

PROJECT TITLE	METHODOLOGICAL GUIDANCE TO IMPACT ASSESSMENT IN LAND CONSOLIDATION PROCESS
Number	PPA05/LT/8/1
Counterpart	Lithuanian Ministry of Agriculture
Beneficiary	Lithuanian Ministry of Agriculture; National Land Service under the Lithuanian Ministry of Agriculture; County Governor's Administration
Duration	2005 November 15 th - 2006 May 15 th

DLG The Netherlands
Ministry of Agriculture Lithuania / National Land Service

THE MANUAL ON ENVIRONMENTAL IMPACT ASSESSMENT IN RELATION TO LAND CONSOLIDATION

Table of content

1. Introduction	3
2. Environmental impact assessment in Lithuania	3
2.1. The EIA Process in Lithuania	3
2.2. Lithuanian EIA procedures for Annex II projects	5
2.2.1. Screening	5
2.2.2. Scoping / EIA program	6
3. Public information and consultations	8
4. EIA Procedures in land consolidation projects	8
5. Information that shall be provided by the organiser	10
6. Potential impacts of land consolidation and related proposed economic activities	13
6.1. Land consolidation	13
6.2. Improvement of drainage system with an area of more than 5 ha	15
6.3. Installation of ponds with an area of more than 10 ha and less than 250 ha	16
6.4. Use of uncultivated land with an area of more than 0,5 ha for intensive agricultural use	17
6.5. Initial afforestation and deforestation for the purposes of conversion to another type of land use with an area of more than 10 ha in rural areas	18
6.6. Improvement or construction of access roads to plots	20
6.7. Construction of overhead electrical power lines with a length between 3 to 15 km	21
Annex I. List of economic activities from Annex II of LAW on EIA	22
Annex II. Questionnaire for solutions impact assessment of territorial planning document and table for evaluation of territorial planning document solutions	26
Annex III. Examples of screening material from the pilot projects	27

1. Introduction

This guidance document has been prepared by experts from the Dutch Service for Land and Water Management, DLG, and the Lithuanian University of Agriculture (LUA).

The aim of this document is to provide guidance on when, and how, an environmental impact assessment (EIA) should be carried out for land consolidation projects in Lithuania. The document sets out a review of EIA requirements under Lithuanian law, and provides a generic description of the main stages in the standard EIA process. The special emphasis has been given to the screening process for EIA. The screening process is a necessary and in most cases the only step in land consolidation projects.

2. Environmental impact assessment in Lithuania

2.1. The EIA Process in Lithuania

Environmental Impact Assessment (EIA) is a procedure designed to identify and help prevent significant adverse environmental changes that would or could be associated with (economic) development activities. The main objectives of the EIA process in Lithuania, as elsewhere in European Union (EU), can be summarized as:

- To assess potential environmental impacts of a project in order to assist in decision-making related to the approval of the proposed development, before the project is undertaken.
- To help optimize the project design by identifying potential environmental impacts, both adverse and beneficial, of construction and operation.
- To identify and compare alternative means of achieving the project's goals in order to help select the preferable alternative.
- To propose measures that would help to mitigate any adverse environmental impacts of the project and enhance any beneficial environmental consequences.
- To provide a source of information for all participants on the baseline conditions and on the proposed development project.

It is important to recognize that environmental impact assessment EIA is a process and is not just about producing a report. Good practice in EIA requires that it is integrated into the process of planning and project design while there is scope to influence the project. The Lithuanian Manual on EIA explicitly acknowledges this.

Key participants in the EIA process as identified in Lithuanian legislation are:

- The organiser, the project developer or proponent (*in the following parts of this guidance the word organiser is used*);

- The competent authority (Ministry of the Environment, or its regional offices or other empowered institution);

- Relevant parties (statutory consultees) for EIA such as government institutions and municipal administrations responsible for health protection, fore-prevention, protection of assets, nature protection, development of economy and agriculture and municipal administration;

- The public (inhabitants and non-governmental organizations (NGOs) and other interested parties or stakeholders);

The legal framework for EIA is set out in the following legislation (valid in EIA process of land consolidation projects):

- Law on Environmental Impact Assessment of Proposed Economic activity of the Republic of Lithuania, adopted 21 June 2005 (*in the following parts of this guidance this law is named as Law on EIA*) (Žin. No.84-3105);

- Governmental Resolution on empowering the Ministry of Environment and Subordinate Institutions, No. 900 28 July 2000 (Žin., 2000, No.65-1956; changed on 01 March 2001 and 04 February 2003);

- Order of the Minister of the Environment on the Approval of the Methodological Guidelines on the Screening of the Proposed Economic Activity, No. D1-665, 30 December 2005 (Žin., 2006, No. 4-129);

- Order of the Minister of the Environment on the Approval of Regulations on preparation of Environmental Impact Assessment Program and Report, No. D1-636, 23 December 2005 (Žin., 2006, No. 6-225);

- Order of the Minister of Environment on the Approval of the Order of Informing the Public and Public Participation in the process of EIA, No. D1-370, 15 July 2005 (Žin., 2005 No.93-3472);

- Order of the Minister of the Environment on the Approval of the Guidelines on the Quality Control of the EIA of the proposed Economic Activity No.305,17, July 2000 (Žin., 2000, No.65-1971);

- Order of the Minister of the Environment on the Approval of the Order of Investigating the Environmental Assessment Documents at the ministry of environment and Subordinate Organizations, No.D1-311, 23 June 2006.

Lithuanian environmental impact assessment legislation complies with the environmental legislation of the EU, principally, the EIA Directive (85/337/EEC as amended by 97/11/EC).

The legislation distinguishes between:

- types of proposed economic activities on which an EIA is required (Annex I of the Law on EIA) i.e. EIA is ***always*** required for these projects;

and

- types of proposed economic activities that ‘shall be subject to Screening for Obligatory EIA’ (Annex II of the Law on EIA) – here the requirement for EIA depends on the opinion of the competent authority following analysis during a screening process.

Land consolidation projects do not fall into Annex I of the Law on EIA. Land consolidation projects are however mentioned in Annex II of the Law on EIA (see Annex I of this guidance).

EIA is also required in cases when the planned economic activity may cause an significant impact on the NATURA 2000 territories.

2.2. Lithuanian EIA procedures for Annex II projects

Specific procedures are in place for:

- undertaking EIA,
- consultation with the public,
- notifying them of formal decisions.

The information required at each stage of the process and the methodologies to be applied are all set out in the Lithuanian environmental assessment legislation. The steps for projects (activities) as mentioned in Annex II of Law on EIA are outlined below. The list of all activities mentioned in the Annex II of Law on EIA is attached (see Annex I of this guidance).

2.2.1. Screening

For Annex II projects, such as land consolidation projects, the screening process is obligatory.

Hereby information, as prescribed by the legislation, is submitted to the competent authority for analysis and a screening decision. This decision is to be provided within 20 working days.

Once the authorities have provided their screening conclusion decision the organiser is required to advertise it locally and to invite the public to comment on the proposal and the decision (See Figure 1).

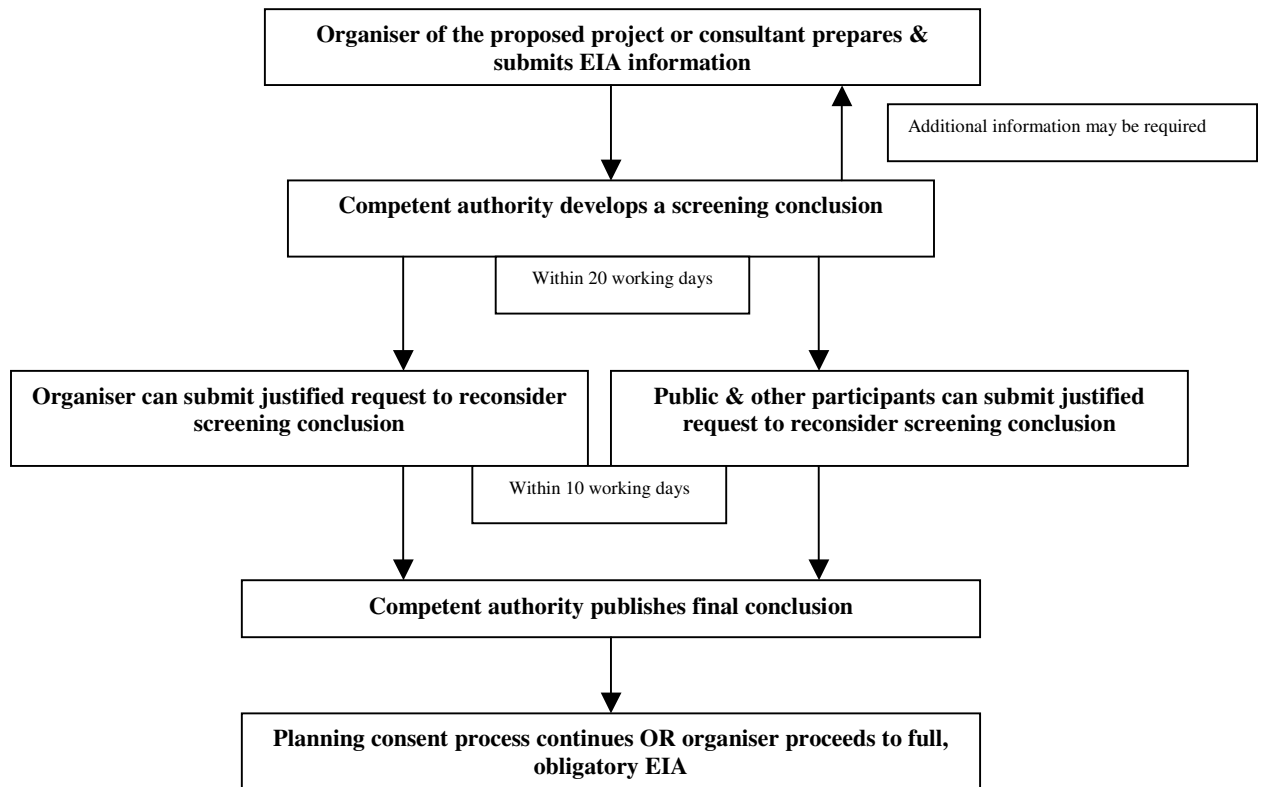
The decision of the competent authority can be twofold:

- no further steps of the EIA process are required,

- a full EIA is required, starting with scoping (see next paragraph).

For most land consolidation projects is anticipated that the screening process is the only step of the EIA process, which will be required.

Figure 1 The process of screening for EIA in Lithuania



2.2.2. Scoping / EIA program

Scoping is the second recognized part of the EIA process and is designed to identify the main issues and those issues perceived as being of importance in the eyes of participants in the EIA process, including the public. Potential impacts are identified for further study, potential alternatives and possible mitigation measures outlined. This process allows the EIA to be focused on the important issues.

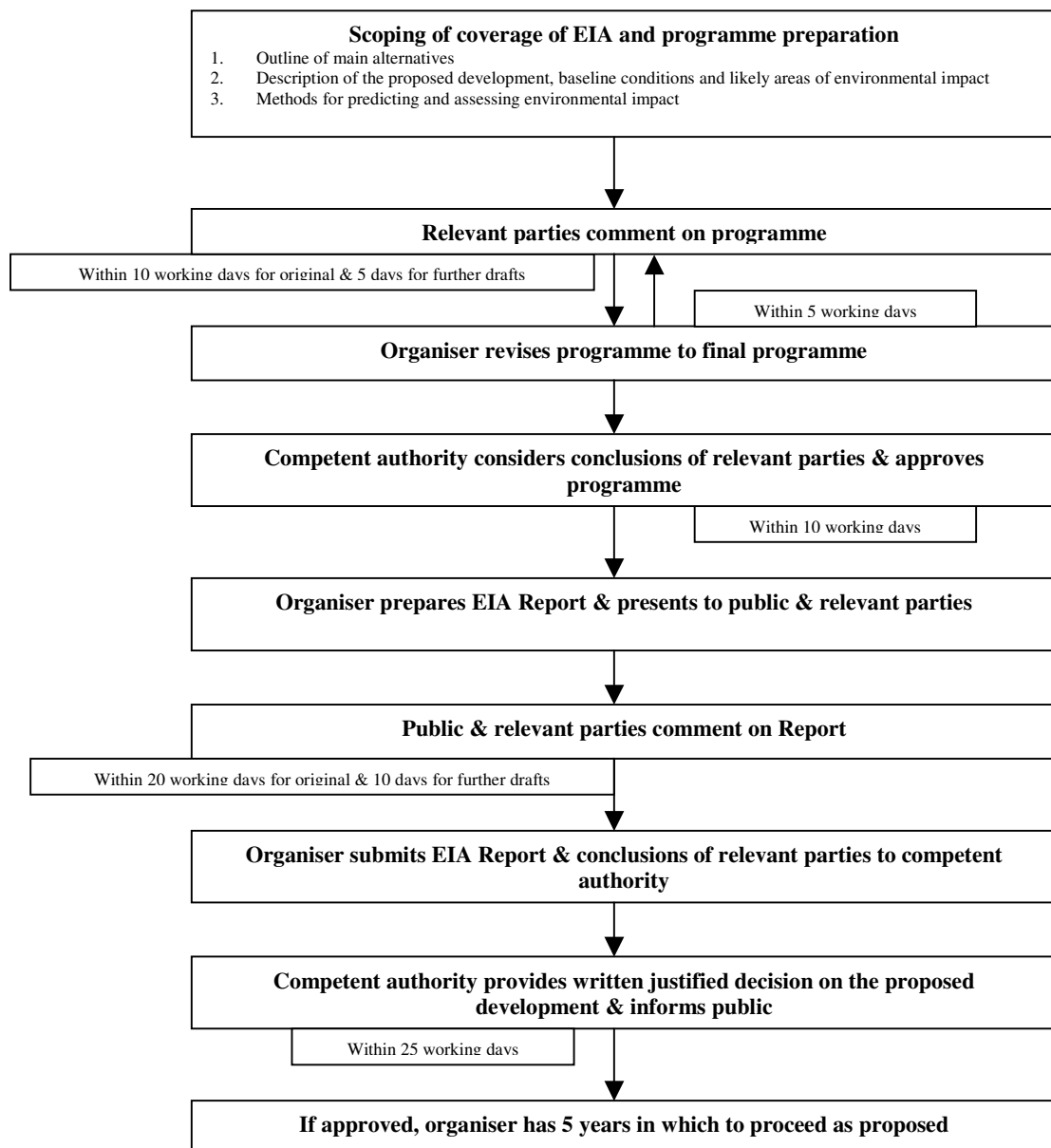
It is recommended that consultation with the public and other interested parties is used to guide the scoping stage as it helps inform and involve the public and can reduce the potential for problems to emerge later in the EIA process (see also chapter 3).

Under Lithuanian legislation the scoping stage involves the preparation of an EIA program by the organiser. The EIA program is submitted to the 'relevant parties of the EIA' as a formal document for comment. Comments are to be given within 10 working days and 5

working days when further revisions are issued by the organiser. Once the organiser has received these comments, the organiser forwards these comments together with the EIA program (amended where necessary) to the competent authority for approval. The organiser has to do this within 10 working days. The competent authority ratifies the EIA program within 10 working days.

The further steps in the full EIA process are shown in Figure 2. These steps are not further described here, as it is anticipated that land consolidation projects only have to perform the screening process. For further text on the full EIA process, reference is made to the Lithuanian Manual on EIA.

Figure 2 The EIA Process in Lithuania



3. Public information and consultations

The Lithuanian EIA Manual recommends that an EIA should include effective and well-timed public consultation both while the EIA program is being prepared and when the EIA report has been completed.

Lithuanian EIA legislation defines requirements for public participation throughout the EIA as follows:

- At the screening stage – the public receives information by the organiser on the screening decision / conclusion of the competent authority. The competent authority issues the screening decision to the organiser.

- The decision of the competent authority can be twofold:

- 1: the screening stage was sufficient and no full EIA is required. In that case the organiser has to publish the decision and invites the public to submit justified proposals to reconsider the screening conclusion. These justified proposals have to be submitted to the competent authority within 10 working days.

- 2: When the competent authority decides that a full EIA is required, the organiser also publishes the decision and invites the public to submit comments and proposals. These comments and proposals are to be submitted to the organiser within 10 working days and within 5 working days when any further drafts are issued by the organiser.

- During the EIA preparation, for example at draft final report stage, a public meeting is held presenting the EIA report. Comments must be taken into account in the final report.

- At the decision making stage the public is notified of the decision by the competent authority and the organiser.

Information on the proposal is made available for public access.

4. EIA Procedures in land consolidation projects

According to the Rules for the preparation and implementation of land consolidation plans (approved by the Government of the Republic of Lithuania, Resolution No 697 of 27 June 2005), the planner of land consolidation project, having prepared the solutions, shall perform the following works: prepare a report on solutions impact assessment in the manner specified by the Resolution No 920 passed by the Government of the Republic of Lithuania on 16 July 2004

„Regarding the Approval of Description of Procedure for Impact Assessment of the Solutions of Territorial Planning Documents “ (Žin., 2004, No 113-4228).

According to the above mentioned Description of Procedure for Impact Assessment of the Solutions of Territorial Planning Documents, in these cases, when according the Law on EIA the environment impact assessment of the proposed economic activities is required, the environment impact assessment has to be carried out during the preparation of special and detail plans, following the requirements of the Law on EIA.

According the Law on EIA, screening is required for the following **proposed economic activities** (the complete list of activities mentioned in Annex II of Law on EIA is attached (see Annex I of this guidance):

- Land consolidation.

Land consolidation is seen as the process of redistribution and reparceling of agricultural land. The agricultural land taking part in the land consolidation is being cultivated. For uncultivated agricultural land see below.

- Improvement of drainage system with an area of more than 5 ha.

When the area of the drainage system to be improved or reconstructed is less than 5 ha no impact screening is required.

- Installation of ponds with an area of more than 10 ha and less than 250 ha.

When the area of the pond to be installed is less than 10 ha no impact screening is required.

When the area is larger or the content of the pond (or dam) is 5 million m³ or more, than a full EIA is obligatory.

- Use of uncultivated land with an area of more than 0,5 ha for intensive agricultural use.

When the area of uncultivated land is less than 0,5 ha no impact screening is required.

- Initial afforestation and deforestation for the purposes of conversion to another type of land use with an area of more than 10 ha in rural areas.

When the area of afforestation or deforestation is less than 10 ha no screening for EIA is required.

- Construction of overhead electrical power lines with a length between 3 to 15 km

The construction of overhead electrical power lines with a length of less than 3 km does not require screening for EIA.

Land consolidation itself and land consolidation related activities (as mentioned above) require that the screening procedure has to be performed. Therefore, the information, as prescribed by the EIA legislation (the screening procedure), has to be prepared and submitted to the competent authority (Regional Department on Environment Protection) for analysis and a screening conclusion.

For description of the screening process see paragraph 2.2. For description of information to be submitted see next chapter (chapter 5).

5. Information that shall be provided by the organiser

Information listed below has to be provided in any case by the organiser (or the preparer of EIA documents) of the land consolidation project and any related activity. These activities are mentioned as proposed economic activities above in chapter 4. The organiser has to submit the information to the competent authority (the Regional Department on Environment Protection).

Generally, descriptive information shall be provided. Quantitative data is submitted only if it is available already to the organiser in this phase of the land consolidation (or land consolidation related) project planning.

The general list of information to be provided is listed below:

The numbering refers to proposed chapters in the screening report.

1. Information about the organiser of the proposed economic activity

- First name, second name;
- Title of the enterprise / organisation;
- Address, phone number, fax number, etc.;
- Other information.

2. Information about the prospective location of proposed economic activity

- Information about location and any alternative locations of proposed economic activity.
For each prospective location of proposed economic activity:
 - Land-site plan;
 - thematic map with adjacencies;
 - copies land ownership documents
 - Topographic map of the environs (scale 1:50.000);
 - An excerpt from a territorial planning register (if there is a territorial planning document approved);
 - Information about the current land use;
 - Information about the existing infrastructure;

- Protective status of the territory (e.g.: protected area, protective zone, NATURA 2000 sites and the environmental purposes of these territories, etc.);
- Information about historical, cultural or archaeological assets in the area;
- Information on settled sanitary protective zones
- Other information.

3. Information about the proposed economic activity

- Name, purpose, production, investments;
- Proposed technologies and capacities*;
- Information about proposed methods of connecting to the infrastructural objects;
- Information about needed resources (both energetic and technological) and raw materials*;
- Phases and lifetime of the project;
- Other information.

4. Information about possible sources of impacts

- Generation of waste (amounts and categories)*
- Information about usage or storage of hazardous (explosive, flammable, irritative, dangerous, toxic, cancerogenic, etching, infective, teratogenic, mutagenic) substances*;
- Information about usage or storage of radioactive materials*;
- Noise, vibration, light, heat, ionizing non-ionizing (electromagnetic) radiation generated by the activity*;
- Information about potential impacts on the living or recreational environment or health of the inhabitants;
- Probabilities of fire or other emergencies (accidents) and proposed preventive measures*;
- Waste water, tentative amounts, water pollutants*;
- Generation of air pollutants, tentative amounts*;
- Soil pollution or erosion caused by the proposed activity;
- Generation of physical and biological pollutants, tentative amounts*;
- Other information.

Most of the general items listed above are not applicable to land consolidation projects and related proposed economic activities. Therefore the following list of possible sectors of impact is composed. This list complies with the items above not marked with a * and can therefore replace the list above.

Land consolidation projects and related proposed economic activities - information about possible impacts (positive and negative) on:

- Water (surface water and groundwater);
- Air (atmosphere);
- Soil and underground;
- Biodiversity;
- Landscape;
- Social;
- Economic;
- Cultural heritage.

Potential impacts of land consolidation projects and related proposed economic activities are described in the next chapter (see chapter 6).

5. Information about proposed impact mitigation measures

Proposed measures for any negative environmental impact prevention, mitigation or compensation. Possible mitigation measures of potential negative impacts of land consolidation projects and related proposed economic activities are described in the next chapter (see chapter 6).

6. Other information

- Possible public discontent with proposed activity;
- Impact of the proposed activity on the local labour market;
- Impact of the proposed activity on the local demographic conditions;
- Impact of the proposed activity on the local living or recreational environment and health / safety of the inhabitants;
- Technological, technical and impact mitigation alternatives considered by the organiser of the proposed economic activity.
- Information about the possible impact on environment in transboundary context;
- Cumulative impact of economic activities on environment.

Some information from this list (marked by *) in most cases is not applicable for land consolidation projects. For the description of impacts an alternative list is given above. This list is to be used for land consolidation projects and related proposed economic activities.

The results of a Cost-Benefit Analysis of the land consolidation project can be presented as part of this information (the economic impact).

Examples of screening information of pilot projects are presented in Annex III of this guidance.

The competent authority develops a screening conclusion within 20 working days (see Figure 1). This decision has to be sent to the organiser of the proposed economic activity.

In 10 working days after receiving the screening conclusion the organiser of the proposed economic activity (or the preparer of EIA documents) shall inform the public by announcing the following information in the places of public gatherings (e.g. on the municipal announcement boards) and in the press of the city (-ies) or district (-s) where the proposed activity is planned to be carried out:

- what kind of activity is proposed and where it is planned to be carried out;
- who is proposing the activity (the organiser);
- the screening conclusion of the competent authority regarding the obligation to perform environmental impact assessment;
- where and when it is possible to acquire information about the proposed activity;
- to whom motivated (justified) proposals regarding the environmental impact assessment may be submitted.

Both the organiser and the public have the right to present justified proposals to the competent authority to reconsider the screening conclusion. These proposals need to be submitted to the competent authority within 10 working days.

In such exceptional cases when the competent authority wants to reconsider the screening conclusion, the competent authority invites the relevant parties of EIA to participate in preparation of the final screening conclusion taking into account the justified proposals of the public and/or the organiser.

If the competent authority decides that a full EIA is required, then the organiser of the proposed economic activity (or the preparer of EIA documents) should follow the full, obligatory EIA procedures (as shown on Figure 2).

In most cases however the screening procedure should be sufficient for land consolidation projects in Lithuania.

After finalizing all the required EIA procedures the organiser of land consolidation project shall follow the solutions impact assessment procedure as described under the Resolution No 920 of the Government (Resolution No 920 as passed by the Government of the Republic of Lithuania on 16 July 2004. „Regarding the Approval of Description of Procedure for Impact Assessment of the Solutions of Territorial Planning Documents“). The questionnaire for the impact assessment of the solutions of territorial planning documents and the table for evaluation of territorial planning document solutions (this questionnaire and table are presented in Annex II of this guidance) have to be completed, the report has to be prepared and presented to the public according the order on public participation in territory planning process.

6. Potential impacts of land consolidation and related proposed economic activities

The potential impacts of land consolidation projects and land consolidation related activities (as mentioned in the Chapter 4 of this guidance) are described below.

6.1. Land consolidation

Land consolidation is seen as the process of redistribution and replotting of agricultural land.

The agricultural land taking part in the land consolidation is being cultivated. For uncultivated agricultural land see paragraph 6.4.

Potential impacts on the environment of land consolidation and possible mitigation measures are presented in the following table.

Land consolidation	Impacts on the environment and possible mitigation measures		
	Potential positive impact	Potential negative impact	Possible mitigation measures
Water	None	None	n/a
Air (atmosphere)	None	None	n/a
Soil and underground	None	None	n/a
Biodiversity	None	None	n/a
Landscape	None	None	n/a
Social	The land consolidation will improve living conditions due to improved revenue from reparable land.	None	n/a
Economic	It is expected that revenue from cultivated land will increase after reparation. Parcels will improve in size and shape; while their location will be closer to the farmhouse. These measures individually reduce costs and improve cultivation, resulting in increased revenue.	None	n/a
Cultural heritage	Land consolidation should give due regard to cultural heritage in the project area. Important is that cultural heritage patterns are taken into account and if possible are emphasized in the land consolidation process. This will then sustain cultural heritage for the future.	Reparcelling of land may disregard existing cultural heritage patterns.	Cultural heritage patterns and sites should be taken into account when planning and executing land consolidation.

n/a: not applicable.

6.2. Improvement of drainage system with an area of more than 5 ha

When the area of the drainage system to be improved or constructed is less than 5 ha no impact screening is required.

Potential impacts of drainage system improvement or construction on the environment and possible mitigation measures are presented in the following table.

Drainage system construction	Impacts on the environment and possible mitigation measures		
	Potential positive impact	Potential negative impact	Possible mitigation measures
Water	The drainage system will affect the groundwater table. The level of the groundwater table will be adjusted to the most optimum for agricultural needs. Therefore the impact is positive.	The most optimum groundwater table for agriculture may not be the best level for the flora and fauna in the project area. Therefore the adjustment of the groundwater table may have a negative impact on the flora and/or fauna in the project area.	None within the drainage system construction area. Outside the project area suitable areas for flora and fauna may already be available (to be indicated). In this case no mitigation is required. If no suitable areas for flora and fauna are available and the habitat is seriously affected, then alternative habitats should be considered to be created.
Air (atmosphere)	None	None	n/a
Soil and underground	None	None	n/a
Biodiversity	None	See impact on water	See impact on water
Landscape	None	None	n/a
Social	The drainage system construction will improve living conditions due to improved revenue from proper drained agricultural land.	None	n/a
Economic	Revenue from properly drained cultivated land will increase.	None	n/a
Cultural heritage	None	None	n/a

n/a: not applicable.

6.3. Installation of ponds with an area of more than 10 ha and less than 250 ha

When the area of the pond to be installed is less than 10 ha no impact screening is required.

When the area is larger or the content of the pond (or dam) is 5 million m³ or more than a full EIA is required.

Potential impacts of installation of ponds on the environment and possible mitigation measures are presented in the following table.

Installation of ponds	Impacts on the environment and possible mitigation measures		
	Potential positive impact	Potential negative impact	Possible mitigation measures
Water	The aim of the pond could be: storage of water for use at times of insufficient rainfall or runoff. The positive impact is therefore the use of water stored for agricultural purposes. Other positive impacts could be the replenishment of groundwater at times of insufficient rainfall.	Loss of water due to evaporation. This depends on the size of the pond in comparison to the volume of water stored.	None, evaporation losses are to be accepted. This negative impact should be less than the positive impacts otherwise the pond should not be constructed at all.
Air (atmosphere)	None	None	n/a
Soil and underground	None	None	n/a
Biodiversity	The pond will most likely have a positive impact on flora and fauna.	None	n/a
Landscape	The pond may have a positive impact on the landscape.	A very large pond will change the appearance of the landscape. This is not always seen as a negative impact.	The size and shape are to be considered. This should harmonize with the landscape.
Social	The pond may have a positive social impact due to recreational use of the pond.	None	n/a
Economic	The use of the stored water in the pond for economic activities will increase revenue from those economic activities.	None	n/a
Cultural heritage	None	Cultural heritage patterns and sites in the area of the pond should not be flooded.	Cultural heritage patterns and sites should be taken into account.

n/a: not applicable.

6.4. Use of uncultivated land with an area of more than 0,5 ha for intensive agricultural use

When the area of uncultivated land is less than 0,5 ha no impact screening is required.

Potential impacts of use of uncultivated land for intensive agricultural use on the environment and possible mitigation measures are presented in the following table.

Use of uncultivated land	Impacts on the environment and possible mitigation measures		
	Potential positive impact	Potential negative impact	Possible mitigation measures
Water	None	Intensive cultivation of land may cause a negative impact on water quality due to nutrients.	Prescription of most acceptable level of fertilizing.
Air (atmosphere)	None	None	n/a
Soil and underground	None	None	n/a
Biodiversity	None	Depending on the size of the uncultivated land and the availability of other nearby suitable areas a negative impact on flora and/or fauna may occur due to change to intensive agricultural use.	None within the uncultivated land. Outside the project area suitable areas for flora and fauna may already be available (to be indicated). In this case no mitigation is required. If no suitable areas for flora and fauna are available and the uncultivated area is considered a precious habitat, which is seriously affected, than creation of alternative habitats shall be considered.
Landscape	None	None	n/a
Social	The intensive agricultural use of the land will improve living conditions due to the revenue gained from the area.	None	n/a
Economic	The intensive agricultural use of the land will result in economic revenue.	None	n/a
Cultural heritage	None	None	n/a

n/a: not applicable.

6.5. Initial afforestation and deforestation for the purposes of conversion to another type of land use with an area of more than 10 ha in rural areas.

When the area of afforestation or deforestation is less than 10 ha no impact screening is required.

Potential **afforestation** impacts on the environment and possible mitigation measures are presented in the following table.

Afforestation	Impacts on the environment and possible mitigation measures		
	Potential positive impact	Potential negative impact	Possible mitigation measures
Water	Due to afforestation more water may infiltrate into the soil and underground. This is generally considered a positive impact.	None	n/a
Air (atmosphere)	Afforestation will benefit air quality due to carbon dioxide reduction and catching of fine dust particles.	None	n/a
Soil and underground	Afforestation generally decreases erosion. This is a positive impact.	None	n/a
Biodiversity	Afforestation may have a positive impact on flora and/or fauna.	None	n/a
Landscape	Afforestation will change the appearance of the landscape. Some may regard this a positive impact.	Afforestation will change the appearance of the landscape. Some may regard this a negative impact.	The size and shape of the afforested area are to be considered. This should harmonize with the landscape.
Social	Afforestation may have a positive social impact due to recreational use.	None	n/a
Economic	Afforestation for economic forestry will result in economic benefits.	Afforestation on areas previously in intensive agricultural use may result in a decrease of economic benefits.	None, the possible decrease in economic revenue is generally accepted in order to reach the other positive impacts described.
Cultural heritage	None	None	n/a

n/a: not applicable.

Potential **deforestation** impacts on the environment and possible mitigation measures are presented in the following table.

Deforestation	Impacts on the environment and possible mitigation measures		
	Potential positive impact	Potential negative impact	Possible mitigation measures
Water	None	Due to deforestation more water run off may occur. This is generally considered a negative impact.	The deforested area is to be cultivated in such a way that water can infiltrate into the soil.
Air (atmosphere)	None	Deforestation will decrease air quality due to biomass reduction, negative impact on carbon dioxide reduction and decreased possibilities to catch fine dust particles.	None within the project area. Afforestation elsewhere.
Soil and underground	None	Deforestation generally increases erosion.	Adaptation of cultivation patterns on the deforested land.
Biodiversity		Deforestation may have a negative impact on flora and/or fauna. The impact depends on the size of the area to be deforested.	Leaving sufficient forest in place in the direct surroundings will decrease the negative impact.
Landscape	None	Deforestation will change the appearance of the landscape. This may be a negative impact.	The size and shape of the deforested area are to be considered. This should harmonize with the landscape.
Social	None	None	n/a
Economic	Deforestation will generally lead to the land being more intensively used as agricultural land. This will result in an increase of economic benefits.	None	n/a
Cultural heritage	None	None	n/a

n/a: not applicable.

6.6. Improvement or construction of access roads to plots

This activity is not mentioned as a proposed economic activity in the Law on EIA. Therefore no impact screening is required. Impact screening has been added here as those roads can be eligible to EU funding and in that case require impact screening.

Impact screening according to the Law on Environmental Impact Assessment is required for construction of district level roads with a length of more than 2 km. Construction of a district level road with a length of less than 2 km do not require impact screening. Access roads to plots of a farm are not considered district level roads. Impacts are assessed of access roads, which are unpaved and provide generally only access to farm plots without through traffic.

Potential impacts of access road construction on the environment and possible mitigation measures are presented in the following table.

Access road construction	Impacts on the environment and possible mitigation measures		
	Potential positive impact	Potential negative impact	Possible mitigation measures
Water	None	None	n/a
Air (atmosphere)	None	None	n/a
Soil and underground	None	None	n/a
Biodiversity	None	None	n/a
Landscape	None	None	n/a
Social	Most positive impact of access road construction is the reduction of transport time. This will result in people having more time available.	None	n/a
Economic	It is expected that revenue from cultivated land will increase due to access road construction. Improved access roads will reduce costs of cultivating the land and therefore will increase revenues.	None	n/a
Cultural heritage	Access road construction should give due regard to cultural heritage patterns and sites in the project area. Important is that cultural heritage patterns are taken into account and if possible are emphasized in the land consolidation process. This will then sustain cultural heritage for the future.	Access road construction may disregard existing cultural heritage patterns or sites.	Cultural heritage patterns and sites should be taken into account when planning and constructing access roads.

n/a: not applicable.

6.7. Construction of overhead electrical power lines with a length between 3 to 15 km

The construction of overhead electrical power lines with a length of less than 3 km does not require impact screening.

Potential impacts on the environment and possible mitigation measures of overhead electrical power lines with a length of more than 3 km are presented in the following table.

Electrical power lines	Impacts on the environment and possible mitigation measures		
	Potential positive impact	Potential negative impact	Possible mitigation measures
Water	None	None	n/a
Air (atmosphere)	None	None	n/a
Soil and underground	None	None	n/a
Biodiversity	None	None	n/a
Landscape	None	The impact depends on the height of the power lines in relation with the surrounding trees. Construction of overhead electrical power lines will have more impact on the landscape in open areas.	Generally the benefits of overhead electrical power lines are considered more important than the possible negative impact on landscape. Generally no mitigation measures are taken.
Social	The positive social impact of electricity supply is widely considered very high. In this specific case electricity is supplied to farmhouses and/or farm sheds improving living conditions.	None	n/a
Economic	The positive economic benefits of electricity supply is widely considered very high. In this specific case electricity is supplied to farmhouses and/or farm sheds improving production and production methods.	None	n/a
Cultural heritage	None	None	n/a

n/a: not applicable.

In most cases overhead electrical power lines are constructed to farmhouses and farm sheds.

Annex I. List of economic activities from Annex II of LAW on EIA

The economic activities related to land consolidation are underlined.

1. Agriculture, silviculture and aquaculture

- Rearing of pigs (less than 900 but more than 200 places for sows, less than 3 000 but more than 700 places for other pigs).
- Livestock installations (more than 200 places for the animals).
- Rearing of poultry (less than 85.000 but more than 10.000 places for broilers, less than 60.000 but more than 10.000 places for hens).
- Rearing of other poultry (more than 10.000 places for other birds).
- Fish farming (in the sea or in the ponds with an area of the site of more than 5 ha).
- Water management projects for agriculture including irrigation and land drainage projects (with an area of more than 5 ha).
- Installation of ponds (amount of water held back or stored is less than 5 million m³ but more than 200.000 m³, or the area is less than 250 ha but more than 10 ha).
- Projects for the use of uncultivated land for intensive agricultural purposes (with an area of more than 0,5 ha).
- Implementation of combined projects for the restructuring of rural land holdings
- Initial afforestation and deforestation for the purposes of conversion to another type of land use (with an area of more than 1 ha in the urban areas, and more than 10 ha in the rural areas).
- Reclamation of land from the sea.

2. Extractive and processing industry

- Peat extraction (when the surface of the site is less than 150 ha but more than 0, 5 ha).
- Extraction or processing of natural gas (when the amount extracted or processed is less than 500.000 m³ per day).
- Quarrying and extraction of other mineral resources (when the surface of the site is less than 25 ha but more than 0,5 ha).
- Extraction of mineral or organic substances from the bottom of the sea, lake or rivers.
- Deep drillings (geothermal drilling, drilling for water supplies, mineral water extraction, etc., except drillings for investigating the stability of the soil).
- Underground mining.

3. Energy industry

- Thermal power stations and other combustion installations, including industrial installations for producing electricity, heat, steam or hot water (with an output of less than 300 MW, but more than 20 MW).
- Installations for pipelines carrying steam or hot water (with a length over 2 km).
- Installations for gas storage (with a capacity of more than 10.000 m³)
- Installations for storage (warehouses and storage grounds) of other types of fossil fuel (with a capacity of more than 1.000 t).
- Briquetting of coal and lignite.
- Installations for hydroelectric energy production or installations that use the hydroelectric energy (hydroelectric power stations, mills, sawmills) (with a maximum power of more than 0,1 MW).
- Installations for the harnessing of wind power for energy production (wind farms) with a height of more than 10 m, (including vane length) or having 2 or more turbines.

4. Production and processing of metals

- Processing of metallic ores.
- Installations for the production of ferrous metals (including pig iron and steel), (primary or secondary fusion and continuous casting).
- Installations for the processing of ferrous metals, including hot-rolling, forging, pressing, stamping, profiling and application of protective fused metal coats.
- Installations for the smelting or alloyage of non-ferrous metals (excluding precious metals), including recovered products (refining, foundry casting, etc.) with a daily capacity exceeding 30 tones.
- Installations for surface treatment of metals and plastic materials using an electrolytic or chemical process (with annual capacity exceeding 50.000 m²).
- Manufacture and assembly of motor vehicles and manufacture of motor-vehicle engines (when the main installation area exceeds 1.000 m²).
- Installations for the construction and repair of ships (shipyards).
- Installations for the construction and repair of aircraft.
- Installations for manufacture or repair of railway equipment (when the main installation area exceeds 1.000 m²).
- Forging, pressing or swaging of metals by explosives.

5. Industry of mineral construction materials

- Coke ovens (dry coal distillation).
- Extraction of asbestos and processing and transformation of asbestos and products containing asbestos: for asbestos products - annual production is less than 20.000 ton of finished products, for friction material - annual production is less than 50 ton of finished products, and for other uses of asbestos - utilisation is less than 200 tones per year.
- Installations for the manufacture of glass or glass fibre.
- Installations for smelting mineral substances including the production of mineral fibres (with a daily capacity exceeding 10 ton).
- Installations for manufacture of ceramics products (with a daily capacity exceeding 3 ton)
- Installations for the manufacture of cement.
- Manufacture of concrete construction materials (with annual capacity exceeding 5.000 m³).

6. Chemical industry

- Manufacturing of lubricants from crude oil.
- Manufacturing or treatment of the following chemicals: pharmaceutical products (daily capacity exceeds 1 ton); pesticides (daily capacity exceeds 5 ton); paint and varnishes (daily capacity exceeds 10 ton); elastomers (daily capacity exceeds 10 ton); peroxides (daily capacity exceeds 5 ton); intermediate products (daily capacity exceeds 10 ton).
- Building of storage facilities (warehouses and storage grounds) for petroleum, petrochemical and chemical products with a capacity of less than 200.000 ton but more than 5.000 ton).
- Manufacture of artificial leather or fibre.

7. Food industry

- Manufacture of vegetable and animal oils and fats (with a daily capacity exceeding 5 ton)
- Packing and canning of animal and vegetable products (with a daily capacity exceeding 5 ton).
- Manufacture of dairy products, milk processing (with a daily capacity exceeding 50 ton)
- Malting and beer manufacture (with a daily capacity exceeding 10 ton of malt or 10.000 liter of beer).

- Manufacture of bread products (with a daily capacity exceeding 10 ton).
- Confectionery and syrup manufacture (with a daily capacity exceeding 5 ton).
- Sugar manufacture.
- Installations for the slaughter of animals (with a daily capacity exceeding 10 ton of carcasses).
- Starch or starch products manufacturing (with a daily capacity exceeding 5 ton).
- Meat and fish processing (with a daily capacity exceeding 5 ton).
- Manufacturing of yeast (with a daily capacity exceeding 2 ton).
- Production of alcohol (with a daily capacity exceeding 1.000 liter).

8. Textile, leather, wood and paper industries

- Manufacturing of pulp.
- Production of paper and board (with a daily production capacity of less than 200 ton but more than 20 ton).
- Treatment of fibres or textiles (with annual capacity exceeding 200.000 m²).
- Tanning of hides and skins (with a daily capacity exceeding 500 m²).
- Production of wood fibre board (with a daily capacity exceeding 5.000 m²), production of wood shavings board (with a daily capacity exceeding 100 m³), production of plywood (with a daily capacity exceeding 50 m³).

9. Rubber industry

- Manufacture and treatment of elastomer-based products (with a daily capacity exceeding 15 ton).

10. Civil engineering works

- Construction of overhead electrical power lines (with a voltage of less than 110 kV and a length of less than 15 km but more than 3 km).
- Urban development projects, including the construction of shopping centres and complexes of car or trolley-bus parks and garages (with a construction area exceeding 0,5 ha).
- Construction of elevated or underground railways (except lines for the main public railway traffic)(with a length of more than 2 km).
- Construction of railway, motor, air or sea transport freight distribution or transshipment facilities or terminals (with an area of more than 0,5 ha).
- Construction of airports and airfields (with a basic runway length of less than 2.100 m).
- Construction of district level roads (with a length of more than 2 km).
- Construction of a new road of four or more lanes, or reconstruction of an existing road as to provide four or more lanes (where such new road, or reconstructed section of road would be less than 10 km, but more than 2 km in a continuous length)
- Construction of sea ports, piers or terminals which can take vessels of less than 1.350 ton but with an area of more than 1 ha.
- Construction of inland waterways, ports, piers or terminals which can take vessels of less than 1.350 ton but with an area of more than 1 ha.
- Deepening of the entrance channels and water space of sea ports.
- Hydrotechnical flood-relief installations (with an area of more than 1 ha).
- Installation of tramways, underground railways or other types of lines used exclusively or mainly for passenger transport (with a length of more than 2 km).
- Installation of suspended lines (e.g. for cable-cars or funiculars) used exclusively or mainly for passenger transport (with a length of more than 500 m).
- Construction of pipelines for the transport of gas, oil or chemicals with a diameter of less than 800 mm and a length of less than 40 km but more than 2 km.
- Installations of long-distance aqueducts (with a length of more than 1 km).

- Coastal installations for combating erosion or other types of coastal works capable of altering the coast such as dykes, moles, etc.
- Groundwater abstraction (where the annual volume of water abstracted is less than 10 million m³ but more than 350.000 m³).
- Construction of bridges (with a length of more than 250 m).

11. Other types of proposed economic activity

- Permanent racing or test tracks for motorised vehicles (with an area of more than 1 ha).
- Installations for disposal or usage of non-hazardous waste.
- Waste-water treatment plants: of cities, towns and villages with a capacity of less than 50.000 population equivalent but more than 2.000 population equivalent.
- surface waste water (rainwater) treatment plants (with waste water collected via canalisation network from an area of 50 ha or more).
- industrial waste water treatment plant.
- Installations for deposition or utilisation of sludge from the waste water treatment plants or for other types of contaminated sludge or site-selection for the utilisation (deposition) of such sludge.
- Selection of the dumping sites for extracted soil.
- Artificial groundwater recharge schemes (where the annual volume of water recharged is less than 10 million m³).
- Transfer of water resources between river basins where the amount of water transferred is less than 100 million m³/year or where the multi-annual average flow of the basin of abstraction is less than 2.000 million m³/year and where the amount of water transferred is less than 5 % of this flow.
- Installations for the storage of scrap iron, including scrap vehicles (with an area of more than 0,5 ha).
- Test benches for engines, turbines or reactors (with an area of more than 500 m²).
- Installations for the recovery or destruction of explosive substances, or selection of the sites for such recovery or destruction.
- Knackers' yards (with daily capacity of more than 10 animals).
- Production of galvanic batteries (with annual capacity of over 5.000 units).
- Lake purification and regulation of lake water level (when purified or regulated water area exceeds 0,5 ha).
- Extraction of sediments from the bottom of the sea or inner water bodies for such purposes as construction, "beach-feeding" or industry.
- Industrial estate development projects with an expansion area of more than 0,5 ha).
- Production of ammunition.
- Installation of television / radio transmitters and radars with a combined transmitting capacity of 20 kW and more.
- Crematoria installations.

12. Tourism and leisure

- Yacht or boat marinas (with an area of more than 0,2 ha).
- Holiday villages and hotel complexes outside urban areas (with an area of more than 0,5 ha).
- Permanent campsite installations (with an area of more than 1 ha).
- Theme parks (with an area of more than 0,5 ha).

13. A proposed economic activity included in the List of the Types of Proposed Economic Activities that Shall be Subject to the Environmental Impact Assessment, which is undertaken for the development or testing of new methods or products and not used for more than two years.

14. Changing or extending the proposed economic activity (including reconstruction of existing construction works, change or modernisation of production process or technologies, change of the mode of production, production type or capacities, implementation of new technologies and other changes which may have adverse effects on the environment) included in the List of The Types of Proposed Economic Activities that Shall be Subject to the Environmental Impact Assessment or in the List of the Types of Proposed Economic Activities that Shall be Subject to the Screening for Obligatory Environmental Impact Assessment.

Annex II. Questionnaire for solutions impact assessment of territorial planning document and table for evaluation of territorial planning document solutions

Questionnaire for solutions impact assessment of territorial planning document

I. IMPACT ON THE SUSTAINABLE DEVELOPMENT OF THE TERRITORY AND (OR) PROPOSED ACTIVITY

1. What results are expected after the implementation of solutions?
2. What will be the influence on the development of the planned territory?
3. What the effect (positive, negative, long-term, short-term) of influence is expected?
4. What is the direct and non-direct impact of particular solution?
5. What activities will be positive influenced by implementing of particular solution?
6. What activities will be negative influenced by implementing of particular solution

II. IMPACT ON ECONOMIC ENVIRONMENT

7. How will influence the implementation of solutions on the economic development of particular regions, municipalities, areas; will increase or decrease the differences between the regions?
8. How will influence the implementation of solutions on the structural changes of industry, agriculture and other sectors?
9. What will be the influence on the natural sources of the area and the rational use of these sources?
10. How will influence the implementation of solutions on the common conditions of investments and business?
11. How will influence the implementation of solutions on the changes in production inputs?
12. How will influence the implementation of solutions on the use of production capacities?
13. How will influence the implementation of solutions on the competitive ability of enterprises on the market?
14. What will be the influence of implementation of solutions on the state or municipality budget (increasing or decreasing the incomes or outcomes)?

III. IMPACT ON SOCIAL ENVIRONMENT

15. How will influence the implementation of solutions on the common social state of the particular region or district?
16. How will influence the implementation of solutions on the employment?
17. How will influence the implementation of solutions on the development of local community or municipality?
18. How will influence the implementation of solutions on the education, culture and public health?
19. How will influence the implementation of solutions on the different social groups (social vulnerable persons, youth, young families, children, elderly and other persons)?
20. How will influence the implementation of solutions on the people and their health?

IV. IMPACT ON THE NATURAL ENVIRONMENT AND LANDSCAPE

21. How will influence the implementation of solutions on the air quality in the area?
22. How will influence the implementation of solutions on quality of groundwater and surface water in the area?
23. How will influence the implementation of solutions on the soil and agriculture land?
24. How will influence the implementation of solutions on the ecosystems and biodiversity?
25. How will influence the implementation of solutions on the protected nature?
26. How will influence the implementation of solutions on the recreational conditions of environment?
27. How will influence the implementation of solutions on the landscape ecological equilibrium?
28. How will influence the implementation of solutions on the landscape esthetical quality?
29. How will influence the implementation of solutions on the heritage?

Table for Evaluation of Territorial Planning Document Solutions

1.	Organizer of Economic Activity		
2.	Preparer of Territorial Planning Document		
3.	Name of Territorial Planning Document		
4.	Links with agreed long term and middle term Strategic Planning Documents		
5.	Links with existing Territorial Planning Document		
6.	Existing situation / no-action alternative		
7.	Aim of Territorial Planning Document Solutions		
8.	Evaluation of possible impacts of solutions		
	Aspects of evaluation	Positive (short term, long term) impacts	Negative (short term, long term) impacts
9.	Impact of solution on:		
	sustainable development of territory or (and) type of activity		
	economic environment		
	social environment		
	nature and landscape		
10.	Impact of alternative on:		
	sustainable development of territory or (and) type of activity		
	economic environment		
	social environment		
	nature and landscape		

Annex III. Examples of screening material from the pilot projects