits or take planning decisions in respect to a project until the EIA requirements have been met. The final decision shall explain how the environmental assessment, with comments, has been evaluated and how the environmental impacts have been reflected in the decision, especially with regard to alternatives and requirements concerning mitigation measures. The outcome of the decision shall be communicated to those parties who have participated in the EIA process.

#### **Experience with EIA**

By the end of 2002, approximately 600 projects have been subject to EIA. These covers all major development projects in Norway during a period of nearly twenty years. The most frequent project types are extraction of ores, light industry/public buildings, and roads. Recently, windmill farms are becoming a common project type as well.



Photo: Torbjørn Kjosvold, frm.foto

Evaluation studies of the Norwegian EIA process show that EIA creates an orderly planning process, enhances the role of the public concerned in the planning and decision making process and produces a broader knowledge base for decisionmaking. More specifically, EIA functions as a uniform process that structures the co-operation between developer, relevant governmental bodies at the appropriate levels, and the public.

The studies also show that the early phase is important. Especially the study programme is an important element of the EIA process, as it contributes to focus on the crucial issues to be addressed in the EIA report.

EIA provides knowledge and consciousness of environmental impacts, and also leads to a more thorough planning process. It helps to achieve alterations in design and implementation of projects in order to enhance environmental performance.

The cost of EIA varies, but does not normally exceed 0.1 - 0.5 % of the total project costs. There is no documented project delay for projects that are assessed according to the EIA provisions.

For further information on EIA and SEA matters in Norway please access www.miljo.no.

International Co-operation on EIA and SEA
Since its inauguration in the 1980's Norway has
been a partner in the Nordic co-operation network
directed at implementing legislation and developing practice on EIA and SEA. As a party to the
Agreement on the European Economic Area of
1992 Norway has also participated in the expert
groups on EIA and SEA of the European Commis-

sion. Norway has also played a leading role in the work of the UN ECE, chairing the Bureau of the Espoo Convention and organising the first meeting of the Parties of this Convention in 1998 in Oslo. More recently, Norway chaired the negotiations on the Protocol on Strategic Environmental Assessment

### EIA and SEA in development co-operation

According to the Strategy for Environment in Development Co-operation, presented in 1997 by the Ministry of Foreign Affairs, the environmental perspective shall be fully integrated in Norwegian development assistance, and support for environmental programmes and projects shall be maintained. In order to comply with this, the Norwegian Agency for Development Co-operation (NORAD) has developed a set of guidelines for environmental impact assessment of all projects submitted for support. As support to sector programmes is becoming increasingly important, guidelines for strategic environmental assessments are currently being considered. As a Centre for Environmental Assistance, the Ministry of the Environment has cooperated with NORAD on these matters. Concerning experience in collabaration on EIA with developing countries, see the list of actors on the following pages. For further information on issues related to environment in development co-operation access www.norad.no/environment

The following actors have broad international experience in the field of environmental impact assessment:

**The Ministry of the Environment (MoE)** has responsibility for the overall environmental policy in Norway. MoE is responsible for the development

# NEW ALTERNATIVE INTRODUCED DURING THE EIA PROCESS

In a transport project in the southeast part of Norway, the EIA process ensured that the planned railway and road projects were integrated into a transport corridor plan. During the public inspection of the notification, it became clear that the proposed alternatives all had significant negative impacts on important cultural heritage sites in the area. As a result, the developers agreed to assess an alternative that will not have those impacts. The project is still in the planning stage, and the alternative that will be implemented is yet not chosen.

#### **EIA PROVIDES IMPORTANT KNOWLEDGE**

In a windmill project in the western coastal region of Norway, the EIA process contributed significant factual knowledge to the decision-making process when the Ministry of the Environment stopped a proposed windmill park in a sensitive coastal landscape with a nationally recognised moor area. In addition, the participation by the public and concerned authorities prepared the Ministry for the high conflict level related to the proposed development.



of legislation, guidelines, training etc. MoE has also worked with co-operation projects on EIA and SEA with a number of countries, including Mozambique, South Africa, The Palestine Authorities etc.

For more information: www.dep.no/md www.norad.no/environment

The Directorate of Cultural Heritage (DCH) is the Ministry of the Environment's advisory and executive body for the management of archaeological and architectural monuments and sites, and cultural environments.

The Directorate's EIA-related responsibilities and activities include co-operation with the Ministry in developing the EIA-system, within the framework of the Planning and Building Act, to advise on implementation of EIA in relation to heritage issues, to advise regional authorities on questions dealing with new types of projects (golf courses, wind mill parks etc.), to produce guides and guidelines concerning the use of EIA in relation to cultural monuments, sites and environments.

For more information: www.riksantikvaren.no www.norad.no/environment

The Norwegian Polar Institute (NPI) is a Directorate under the Ministry of the Environment. It is Norway's central institution for research, environmental monitoring and mapping of the polar regions. The Institute has a special competence for EIA in Arctic regions. As part of a governmental structure, the Institute participates in the elaboration of EIAs only when public authorities are responsible. In addition, the NPI always comments on SEAs and EIAs in Norwegian Arctic regions. The

#### **EIA IN THE PETROLEUM SECTOR**

Impact assessments when opening an area
Before production licences can be awarded, an area
must be opened for petroleum activities. In that context,
the authorities carry out an impact assessment and consulting procedure, which includes an evaluation of the

possible environmental, economic and social effects of activities on adjoining industries such as fishing.

# Impact assessments for developments and cessation of activities

The Petroleum Act also requires the licencees to submit an assessment as part of its plan for development and operation (PDO) and plan for installation and operation (PIO) which covers the impact of producing the relevant discovery on nature, the environment and the fisheries. This assessment must outline possible environmental effects of anticipated discharges and the impact on other industries, including fishing. A systematic cost/benefit analysis of possible mitigatory measures is also required. The impact assessment is used as a tool throughout the development period to ensure that environmental considerations are taken into account. Both the programme for the assessment and the completed work are subject to public consultation. According to the Petroleum Act. a similar assessment must also be carried out as part of a cessation plan.

# Regional impact assessments

In order to obtain the best possible overview of environmental impacts of petroleum activities, wider area assessments may be necessary. This is done through a regional impact assessment prepared by the licencees. The oil and gas sector was one of the first in Norway to develop a system for such assessments.

http://www.dep.no/oed/engelsk/index-b-n-a.html

institute also delivers background data to various institutions which carry out EIA's.

For more information: www.npolar.no

The Norwegian Pollution Control Authority (NPCA) is a Directorate under the Ministry of the Environment. NPCA has broad competence on EIA/SEA/area use planning. As an example, Norway is at present developing a holistic management plan for the Barents Sea based on the ecosystem approach. The plan is based on SEAs of all sectors having activities that affect the environment of the area, namely: petroleum industry, shipping, fisheries and aquaculture. In addition, a SEA is being prepared for long range pollution. NPCA is involved in the development of these SEAs and the management plan.

For more information: www.sft.no www.norad.no/environment

## The Directorate for Nature Management (DN)

is a Directorate under the Ministry of the Environment. Its main tasks are to serve as the national implementing authority in the fields of biodiversity, land use planning and management, wildlife and freshwater resources and outdoor recreation.

DN has ample experience in assessing impacts on the environment from large scale developments in sectors such as transportation, hydro and wind power development, industry and mining. Impact assessment comprises the fields of biodiversity, wildlife and freshwater resources, and outdoor recreation. In addition, DN has developed capacity on the systemic side of EIA, and may advise on scope, relevance and quality.

For more information: www.dirnat.no www.norad.no/environment

The Norwegian Mapping Authority (NMA) is the national mapping and geographic information authority in Norway. NMA is co-ordinating the ARE-ALIS program. AREALIS is a supporting tool for Environment Impact Assessment. The program is an initiative to make existing environmental data and land use information from different sectors available at local and regional administrative levels (counties and municipalities). The program will stimulate the work for environmentally sound land use, sustainable development and rational planning. This will help to minimise land use conflicts, resulting in shorter planning time and economic use of the planning force.

For more information: www.statkart.no www.norad.no/environment

The Norwegian Institute for Cultural Heritage Research (NIKU) is a national centre of expertise in the cultural heritage field, undertaking research and fieldwork projects in urban and rural contexts both at home and - increasingly - abroad. NIKU's in-house expertise covers environmental impact assessment, risk assessment, scoping, surveying/mapping and environmental monitoring. Most projects arise in connection with development plans of various kinds, particularly those that lay claim to large areas (housing and industrial estates, transportation, hydro-electric schemes, quarrying, golf courses and so on). NIKU strives constantly to refine and develop research and fieldwork methods, and has close working ties with its five fellow institutes in the Environmental Research Alliance of Norway.

For more information: www.niku.no

The Norwegian Institute for Water Research (NIVA) is Norway's leading multidisciplinary research institute on the use and protection of water bodies and water quality, including both freshwater and marine areas. NIVA has extensive competence and experience from national and international projects related to EIA/SEA of development projects, such as hydropower, water supply and wastewater, infrastructure and industrial development, offshore oil exploration and production, fish farming, and other large-scale activities that may have significant impacts on water. The topics include assessment and modelling of water pollution, hydrology, effects on biodiversity, impacts on various water-uses, and economic valuation.

For more information: www.niva.no

The Norwegian Institute for Nature Research (NINA) is a national and international centre of expertise within applied ecology research and environmental consultancy. EIA is one of its prioritised activities. NINA has long experience and expertise in assessing the character and potential effects of any particular enterprise, as well as in both prioritising themes relevant to the decision-making process (scoping) and dealing with these in a professional and rational way.

For more information: www.nina.no

The Norwegian Institute for Air Research (NILU) conducts research and science based services for clients all over the world with emphasis on the sources of airborne pollution, atmospheric transport, transformation and deposition. NILU is also involved in the assessment of the effects of pollution on ecosystems, human health and materi-

als. A main priority for NILU is to provide scientific facts on the quantitative relationships between these factors, and at the same time make the results available in user-friendly manner for decision-makers. NILU has in the last decade specialised in delivering systems for air quality surveillance and monitoring, as well as applicable management tools like: Air Quality Monitoring and Modelling; Air Quality Assessment; Abatement Options Assessment; Cost Benefit Analysis or Cost Effectiveness Analysis; and Optimum Control Strategy Planning.

For more information: www.nilu.no

The Norwegian Institute for Urban and Regional Research (NIBR) includes the National Centre for Planning and EIA. The centre plays a major role in studying and developing planning and EIA/SEA as instruments in environmental policy and management in Norway. It is also involved in an extensive network of authorities, developers, and researchers, nationally and internationally.

For more information: www.nibr.no

The Institute of Marine Research (IMT) is a leading governmental research institution whose main aim is to contribute to a responsible utilization of the oceans as a food source and as basis for industrial activity and recreation. IMR has advisory tasks in relation to renewable resources monitoring and management, environmental monitoring and impact assessments related to oil/gas extraction activities and aquaculture. IMR is also involved in international co-operation both at regional and global levels and in development co-operation with several countries in Africa and Asia.

For more information: www.imr.no www.norad.no/environment

The Centre for International Environment and Development Studies (NORAGRIC) at the Agricultural University of Norway (NLH), focuses mainly on research, education and assignments, particularly in developing countries and countries with economies in transition. Noragric/NLH's South East European programme addresses, inter alia, optimal use of limited available resources in the SEE region, use of GIS-methods in forestry and agriculture, and information exchange with universities. Noragric's large portfolio of international assignments includes EIAs, land-use planning, carbon sequestration, competence building etc.

For more information: www.nlh.no/noragric www.norad.no/environment

Chr.Michelsen Institute (CMI) is an independent, non-profit research institution working with development issues and human rights in the South. One of the main research areas is Natural Resource Management focusing on the use of natural resources under varying natural, social and institutional circumstances. The twin challenges of trade liberalisation and poverty reduction exert increasing pressure on renewable natural resources in developing countries - agricultural land, forest products and fisheries. Recent research at CMI has focused on inland fisheries in Africa, management of tropical forests and development of models of deforestation processes in South-East Asia and pastoralism in the Horn of Africa.

For more information: www.cmi.no

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