

ASSESSMENT METHODOLOGY

1.november 2012

Method for assessing environmental impacts (Environmental Impacts on the Environment, EIA)

An assessment of environmental impacts aims at identifying and evaluating significant effects that are very likely to occur. The assessment focuses on the issues identified with most significant effects and not on concerns that the assessment indicates to be insignificant.. An impact can be either positive or negative.

This note describes the general method for assessing environmental impacts. The method has been developed based on the criteria in annex 3 of the EU-EIA Directive (85/337/EEC). The assessment method is drawn up by NIRAS. The method is a working tool which can be continuously revised.

The main purpose of the method is to ensure that the assessments are based on specific terms and to increase the transparency of the assessments conducted. The objective is to propose possible mitigation measures and to define the residual impacts in order to support the decision-making process. It is important to point out that the method can never stand alone. It has not been the intention to try to establish a method that would predict the exact magnitude of the impact or change in all situations and the method cannot replace specialist knowledge and project-specific assessments.

The method can be used where there are no statutory requirements (such as threshold limit values). The method is not applicable to assessments in accordance with the EU- Habitat Directive and EU-Bird protection Directive (Natura 2000 sites).

Description of the method

Table 1 describes when mitigation measures are expected with a view to reducing a given environmental impact.

Table 1 Degree of remedial measures

Magnitude of impact	Mitigation measure
Major impact	Impact considered of sufficient importance to consider whether the project should be changed or whether mitigation measures should be made to reduce this impact
Moderate impact	Impact of a magnitude where mitigation measures are considered
Minor impact	Impact of a magnitude where it is not likely that mitigation initiatives are necessary.
Negligible impact and no impact	Impacts considered so negligible that they are not relevant to take into consideration when implementing the project

A number of criteria form part of the assessment of environmental impacts. Table 2 lists the most significant criteria. The likelihood of occurrence or the risk of an environmental impact taking place has been divided into three groupings in the table; however, as is most often the case in respect of impacts on the natural environment, this division will be more varied and detailed.

Table 2 List of criteria for assessment of environmental impacts

Criteria	Factor
Importance of the issue	<ul style="list-style-type: none"> • Importance to international interests • Importance to national interests • Importance to regional interests • Importance to local interests • Importance in respect of the area with direct impact • Negligible or not important
Persistence	<ul style="list-style-type: none"> • Permanent impact (non-reversible) in the life of the project • Temporary for >5 years • Temporary for 1-5 years • Temporary for <1 year
Likelihood of occurrence	<ul style="list-style-type: none"> • High (>75 %) • Medium (25-75 %) • Low (<25 %)
Direct/indirect impact	Impact caused directly by the project or indirectly as a derived effect of a direct impact
Cumulative	An impact combined of other activities or other projects locally or regionally

The below tables (Table 3, Table 4 and Table 5) indicate the process of assessing the magnitude of individual environmental impacts in connection with a project. The following is a description of the table: Column 1 states the degree of disturbance: The extent of the disturbance is assessed as high, medium or low. Column 2: assesses whether the disturbance is important to international, national/regional or entirely local interests. Column 3 indicates the likelihood that the assessed disturbance occurs. Column 4 shows the persistence of the disturbance. By combining these four factors the magnitude of impact is found in column 5.

One of the purposes of the method is to ensure that the assessments are based on the terms laid down: degree of disturbance, importance, likelihood of occurrence and persistence. At the same time, the purpose is to increase the transparency of the assessments conducted and ensure supplementary argumentation. It is important to point out that it is a matter of estimating the likely degree of impact, and that the method can never stand alone. It is not possible to establish a method in which the degree of impact can always be predicted when the method is to cover environmental assessments within all relevant topics. The method cannot replace specialist knowledge and project-specific assessments, and therefore the assessments must be made on the basis of a specialist insight and with sufficient argumentation. This can lead to the resultant degree of impact becoming different from what the method immediately predicts.

Table 3 Assessment of degree of impact (high degree of disturbance)

Degree of disturbance	Importance	Likelihood of occurrence	Persistence	Magnitude of impact
High	International interests	High (>75 %)	Permanent (> 5 years)	Major
			Temporary (1-5 years)	Major
			Short-term (0-1 year)	Moderate
		Medium (25-75 %)	Permanent (> 5 years)	Major
			Temporary (1-5 years)	Major
			Short-term (0-1 year)	Moderate
		Low (<25 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Moderate
			Short-term (0-1 year)	Minor
	National or regional interests	High (>75 %)	Permanent (> 5 years)	Major
			Temporary (1-5 years)	Moderate
			Short-term (0-1 year)	Moderate
		Medium (25-75 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Moderate
			Short-term (0-1 year)	Minor
		Low (<25 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short-term (0-1 year)	Minor
	Local interests (important for the area directly affected or for the immediate surroundings)	High (>75 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Moderate
			Short-term (0-1 year)	Minor
		Medium (25-75 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short-term (0-1 year)	Negligible/none
		Low (<25 %)	Permanent (> 5 years)	Minor
			Temporary (1-5 years)	Negligible/none
			Short-term (0-1 year)	Negligible/none
Negligible/not important	High (>75 %)	Permanent (> 5 years)	Negligible/none	
		Temporary (1-5 years)	Negligible/none	
		Short-term (0-1 year)	Negligible/none	
	Medium (25-75 %)	Permanent (> 5 years)	Negligible/none	
		Temporary (1-5 years)	Negligible/none	
		Short-term (0-1 year)	Negligible/none	
	Low (<25 %)	Permanent (> 5 years)	Negligible/none	
		Temporary (1-5 years)	Negligible/none	
		Short-term (0-1 year)	Negligible/none	

Table 4 Assessment of degree of impact (medium degree of disturbance)

Degree of disturbance	Importance	Likelihood of occurrence	Persistence	Magnitude of impact
Medium	International interests	High (>75 %)	Permanent (> 5 years)	Major
			Temporary (1-5 years)	Moderate
			Short-term (0-1 year)	Moderate
		Medium (25-75 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Moderate
			Short-term (0-1 year)	Minor
		Low (<25 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short-term (0-1 year)	Minor
	National or regional interests	High (>75 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Moderate
			Short-term (0-1 year)	Minor
		Medium (25-75 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short-term (0-1 year)	Minor
		Low (<25 %)	Permanent (> 5 years)	Minor
			Temporary (1-5 years)	Minor
			Short-term (0-1 year)	Negligible/none
	Local interests (important for the area directly affected or for the immediate surroundings)	High (>75 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short-term (0-1 year)	Minor
		Medium (25-75 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short-term (0-1 year)	Negligible/none
Low (<25 %)		Permanent (> 5 years)	Minor	
		Temporary (1-5 years)	Minor	
		Short-term (0-1 year)	Negligible/none	
Negligible/not important	High (>75 %)	Permanent (> 5 years)	Negligible/none	
		Temporary (1-5 years)	Negligible/none	
		Short-term (0-1 year)	Negligible/none	
	Medium (25-75 %)	Permanent (> 5 years)	Negligible/none	
		Temporary (1-5 years)	Negligible/none	
		Short-term (0-1 year)	Negligible/none	
	Low (<25 %)	Permanent (> 5 years)	Negligible/none	
		Temporary (1-5 years)	Negligible/none	
		Short-term (0-1 year)	Negligible/none	

Table 5 Assessment of degree of impact (low degree of disturbance)

Degree of disturbance	Importance	Likelihood of occurrence	Persistence	Magnitude of impact
Low	International interests	High (>75 %)	Permanent (> 5 years)	Moderate
			Temporary(1-5 years)	Minor
			Short-term (0-1 year)	Minor
		Medium (25-75 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short-term (0-1 year)	Negligible/none
		Low (<25 %)	Permanent (> 5 years)	Minor
			Temporary (1-5 years)	Minor
			Short-term (0-1 year)	Negligible/none
	National or regional interests	High (>75 %)	Permanent (> 5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short-term (0-1 year)	Negligible/none
		Medium (25-75 %)	Permanent (> 5 years)	Minor
			Temporary (1-5 years)	Negligible/none
			Short-term (0-1 year)	Negligible/none
		Low (<25 %)	Permanent (> 5 years)	Minor
			Temporary (1-5 years)	Negligible /none
			Short-term (0-1 year)	Negligible/none
	Local interests (important for the area directly affected or for the immediate surroundings)	High (>75 %)	Permanent (> 5 years)	Minor
			Temporary (1-5 years)	Negligible/none
			Short-term (0-1 year)	Negligible/none
		Medium (25-75 %)	Permanent (> 5 years)	Minor
			Temporary (1-5 years)	Negligible/none
			Short-term (0-1 year)	Negligible/none
		Low (<25 %)	Permanent (> 5 years)	Minor
			Temporary (1-5 years)	Negligible/none
			Short-term (0-1 year)	Negligible/none
Negligible/not important	High (>75 %)	Permanent (> 5 years)	Negligible/none	
		Temporary (1-5 years)	Negligible/none	
		Short-term (0-1 year)	Negligible/none	
	Medium (25-75 %)	Permanent (> 5 years)	Negligible/none	
		Temporary (1-5 years)	Negligible/none	
		Short-term (0-1 year)	Negligible/none	
	Low (<25 %)	Permanent (> 5 years)	Negligible/none	
		Temporary (1-5 years)	Negligible/none	
		Short-term (0-1 year)	Negligible/none	

