ANNEX 6

PROJECT CONSORTIUM:

Institute for Sustainable Development

Environmental Impact Assessment for the Draft Rural Development Programme 2007 - 2013

A Study commissioned by the Ministry of Agriculture and Rural Development

Contract of Mandate No DGzp-2910A-26/06

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EXECUTIVE SUMMARY

The goals of Environmental Impact Assessment for "National Strategic Plan for 2007-2013 Rural Development" (hereinafter referred to as RDP) have been as follows:

- to assess the extent and the manner of considering the environmental protection issues in all the parts of National Strategic Plan;
- to assess potential impact of the RDP implementation on the environment;
- to assess potential environmental impact should the RDP not be implemented, and to assess the opportunities for sustainable development that would be lost should the advantage of possibilities for implementation of all support types (applicable in the existing conditions of Poland) allowed by the Council Regulation (EC) No 1698/2005 not be taken;
- to draw up recommendations that would allow to address environmental protection and sustainable development needs in a more comprehensive manner during the RDP implementation.

Article 5 of 1997 Constitution of the Republic of Poland, which reads as follows: "*The Republic of Poland (...) shall ensure the protection of the natural environment pursuant to the principles of sustainable development* [1] (Dz. U. 1997, No 78, item. 483), has been the key reference point for this Assessment. Therefore, the Assessment refers not only to environmental protection itself, but also analyses the impact of the planned measures on sustainable development possibilities.

Rural Development Programme for 2007-2013 is the basic planning document which outlines the support trends that would ensure a harmonious development of the rural areas. The Assessment contains a diagnostic part with the characteristics of Programme covered area; strategic part defining priority support trends; and implementing part with description how to implement the aims and priorities formulated in the document.

The strategic part specifies particular measures intended for rural development under four axes.

Axis 1: Improving the competitiveness of the agricultural and forestry sectors – measures to be carried under this axis are to help adjust the agricultural holdings to the Community requirements and to the growing competitiveness of the foreign producers.

Axis 2: Improvement of the environment and the countryside – the measures under this Axis are to support the role of countryside in environmental protection, i.e. water resources and soils, habitats, landscape and biodiversity.

[1]According to Environmental Protection Law of 2001 (consolidated text, Dz.U. No 129 of 2006, item 902) sustainable development means social and economic development which integrates political, economic and social activities while maintaining natural balance and permanence of basic natural processes in order to guarantee the possibility of satisfying basic needs of particular communities or citizens of the existing generation and the generations to come.

Axis 3: Improving of the quality of life in rural areas and encouraging diversification – in compliance with the Axis title it is intended to ensure sustainable improvement of the life standards of rural area inhabitants through diversification of the economic activities carried out in rural areas, access to the basic services for the rural inhabitants and rural renewal.

Axis 4: LEADER approach – the measures provided for under this Axis are aimed at the mobilization of the rural inhabitants and participation in the implementation of local initiatives under Local Development Strategies.

Each measure proposed under particular RDP Axis has been briefly described, i.e. the objective, beneficiary, legal basis, form, funding principle, payment calculation and monitoring system for a each measure have been identified. The Axes proposed in RDP reflect the country needs in the rural development sector and identify the main areas of activities in this respect. The Rural Development Programme will be implemented across the whole country and it will be funded from the European Agricultural Fund for Rural Development and from national resources allocated for this purpose in the budget act.

Work on the Assessment has been divided into the following stages:

Stage 1 – Making up a list of the RDP Assessment criteria

The criteria have been selected in accordance with the list of criteria based on the analysis of over 100 strategic documents, i.e. the Polish and European Union legal instruments, international environmental protection conventions and major documents addressing sustainable growth policies and strategies. Eventually, 28 criteria were identified and divided into three groups:

- Formal criteria (6) for general assessment of the RDP document;
- General criteria (17) for assessment of the extent of sustainable development implementation first of all and how far the Axes and measures proposed in RDP are environment friendly;
- Detailed criteria (5) for assessment of the direct impact of proposed Axes and measures on the condition of various environment elements.

Stage 2 – Identification of the relationship level between criteria and priorities and trends provided for in RDP

At this stage of work an impact matrix covering the identified general and detailed criteria as well measures was elaborated. Using the matrix the relationship degree between the criteria and measures (their impact both on the environment and on the possibility of sustainable development implementation) was assessed. This allowed to identify in respect of particular criteria these measures whose implementation could produce vital positive or negative environmental impact as well as measures whose implementation would be an opportunity or a threat for the sustainable development principles.

Stage 3 – Assessment and description of environmental impacts as well as those associated with the implementation of sustainable development principles.

At this stage a detailed analysis of the identified major impacts was carried; their intensity and importance was assessed, and the impacts were described. In respect of the identified major impacts recommendations were formulated and alternative solutions were suggested individually for the formal criteria and collectively for particular impacts at the end of each priority assessment.

Stage 4 – Preparation of the complete Environmental Assessment Impact and consultations procedures

Though the Expert Team worked on this Environmental Impact Assessment document with due diligence, there are areas of uncertainty as regards the possible potential impact of RDP implementation on natural environment and possibilities of sustainable development implementation because of the nature of the document and specificity of strategic environmental assessment procedure. The major areas of uncertainty are as follows:

- complexity of the support orientations set out under particular axes so that it is hard to determine explicitly the scale and nature of the impact. These may often be both positive and negative, and this largely depends on individual projects, their scale, implementation method and venue.
- failure to include target values for the proposed set of indicators[2],
- inability to carry out additional studies or analyses by the Team because of both short period of time and limited financial resources allocated for the Assessment preparation. Hence, the Assessment is based on the existing knowledge on sustainable development and environmental protection.

The strategic environmental impact assessment of measures to be implemented under RDP allowed to identify their potential positive and negative effects for the environment and sustainable development, formulation of major evaluations, conclusions and recommendations complete with alternative proposals as presented below.

Axis 1.

Because of the complexity of measures under this Axis they were symbolically divided into so-called "soft" and "hard" measures. "Soft" measures are those which are not directly related to any projects, whereas "hard" measures are those most often associated with implementation of specific projects of activities in rural space.

The majority of works carried out under "soft" measures will be positive but the intermediate actual effects will depend both on the importance assigned to environmental protection issues during RDP implementation and on the extent of (environmental protection) knowledge acquired by the farmers will translate into real actions.

Vocational training for persons employed in agriculture and forestry. Actual effects of this measure will strongly depend on the contents of training, including "saturation" of the detailed training curricula with the issues relating to the water resources protection, farmland

[2]In accordance with the Employer's information these data will be added in the document at subsequent stage of work on RDP.

biodiversity and methods of its preservation etc. Omission of or insufficient emphasis on these issues may lead to the disastrous effects of training for environment.

Early retirement. It seems that this measure will bring about two types of effects: positive impact associated with the obligation to apply good agricultural practice by the successors as far as the environmental protection, hygiene standards, animal welfare and farm environmental protection are concerned. On the other hand this measure will probably lead to agricultural production intensification, unification of the landscape in consequence of land consolidation on the farms run by the successors. This measure will also make farms to go out of business (and agricultural production) – from the point of view of economics it is acceptable, but from the point of view of biodiversity the consequences will be negative.

Participation of farmers in food quality schemes. The assessment shows that this measure will bring positive effects for the environment both through replacing quantity oriented production with quality oriented production and higher environmental requirements imposed on such a type of production.

Information and Promotion Activities Such activities will have positive impact on the ecological awareness of the public because they will attract attention to the environmental protection issues in the process of productions of such products and in the promotion materials.

Agricultural producer groups Methods and scope of environmental impact for this measure cannot be now explicitly assessed – both positive and negative effects may occur. The former may be associated with scale effect – streamlining of production, product preparation, storage and transport. The negative effects will be those associated with production intensification, standardization within the group and narrowing specialization. These effects will be both direct and indirect.

Advisory services for farmers and forest owners The impact of this measure will both positive and negative. The positive effects will be associated with proper standard of advice on the needs to adjust of agricultural holdings to the environmental protection requirements, cross-compliance rules, animal welfare etc. The negative effects will occur when advisory services will lead to production intensification and standardization, land consolidation etc.

The environmental impact of "hard" measures will be differentiated as the positive effects will be accompanied by significant negative effects. These will result in particular from the agricultural production intensification.

Setting-up of young farmers. This measure may lead to intensification and specialization of production, which have adverse impact on the environment. However, these negative effects may be relieved by better knowledge of the farm successors on the natural environment protection.

Modernisation of agricultural holdings. The positive effect of the measure will be associated with reduction of environmental hazards produced by agricultural holdings as a result of improved water or waste management or modernization of the machine fleet and construction of the technical facilities (such as manure pads or liquid manure tanks). Nevertheless, the agricultural holdings' modernization will be associated with production intensification and this may disturb the balance of the economic and environmental development aspect and lead to an adverse impact. The land consolidation process (if any) associated with the sale of land

by the neighbours, liquidation of baulks (adverse impact on biodiversity) may also bring about a negative effect. Extension of agricultural land will also lead to an intensified mechanization of farm work, including the use of heavy equipment, and will adversely affect soil properties. Modernization may also affect the biodiversity through a reduced number of species and varieties of cultivated plants.

Increasing the added value to primary agricultural and forestry production. The positive effect of the measure is mainly associated with the need for adjustment of the establishments, which apply for support, to the environmental standards, and the adjustment mainly consists in reduction of polluting emissions. The negative effects may arise first of all with the excessive concentration of processing plants in a specific region or with their location in the most sensitive regions, application of technologies with an increased consumption of water or other resources.

Improvement and development of infrastructure related to the development and adjustment of agriculture and forestry In general, these measures may lead to changes for worse in biodiversity, water resources and ecosystems associated with water and landscape. Land consolidation will cause baulk liquidation and, in many cases, mid-field afforestation, and will lead to changes in landscape and reduction of biodiversity. Land consolidation may also cause dispersion of development and changes in rural landscape. When these works are carried out at same time with land improvement there is a risk that land, which has so far had only natural functions, will be used for agricultural production or by non-agricultural economy sectors. Improperly planned land improvement and badly operated systems may threaten natural environment. Therefore, it is necessary to start projects with detailed analysis of the need for ground-water conditions improvement supported with public consultations.

Potential positive impact of the measure will be limited and will be associated mainly with the economic environment – improved productivity of agricultural holdings. To some extent it will also favour better air-water conditions in soils and prevent erosion.

Axis 2.

The General objective of rural support for rural areas to be offered under Axis 2 is to contribute to the improvement of the environment and to promote sustainable rural development. However the division of resources indicates that the social objectives are the objectives of this axis - over 42% of the resources of the axis was allocated to LFA support. Detailed analysis indicates that the implementation of Axis 2 instruments will be mostly of benefit to the environment and introduction of sustainable development principles, and even of great benefit in the case of certain instruments. One should however take into account the fact that the implementation of certain instruments may have negative impact. Certain measures implemented badly or incorrectly, may contribute to the deterioration of the environment. Organic farming for example, despite its name, may in extreme cases constitute threat to biodiversity or water resources.

Support of management in mountain areas and in less-favoured areas (LFA). The impact of the implementation of the measure in question on the environment and the implementation of sustainable development principles will be mostly of benefit, because it will create conditions for ensuring continuity of agricultural activity within the determined

areas. Preventing the abandonment of traditional forms of area use and of extensive agricultural management is of benefit to biodiversity protection and landscape values. The support should limit the scope of pressure of urbanisation and building development on agricultural land (due to the support for their use for agricultural purposes). Support for agriculture within areas with unfavourable conditions of management will indirectly support the maintenance of cultural values of those areas, both in the material scope (relating to construction and traditional management practices) and the immaterial one (relating to customs and other forms of local heritage).

NATURA 2000 payments and payments linked to Water Framework Directive. From the environmental point of view, the measure is by all means desired and expected. It is forecast that its impact on the environment and implementation of the principles of sustainable development will mostly be positive, especially in respect of the maintenance of natural values of the Natura 2000 areas (Scheme I), and on water and its management (Scheme II, if actually implemented and depending on the arrangement). Nevertheless it should be stated explicitly that the expected positive outcome of Scheme I in respect of biodiversity of the Natura 2000 areas will be insufficient to ensure the objectives of protection of the Natura 2000 network within agricultural areas in our country[3]. The scale of possible positive effect on implementation of Scheme I will be diminished by the small scale of the resources – only 20% more for the implementation of the same projects under the agri-environmental programmes, plus the return of costs for the nature-related documentation. It is a matter of concern that the description of measures taken to ensure the implementation of the objectives of the Water Framework Directive is lacking and their implementation has been delayed by 2010. It may mean (especially in view of the scale of necessary measures) that Poland will be unable to timely implement the objective of this Directive, i.e. the assurance of good condition of all waters by 2015[4].

Agri-environmental program (agri-environment payments). The agri-environmental programme is the most important agri-environmental measure from the measures implemented under RDP. It should definitely contribute to the implementation of environmental objectives (mainly those concerning biodiversity protection, including genetic resources concerning the species of breeding animals and varieties of crop plants as well as protection of soil and water). It will definitely have positive impact directly on the environment (first of all on biodiversity) and on the maintenance of landscape values and

[3] The instrument will not be implemented within all rural areas (its implementation area will depend on the farmers' decisions – voluntary instrument), and outcome will depend on the scope of measures taken and their sufficiency with respect to the needs resulting from the condition of habitats and species within the respective Natura 2000 areas (2 packages of agri-environmental measures will be available for the time being, whereas the plans of protection of those areas, which could constitute basis for other projects, are still lacking – they are to be prepared within the next few years). Support under RDP is however the basic instrument for the benefit of protection of biodiversity within agricultural areas. The resources allocated to the financing of the Natura 2000 network provided for in the Operational Programme "Infrastructure and Environment" are intended for other purposes – they will mainly support the drawing up of the plans of protection of those areas and of respective species and habitats as well as specific works of intervention nature.

[4] It is known that in accordance with the schedule of implementation of this Directive, drawing up plans of water management in the catchment area has not been terminated yet. Implementation of measures limiting the contamination of water from agricultural sources is possible, however, before the preparation of the said plans for catchment areas (i.e. before 2009), *inter alia* on the basis of present knowledge of the impact of the agricultural sector on the condition of water resources.

indirectly on the implementation of the sustainable development principles. The implementation of all these objectives will definitely contribute to the shaping of environmental awareness of the rural population and all other residents, to whom RDP problems relate. The positive outcome of agri-environmental programmes would be considerably greater is the scope of agri-environmental packages to implement was greater. This particularly relates to the packages concerning the protection of water resources and water and marsh areas (restriction of outflow from drainage basins).

Afforestation of agricultural and non-agricultural land. The basic risk relating to the planned afforestation consists in their introduction within areas, where they should not be carried out, because this would pose threat to biodiversity. Not all areas may be afforested – this *inter alia* concerns areas which are refugees of protected animals of open areas and specific ecologically-extreme habitats, i.e. absolutely humid, marshy and particularly dry, especially stenothermic. If works within these areas are avoided, the environmental effect of afforestation will be positive – the forest cover of the country will be increased and forest complexes enhanced, the quantity of coal bound by biomass will increase. Impact on water resources will be positive, particularly in the case of afforestation of watershed areas of great land slopes within heavy soil. Afforestation should also have positive impact on the environmental awareness of the population.

Restoring forestry potential and introducing prevention actions. Environmental impact of support provided under this measure will be positive in majority or even very positive, which will facilitate the restoration of the desired condition of forest ecosystems and fulfilling their positive environmental and social functions. It will also have positive impact on environmental awareness of the residents by indicating the significance of forests and functions they fulfil. Nevertheless the works should be performed under close environmental supervision – this first of all relates to the Natura 2000 areas.

Axis 3.

The impact of measures taken under this axis will be mostly positive, it will be of direct (improvement of the quality of the environment) and indirect nature (improvement of management of the environment and its resources, the cultural sites). They will be sustainable in majority. Negative effects may also occur, their concentration in areas of high environmental and tourist value may result in local deterioration of the natural environment condition.

Diversification towards non-agricultural activity and establishment and development of micro-enterprises (the scope of both measures is identical; they only vary in terms of entities the aid will be aimed at). The proposed measure should have positive impact on the sustainable development of rural areas through supporting social and economic development and environmentally-friendly types of non-agricultural activity of the rural population. This will concern the development of the services sector (especially immaterial ones), development of renewable energetic, supporting sustainable consumption in the case of supporting immaterial consummation or consumption based on local products (which is not however to be carried out directly). Threat to the natural environment and negative impact on this

environment may result in excessive concentration of new types of activity within one area, introduction of technologies harmful to the environment and contributing to the development of mass tourism.

Basic services for the economy and rural population. It is forecast that the measure will contribute to providing solutions to basic environmental protection problems within rural areas, and indirectly will contribute to the improvement of water and ground quality. The basic positive impact will relate to the introduction of solutions, which will facilitate sewage and waste management by the rural population in compliance with the provisions. Next to the direct positive effects, indirect impact will occur consisting in the improvement of the quality of water, soil cleanliness and prevention of littering the landscape. The measure in question also involves certain possible undesired effect. The effect relates to the possible increase of water consumption (as a result of access to the water supply and sewage system) and waste production. Thus it would be desirable to relate those works to the educational activity in the scope of economical and effective use of the resources. Unfavourable effect – even though on a small scale – may relate to occupying the land for the purposes of new projects.

Village renewal and development. It is forecast that the measure will have positive effect on account of the maintenance, renewal and improvement of cultural and natural heritage. It will contribute to the increase of attractiveness of the rural areas, thus more to immaterial than material consumption. The indirect, better condition of cultural, touristic and similar facilities will contribute to lesser pressure on the resources and to the improvement of the environment. Negative impact will occur in the case of predominance of tourism and economy development interests over the environmental protection needs and maintenance of the natural resources in good condition (e.g. destruction of the spatial order through the location of tourist infrastructure projects around renewed historic buildings.

Axis 4.

The measures taken under Axis 4 will be mostly of indirect influence, and it is difficult to estimate whether the influence will be positive or negative, as it depends mainly on the significance of environmental issues in the activity of local groups. Lessons learned about the present scope of implementation of the LEADER measures indicate that its impact will be mostly positive. It cannot be stated explicitly that there will be no negative impact, though.

Local Development Strategies, improvement of the quality of life, diversification of activity on rural areas The measure in question may have great impact on the quality of the environment in Poland, most of all because it is assumed that the actual support for LEADER will relate to social activity within 50% of rural areas. The possibility to achieve the said positive impact is however limited by the fact of omission of obligatory participation of environmental protection experts in the make-up of Local Action Groups, which will establish strategies and determine direction of measures. The lack of such persons in the said groups may result in undesired negative effect for the natural environment caused by local strategies, even in spite of the authors' intentions. The negative environmental impact will occur when the environmental protection needs become dominated by the desire to achieve short-term economic benefits.

Cooperation (inter-regional and international). The actual effect of this measure for sustainable development will depend most of all on the scope of considering the environmental issues in local strategies and the desire to include those issues in the plans of measures of Local Action Groups. If the environmental protection is the significant element of the programme of measures, it should be expected that the exchange will feature the obtaining of information on the lessons learned in respect of the implementation of good environmental practice, which will then be transposed (and implemented) on the local area. If it is omitted, the cooperation under this measure will have no significant impact on the protection of the environment and sustainable development.

Running costs of Local Action Groups, acquisition of skills and animation. Also in the case of this activity, impact on the environment will depend most of all on the significance of the environmental protection and sustainable development issues for works of Local Action Groups and how they will be reflected in the local development strategies the said groups prepare.

Based on detailed impact identification, detailed recommendations were proposed, some of them being alternative and, if taken into consideration, allowing to avoid or minimise the strength and scope of significant negative impacts. As a result of the work, also more general conclusions were drawn and general recommendations could be proposed.

In order to enhance positive impact of RDP implementation, mainly environmental and social impact, it is suggested to consider the possibility of introduction under RDP of certain instruments provided for in the Council Regulation (EC) No 1698/2005 and not intended for application in Poland. These should mainly include the following:

- Natura 2000 forest payments;
- forest-environment payments;
- non-productive projects;
- encouragement of tourism activities;
- village renewal (nature conservation microprojects).

Allocation of larger financial resources for measures contributing to biodiversity and water resources protection in rural areas and use under RDP was also considered appropriate. The necessity to increase the financial outlay on environmentally-friendly measures results also from the increase of the scope (quantity) of RDP instruments available for the environmental issues suggested above.

It is considered appropriate to recommend the linking of the LEADER programme with Axis 2 measures so that the Local Action Groups could concentrate on assurance of appropriate natural environment condition within rural areas.

The recommendation that the environmental criteria which eliminate or limit the possible negative impacts of these measures be considered within the NSP and RDP in order to ensure full implementation of environmental functions of rural areas is promoted.

It is recommended to use the RDP implementation to stimulate environmentally-friendly behaviour and market demand for environmentally-friendly products by imposing, under the Programme of Application, the green purchase, tenders and orders, i.e. using environmental criteria for their implementation, as recommended by the EU.

In conclusion, it should be stated that positive impact of RDP on the environment is far greater than the negative one, but (also in relation to other plans, programmes and planned measures) is insufficient to achieve the strategic environmental objectives within the agricultural area of Poland. This refers to the objectives of the Water Framework Directive and to the improper condition of species and habitats conservation under the Natura 2000 system, as well as to the 2010 objective, i.e. reducing the decline of biodiversity by that year. In particular, they will not enable halting of the negative tendencies of biodiversity decline, but only reduce it. On the other hand, however, the analysis showed that the environmental, social and economic effects of the "0" variant, assuming that the planned measures are not implemented, would be far more unfavourable.

Furthermore, transboundary impact which would require launching the procedure provided for in the Espoo Convention and confirmed by the Environment Protection Law was not found.

I. GENERAL ISSUES

I.1. INTRODUCTION

I.1.1. FORMAL AND LEGAL BASIS

Environmental impact assessment for the *Rural Development Programme 2007-2013* was prepared by the consortium Agrotec Polska Sp. z o.o., Agrotec spa and Instytut na rzecz Ekorozwoju [the Institute for Sustainable Development] and commissioned by the Ministry of Agriculture and Rural Development pursuant to Contract for specific work No DGzp-2910A-26/06 of 28 August 2006 as a result of public procurement No DGzp-2910A-26/06 of 17 August 2006.

Article 40 (1) and (2) of the Environmental Protection Law Act of 27 April 2001 (Dz. U. No 62, item 627, as amended) was the legal basis for this Assessment. The afore mentioned article imposes the obligation to carry out activities in respect of environmental impact assessment for implementation of strategic documents (draft policies, strategies, plans or programmes). These provisions constitute transposition of the provisions of Directive 2001/42/EC of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment of 27 June 2001 into the Polish legislation.

I.1.2. OBJECTIVES AND SCOPE OF THE ASSESSMENT

The objectives of this Environmental Impact Assessment included the following:

- to assess the extent and the manner of considering the environmental protection issues in all the parts of Rural Development Programme;
- to assess potential impact of the RDP implementation on the environment;
- to assess possible effects on the environment of failing to implement the provisions of RDP with the assessment of the possibly lost opportunities for sustainable development in relation to failing to fully exploit the possibilities of implementation in Poland of all types of support provided for in Council Regulation (EC) No 1698/2005, which may be applicable in the Polish conditions;
- to prepare recommendations with alternative solutions which will facilitate the improvement of the final RDP version.

The content of this Assessment results from Article 41 (2) of the Act - Environmental Protection Law, the requirements included in the tender materials prepared by the Contracting Entity, as well as arrangements concerning the scope and detail of information to be included in the Assessment, prepared by the Ministry of Agriculture and Rural Development with the Ministry of the Environment and the Chief Sanitary Inspector. The results of the arrangements are as follows:

- Evaluation under the Assessment covers the following RDP elements:
  - assessment of the economic, social and environmental situation with the analysis of the status of rural areas using the SWOT method;
  - overall strategy and divided into axes;
  - financial resources of RDP;
  - internal and external coherence of RDP;
  - National Network of Rural Areas.

- The Assessment should first of all relate to:
  - priorities suggested in RDP from the point of view of the sustainable development principle;
  - foreseeable impact of the suggested directions of support on the use of resources, including high nature-value areas, considering the Natura 2000 network.
  - increase of the level of hazard posed by various contamination and disturbances (e.g.: sewage, emission to the air, noise, waste, including cross-border impact) towards the implementation of RDP;
  - the scale of suggested directions of support for agriculture and rural areas, which may be considered environmentally-friendly;
  - regularity of suggested legal, financial and educational instruments from the point of view of seeking possibilities for the decrease of pressure on the environment;
  - ways of monitoring and evaluation RDP implementation from the perspective of environmental protection requirements and putting into practice the rules of sustainable development;
  - possible impact of the RDP provisions on human health (pursuant to Article 3 (11) of the Act of 27 April 2001 - Environmental Protection Law).

- In addition, the report of the assessment should include:
  - recommendations of solutions aimed to prevent and limit negative impact on the environment resulting from RDP implementation;
  - suggested solutions alternative to solutions included in the drafted document (if necessary);
  - recommendations for complementing the Programme with missing solutions for the environment.

The preparation of the Assessment of impact of RDP on the environment covered also the provisions of national strategic documents and of the European Union strategic documents – concerning the protection of the environment, nature and sustainable development, and relating to the agricultural sector and rural development. First of all, the following documents were used:

- Council Regulation (EC) No 1698/2005 of 20 September 2005 on supporting rural development under European Agriculture Rural Development Fund (EAFRD);

- Commission Guidelines on the evaluation;
- updated Strategy for the European Union's sustainable development;
- Sixth environment programme of the European Union;
- National Cohesion Strategy 2007-2013[5];
- National Reform Programme 2005-2008;
- Country's Development Strategy 2007-2015;
- updated Concept for the Country's Spatial Planning;
- National Woodland Extension Plan;
- National Regional Development Strategy;
- Environmental Strategy. Objectives, tasks and priorities for 2007-2013 with the perspective by 2020 – synthesis;
- Second National Environmental Policy;
- National Strategy for Protection and Restrained Use of Biodiversity with the programme of measures;
- Draft National Agri-Environmental Plan.

In addition, in accordance with the changes introduced by the latest amendment to the Act - Environmental Protection Law, the preparation of the Assessment of impact of RDP on the environment covered the provisions (content) of the available assessments of impact on the environment, prepared in relation of other strategic documents covering RDP-related issues. These included in particular:

- Estimated impact of the National Strategic Plan for Rural Areas 2007-1013 on the environment (working draft),
- Estimated impact of the Operational Programme "Infrastructure and the Environment" on the environment,
- Estimated impact of the Regional Operational Programmes on the environment,
- Estimated impact of the National Development Strategy by 2015.

I.1.3. OBJECT OF THE ASSESSMENT

The object of the Assessment is Version W-06/VII/06 of the draft Rural Development Programme 2007-2013, of July 2006, approved by the Council of Ministers, which consists of:

- diagnostic part (Chapter 1 and 2), initial part, providing the characteristics of the area covered by the Programme, relating to the social and economic situation of the country, situation of agricultural holdings, condition of infrastructure in agriculture and rural areas,

[5]Former National Strategic Reference Framework.

structure of agricultural production, resources and condition of the natural and cultural environment in Poland;

- strategic part (Chapter 3), fundamental part, specifying priority courses of support and presenting in detail individual measures intended for rural development under four axes:

  - **Axis 1: Improving the competitiveness of the agricultural and forestry sectors**

  Measures to be carried under Axis 1 are to help to adjust the agricultural holdings to the Community requirements and to the growing competitiveness of the foreign producers. Implementation of objectives under Axis 1 will cover inter alia the following: measures supporting the process of restructuring and modernisation of agricultural holdings, improving the competitiveness of the agri-food industry, supporting development of rural infrastructure, farmers' participation in production quality systems. Moreover, the Axis provides for the following: education, information, promotion and consultation activities aimed to broaden knowledge and improve qualifications of the rural population, enhancing production quality, as well as introduction of instruments in the form of aid for young farmers and pensions supporting structural transformation in rural areas.

  - **Axis 2: Improving the environment and countryside**

  Axis 2 measures are based on the model of agriculture, which takes into account, in addition to the production function, also the role of countryside in environmental protection, i.e. water resources and soils, habitats, landscape and biodiversity. Axis 2 provides for measures consisting in the following: promoting good agricultural practices, diversification of business activity towards non-agricultural activities, supporting agricultural activity on agricultural land of lower quality. In the area of forest economy, support is to be provided for afforestation of agricultural and set-aside land, as well as prevention of natural disasters and elimination of their consequences.

  - **Axis 3: Improving the quality of life in rural areas and encouraging diversification**

  The instruments available under Axis 3 are complementary to the priorities defined under the first two axes and may together positively influence the rural population. The proposed measures will concern mainly the following: diversification of economic activities towards non-agricultural activities with particular emphasis on establishment and development of micro-enterprises, providing rural population with access to basic services through supporting development in local towns, village renewal and positive image creation for villages.

  - **Axis 4: LEADER**

  Axis 4 is aimed at the activation of the rural inhabitants and participation in the implementation of local initiatives under Local Development Strategies. Measures under Axis 4 are to consist in granting support to applicants of projects contributing to improvement of the quality of life and diversification of activity in rural areas, supporting interregional and international cooperation and ensuring efficient functioning of Local Action Groups – ongoing costs, vocational training and activation of local community.

- The implementing part (Chapters 4, 5, 6, 7, 8) determining the Programme budget, financing rules, system for management and control, monitoring and evaluation of RDP provisions, as well as the rules for establishment and functioning of the National Network of Rural Areas.

Council Regulation (EC) No 1698/2005 of 20 September 2005 on supporting rural development under European Agriculture Rural Development Fund (EAFRD) is the legal basis for the measures proposed in RDP.

The National Strategic Plan for Rural Development 2007-2013, which presents in detail priority axes of measures aimed to enhance the functioning and development of rural areas in Poland.

In the document concerned each measure proposed under particular NSP Axis has been briefly described, i.e. the objective, beneficiary, legal basis, form, funding principle, payment calculation, as well as monitoring system for a each measure have been identified. The Axes proposed in NSP reflect the country needs in the rural development sector and identify the main areas of activities in this respect. The Rural Development Programme will be implemented across the whole territory of Poland and it will be funded from the European Agricultural Fund for Rural Development and from national resources allocated for this purpose in the budget act.

I.1.4. *MODE, CONDITIONS AND MANNER OF WORK OF THE ASSESSMENT TEAM*

Article 5 of the Constitution of the Republic of Poland of 1997, which reads "The Republic of Poland (...) shall ensure the protection of the natural environment pursuant to the principles of sustainable development" (Dz. U. 1997, No 78, item 483), constituted the key point of reference for drawing up the Assessment. In relation to this provisions the issue of the protection of the environment raised in this document has been handled widely, exceeding its traditional meaning. Legal acts and programme Polish and EU documents on the protection of the environment and sustainable development constitute points of departure for the Assessment and cover inter alia: Act – Environmental Protection Law, Second National Environmental Policy, Sixth Programme of Environmental European Union Measures, European Union Sustainable Development Strategy. Work on the Assessment aimed at the strategic ecological precautionary principle set out in the Rio Declaration under 15 (issued during the Earth Summit in Rio de Janeiro in 1992).

The works of the Assessment Team were initiated at the beginning of September 2006 and were carried out simultaneously with the works on the NSP Assessment. The first stage of works was the identification of assessment criteria which are significant due to the possible impact of RDP on the environment. Then the criteria provided basis for the identification of the correlation between the directions of respective measure axes proposed in RDP and their impact on the environment and the possibility to implement the sustainable development principles. The most significant determined (positive and negative) interactions have become basis for drawing up the report of Assessment of impact of RDP on the environment. The next

stage of works was the drawing up of the general part of the report and preparation of numerous partial analyses under the detailed assessment, with the proposed recommendations, covering the alternative proposals concerning the necessary or desired modifications to the document evaluated. The draft report was evaluated by two independent experts, i.e.: Professor Jan Żelazo from the Warsaw Agricultural University and Doctor Szczepan Figiel from the University of Warmia and Mazury in Olsztyn. The draft document was discussed during the verification seminar, which was attended by the authors of the Assessment and the representatives of the Contracting Entity and experts from outside the assessment team. The participants included: Doctor Anna Liro (Ministry of the Environment), MSc Eng. Dorota Metera (IUCN, Bioekspert company), MSc Eng. Grażyna Niewęgłowska (Institute of Agricultural and Food Economics), Doctor Barbara Perepeczko (Polish Academy of Sciences Institute of Rural and Agricultural Development) and MSc Bohdan Szymański (Polish Ecological Club). Then, upon consultation with the external experts invited, the final version of the report of Assessment was drawn up.

I.1.5. ASSESSMENT TEAM

The Assessment of impact of the Rural Development Programme 2007-2013 Rural Development on the environment was prepared by a group of experts in the following make-up: Piotr Gołos (Forest Research Institute), Jolanta Kamieniecka (Institute for Sustainable Development), Krzysztof Kamieniecki (Institute for Sustainable Development), Andrzej Kassenberg – Team Manager (Institute for Sustainable Development), Zbigniew Karaczun (Warsaw Agricultural University), Aleksander Kędra (Institute for Sustainable Development), Waldemar Mioduszewski (Institute for Land Reclamation and Grassland Farming), Paweł Pawlaczyk (Club of Nature-Lovers), Adam Wasilewski (Institute of Agricultural and Food Economics), Bożenna Wójcik (Institute for Sustainable Development) and Marta Łazarska – Team's Secretary (Institute for Sustainable Development).

I.1.6. STATEMENT ILLUSTRATING THE PLACES IN WHICH THE CONTENT OF THIS ASSESSMENT MEETS THE OBLIGATIONS PROVIDED FOR IN ARTICLE 41 (2) OF THE ACT – ENVIRONMENTAL PROTECTION LAW

The presentation below presents the point of reference of authors of this report of Assessment of impact of RDP on the environment to the statutory requirements concerning the scope of assessment of impact of the plan or programme on the environment (Article 41 (2) of the Act - Environmental Protection Law[6]).

[6]Announcement of the Speaker of the Sejm of the Republic of Poland of 4 July 2006 on announcement of consolidated text of the Act – Environmental Protection Law. Dz.U. 2006 No 129 item 902

No.	Requirements concerning the content of the Assessment of impact on the environment, provided for from Article 41.2 (1) –(12a) of the Act – Environmental Protection Law	Place of taking into account the statutory requirements in the report of assessment of impact of RDP on the environment
Article 41.2 Assessment of impact on the environment referred to in Paragraph 41.2 shall:		
1	include information on the content, main objectives of the planned document and its links to other documents;	Chapter in the report (I.1.3.).
2	determine, analyse and evaluate the current condition of the environment and the possible changes to this condition in the case of failing to implement the planned document;	Chapter in the report (I.2.1 and I.2.2.2.).
3	determine, analyse and evaluate the condition of the environment within areas covered by the assessment significant impact;	Chapter in the report (I.2.1, I.2.3)
4	determine, analyse and evaluate the current environmental protection problems, significant from the point of view of the planned document, especially those concerning the protected areas;	Chapter in the report (I.2.1, I.2.3)
5	determine, analyse and evaluate the environmental protection objectives set out on the international or national level, significant from the point of view of the planned document, as well as ways in which these objectives and other environmental problems have been taken into account during the document preparation;	The objectives have been taken into account in the evaluation criteria used in the assessment, and in the manner of taking them into account during the preparation of RDP – in Chapter II.
6	determine, analyse and evaluate the assessment significant impact on the environment and monuments, including the direct, indirect, secondary, accumulated, short-term, medium- and long-term, constant and temporary impact;	The issues have been referred to in Chapter II.2 Assessment of impact of RDP on the environment. *Detailed assessment* – both in the assessment (table summary concerning material impacts of individual measures) and the comment on the impact of individual measures on the environment
7	provide solutions aimed to prevent, restrict or ensure nature compensation for negative impact on the environment, which may result from the implementation of the planned document;	These issues have been referred to in Chapter II Assessment of impact of RDP on the environment (especially in recommendations)
8	present solutions alternative to those included in the planned document with the justification of their selection, including the indication of the difficulties resulting from the deficiencies of techniques or gaps in contemporary knowledge;	These issues have been referred to in Chapter II.1 Assessment of impact of RDP on the environment (especially in recommendations) These issues of gaps in knowledge have been referred to in Chapter III.2
9	include information on the methods applied while drawing up the assessment;	Chapter in the report (III.1)
10	include information on the implementation of the planned document analysis implementation methods as well as the frequency of its implementation;	These issues are referred to in the formal criterion No 5 in Chapter II.1

No.	Requirements concerning the content of the Assessment of impact on the environment, provided for from Article 41.2 (1) –(12a) of the Act – Environmental Protection Law	Place of taking into account the statutory requirements in the report of assessment of impact of RDP on the environment
Article 41.2 Assessment of impact on the environment referred to in Paragraph 41.2 shall:		
11	include information on the possible cross-border impact on the environment;	Described in Chapter II.2.6.
12	include the summary drawn up in the non-specialist language;	The summary has been provided at the beginning of the report of Assessment
12a	The assessment of impact on the environment referred to in Paragraph 1 takes into account information included in assessments of impact on the environment drawn up for the accepted documents relating to the draft document referred to in Article 40 (1).	These issues are referred to in the formal criterion No 6 in Chapter II.1

I.2. THE CURRENT AND FUTURE STATE OF ENVIRONMENT IN THE RURAL AREAS IN POLAND

I.2.1. THE CURRENT STATE OF ENVIRONMENT IN THE RURAL AREAS IN POLAND

The environmental effects of the undertakings under RDP will have a very broad character and concern almost the whole area of our country. The only areas not covered by these effects will be the areas of metropolitan centres and larger cities, even though indirect effects may appear also in these areas (e.g. relating to the influence on the health of inhabitants through the quality of agricultural produce delivered to the market). Therefore, the analysis of the condition of environment is related to relevant problems on the scale of the whole country.

Farming, the most important of economic functions of rural area together with forestry, plays a vital role in Poland – as a sector of economy, a factor governing the level of social development as well as an element shaping the natural conditions and influencing the condition of environment.

From the economic point of view, the role of the discussed sector has significantly decreased in the last dozen years or more. Although the share of farming in GDP in 1945 amounted to as much as 60%, and at the beginning of the 90s to almost 20%, currently it fell to approx. 2.5-4%. Nevertheless, rural areas and farming play a vital economic and social role: about one fourth of professionally active population is employed in farming which, however, indicates very high concealed unemployment due to low productivity. Rural areas are the place where raw materials for the agri-food sector entities are produced. Over 30% of the inhabitants of our country live in rural areas. Since financial situation in rural areas often results in behaviours which have adverse environmental effects (e.g. improper sewage and waste management, poaching, illegal firewood logging, etc.), one of the factors protecting the

environment in these areas should be activities aimed at enhancing the quality of life of the inhabitants and at non-environmental behaviours of the rural society (e.g. respecting good agricultural practice).

From the point of view of environmental protection farming, is a specific sector of economy owing to the fact that production possibilities are to a large degree subject to the condition of environment. It means that improper, wasteful farming would make cultivating and breeding impossible or at least more difficult in the future. Therefore, farming is very sensitive to environmental effects of other forms of human activity. Industrial, urban, transportation or tourist soil and water contamination restricts possibilities of agricultural production in the same way as causing this degradation by agricultural activity itself does. This sector strongly influences environment, reshaping it, simplifying its structure, and in some cases contaminating and degrading it. One of the factors determining the importance of farming for the condition of environment is the size of area on which agricultural production is held – in Poland it is over 50% of overall area of our country (Table 1). Therefore, it is the manner environment activities are performed in this area that the Polish countryside and condition of environment on the territory of whole country depends upon.

Table 1. Use of land in Poland in 1950-2004

	Share in the area of Poland (in %)					
	1950	**1980**	**1990**	**1995**	**2000**	**2004**
Agricultural land	65.6	60.3	59.3	57.4	57.0	52.2
Forests	21.9	27.7	28.0	28.2	28.8	29.2
Other	12.5	12.0	12.7	14.4	14.2	18.6

Source. Ochrona środowiska 2005. GUS. Warsaw 2005.

Forestry, the second very important function of rural areas in Poland, is connected to forests occupying approx. 29.2% of the country. Forests in Poland play productive (economic) as well as ecological (protective) and social functions. Forestry in connection with wood industry do not play a large role in the country economy (approx. 0.28% GBP), however other functions – ecological and social - determine their significance.

In Poland the majority of forests are state-owned (over 78% of area), organised as State Forests National Forest Holding. Private forests in 2004 occupied a much lesser area – approx. 17% of the total forest area. Among private forests are mainly forests owned by natural persons (approx. 94% of private forest area) *(Leśnictwo 2005)*.Similarly to other states in Europe, in Poland private forests usually constitute a part of an agricultural holding. According to the data of the 2002 General Agricultural Census, over 841,000 agricultural holdings (28% of all agricultural holdings) have a forest. Among these holdings over 59% have a forest under 1 ha, whereas only approx. 4% of holdings have a forest over 5 ha. The surface structure of private forestry holdings is characterised by a great fragmentation, average forest area being about 1.3 ha where the average area of a agricultural holding in 2004 amounted to 8.4 ha, including 7.5 ha of agricultural lands *(Mały Rocznik Statystyczny 2005)*.

Forest in an agricultural holding is one of the types of land use and in many cases it facilitates running it, in case of larger forest areas constituting the source of small income, and in small holdings a basis for raw wood (firewood or building material). One must not forget

that due to the characteristics of tree stands and the way economic activity is organised in private forests, their economic significance is small.

I.2.1.1. AQUATIC ENVIRONMENT

Farming has great influence over the condition and quality of water resources. The fundamental threats to water resources resulting from this kind of activity are as follows:

- farming intensification incompatible to the conditions of environment, including excessive concentration of animal production, irrational application of fertilisers and plant protection products, wrong water and sewage management system in a holding;
- acceleration of outflow of rainwater from drainage basins as a result of: merging fields (creating great homogeneous areas), eliminating marshlands with shrubs and small ponds, building drainage systems (in the absence of irrigation), irrational river regulation and building flood banks.

Moreover, one has to remember that farming, same as forestry, is the greatest water consumer (evapotranspiration[7]). The organisation and management of the agricultural area together with the existing water and land improvement systems in a significant way influence water circulation in drainage basin. As a result of various human activities, there has been a clear acceleration of outflow of water from drainage basin which caused a higher number of droughts and floods and contributed to water contamination.

The great role of water management in agriculture may be proven by the fact that about 40% of agricultural land (nearly 20% of the country) is fitted with land improvement devices. These are mainly drainage systems. About 500,000 ha of improved areas of land (mainly grasslands) fitted with buildings making it possible to irrigate, but only 90,000 ha are currently irrigated. Drainage of organic soils, especially peat soils, triggers adverse processes of peat decomposition and peat deposit decision[8] – despite momentary improvement of production conditions after draining the marshland, in the longer perspective it leads to a significant deterioration of soil properties. Intensive greenhouse gas emissions to the atmosphere and nitrogen compounds contaminating groundwater are of no little importance. These adverse processes concern currently the majority of agricultural land on peat soils in Poland.

Currently there has been a development of so-called drip (trickle) irrigation of orchards and vegetable crops. However, there is no reliable information on the irrigated area and the amount of water intake. These irrigation systems are based on groundwater intake from shallow wells, up to 30 m deep, which can be opened without the Water Law Act permit. On the other hand, expensive irrigation systems of field crops are not run, which results from the economic condition of the Polish farming. It has to be mentioned that in other countries located in our climatic zone (e.g. Germany, Belgium, and the Netherlands) with higher precipitation rate, around 3-8% of field crops are irrigated. With regard to the depletion

[7] Evapotranspiration – water loss from the surface of the Earth by way of direct soil evaporation and plant transpiration.

[8] Decession – accelerated process of humification and mineralisation of organic ingredients of hydrogenic soils which is a part of the process of decomposition (soil formation process) and takes place in the conditions of lessened or halted hydration.

of water resources, it may turn out that in the near future access to water will determine the volume of plant production.

According to the CSO data as of 2004 *(Ochrona... 2005)*, out of total volume of water taken (approx. 11,000 cubic hectometres) 71.1% is used for industry, 19.2% for municipality (water supply system), whereas only 9.7% for irrigation in agriculture and forestry as well as fishery ponds replenishment. It has to be noted that out of the latter, the greatest amount of water is taken for fishery ponds replenishment.

There have been significant changes in water management in the recent years. A modern water management system, based on drainage basin configuration rather than administrative division, is being introduced. According to so-called Nitrate Directive[9], areas sensitive to nitrate pollution have also been selected. Those of the areas where nitrate concentration exceeds 50 mg/l constitute less than 1% of the country. Special programmes of water protection are introduced in these areas; some of the measures included in these programmes concern farming.

Water consumption has diminished due to public utilities, industry and farming (Table 2). Thanks to the construction of about 4,000 wastewater treatment plants in the last 15 years, the spot effluence contamination disposed of to waters has been reduced (map 1). According to the CSO data, during 1990-2003 the amount of urban waste disposed of to waters was reduced by 42.8% from 2313.9 to 1323.7 million cubic metres, whereas industrial waste requiring treatment by 52.7% from 1800.8 million cubic metres to 852.1 million cubic metres. Unfortunately, the increase in the number of water supply connections in the rural areas with the simultaneous underdevelopment of sewage network construction and too high fees for sewage disposal result in the growing amount of untreated or only mechanically treated rural sewage.

Table 2. Exploitation resources of groundwater and water intake for national economy and population in the voivodships in 2004.

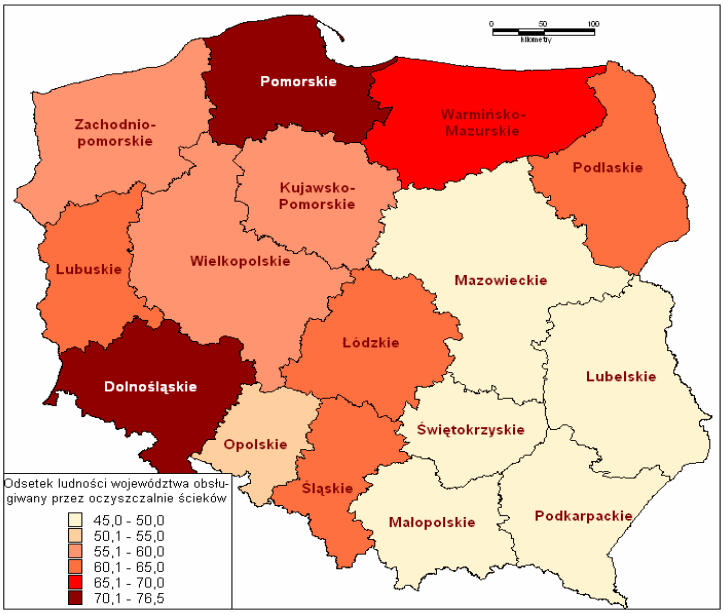
Voivodships	Exploitation resources of groundwater (condition as of 31 December)	Water intake for national economy and population (surface and groundwater)
	In cubic hectometres	
Poland	**16500.1**	**10990.0**
Dolnośląskie	671.4	456.0
Kujawsko-Pomorskie	1263.9	236.4
Lubelskie	1137.7	355.0
Lubuskie	791.5	101.1
Łódzkie	1307.9	326.9
Małopolskie	579.3	879.9
Mazowieckie	1911.2	2678.3
Opolskie	469.3	127.0
Podkarpackie	501.4	274.0
Podlaskie	659.1	88.8
Pomorskie	1423.9	284.8
Śląskie	978.7	528.9

[9] Council Directive of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC).

Świętokrzyskie	530.2	1110.5
Warmińsko-Mazurskie	1130.2	124.1
Wielkopolskie	1570.8	1894.8
Zachodniopomorskie	1483.7	1523.5

Source: Ochrona środowiska 2005. GUS. Warsaw 2005.

Map 1. The percentage of population of voivodships covered by wastewater treatment plants in 2003.



Source: Kistowski M., Regionalny model zrównoważonego rozwoju i ochrony środowiska Polski a strategie rozwoju województw, Uniwersytet Gdański, Bogucki Wydawnictwo Naukowe. Gdańsk-Poznań, 2003.

"Despite the reduction of the amount of discharged sewage, groundwater is still to a large degree contaminated which to a great extent results from agricultural activity. Surface water and shallow groundwater are heavily contaminated with biological compounds. From surface water sources to the waters in the Vistula basin flows 113,969 tonnes of nitrogen per year and 8,574.9 tonnes of phosphorus, to the waters in the Oder basin respectively 87,222.8 tonnes of nitrogen per year and 5,644.9 tonnes of phosphorus per year. The amount of nitrogen disposed of to waters from area sources is almost eight times higher and that of phosphorus almost four times higher than from spot sources" (Raport dla Obszaru… 2005a; Raport dla Obszaru… 2005b).

Taking into account the physical, chemical and bacteriological criteria it can be said that cleanness of rivers improved insignificantly during 1993-2003 (measured by the percentage share of waters classified under specific purity classes on the whole length of controlled sections). As for the physical and chemical criteria, a progress in water purity indexes in rivers has been noted. There has been a significant decrease in the percentage share of non-classed waters within the controlled sections: from 35.8% in 1990 to almost 13% in 2003 *(Ochrona… 2004)*. At the same time, there has been a rise in the sections of waters included in higher purity classes[10]. As for the bacteriological criterion, the improvement

[10] According to the Regulation of the Minister of Agriculture of 11 February 2004 on classification for presenting surface water and groundwater condition, the manner of conducting monitoring and the manner of interpretation of the results and presentations of the condition of these waters (Dz.U. No 32, item 284),

during 1990-2003 is permanent but insignificant. In the recent years an improvement in a few basic indexes on the main Polish rivers has been noted, including: BOD, dissolved oxygen, phosphorus and ammoniacal nitrogen. At the measurement points on all rivers a fall of the phosphates level has been noted. The monitored phosphates and ammoniacal nitrogen level is multidirectional; a downward trend has been spotted in.al. on rivers such as: the Narew, the Nysa, the Warta, the Bug. In river waters there has been noted a decrease in the concentration of heavy metals: lead, chromium and copper.

The majority of lakes in Poland are eutrophic lakes. The development of area has the greatest influence on the level of eutrophication[11]. Lakes from wooded drainage basins are in the best condition, whereas lakes in urban areas are in the worst. Lakes of the 1st and 2nd class of water still predominate. In the waters of the lakes a positive trend of reduction in the phosphorus compounds and nitrogen concentration has been noted *(Raport… 2003)*. In is an inspiring fact that the trend of worsening of the water purity in lakes has been put to a halt. However, even the improvement of water purity is not tantamount to the recreation of lake ecosystems degraded by eutrophication (lakes as opposed to water courses, have very restricted possibilities of regeneration).

The emission of contaminants of agricultural origin takes place as a result of leaching fertilisers from fields as well as from farmyards and drainage soil improvement systems. We are inclined to think that the situation is gradually improving which should stem from the implementation of the Code of Good Agricultural Practice including the construction of tight tanks for liquid animal excrement and manure pads. The measurements to date do not reveal the contamination of waters with pesticides, but such threats together with the intensification of agriculture may grow specifically in the region of large holdings. However, general observance of environmental standards will minimise such threats.

One of the rules of sustainable rural development is such use of the agricultural land that there is no contamination of surface and ground water and no deterioration of water balance structure. This aim can be achieved by restricting the emission of pollutants from agricultural sources which to a great extent is assured by agriculture managed according to the Code of Good Agricultural Practice.

The dictate to rationally use water resources results also from the legislation in force, both State and Community law. The most important legal act which will influence the management of water resources in Poland and their exploitation is the Water Framework Directive (WFD) [12]. It places on Member States the obligation to ensure by 2015 *"good quality of all water resources"*. Water Framework Directive whose fundamental goal is to create legal framework for the protection of surface water and groundwater exerts undeniable influence on all sectors of economy such as agriculture, industry, transport, tourism infrastructure, urban and rural wastewater treatment plants. The implementation of the WFD

currently a five-degree water classification is in force, and, in addition, in CSO documents a division into three purity classes is used (Regulation of the Ministry of Environment Protection, Natural Resources and Forestry of 5 November 1991 (Dz.U. No 116, item 503). It makes it impossible to compare with 2004.

[11] Eutrophication – process of enriching water tanks in food substances (nutrients, biogens), mainly in nitrogen and phosphorus compounds.

[12] Water Framework Directive is gradually being implemented into the Polish legislation; not all provisions have been fully transferred yet.

provisions will require taking a number of measures to restrict adverse effect of the economy on water resources and ecosystems relying on waters.

I.2.1.2. AIR AND CLIMATE PROTECTION

Since 1990 the amount of pollution emitted to the atmospheric air has been systematically diminishing. It is caused by various reasons:

- the change in economy structure and restructuring of those economy sectors which are significant sources of emission to air;
- significant financial inputs into air protection programmes, especially incurred by economic entities and financed from public ecological funds.
- significant conversion of fuels – departure in communal economy from coal to natural gas.

Table 3 presents changes concerning emissions of chosen pollutants during 1990-2003.

Table 3. Total emission[a)] of main air pollutants

Specified pollutant	1990	1995	2000	2003
	In thousand tonnes			
Sulphur dioxide	3210	2376	1511	1375
Nitrogen dioxide	1280	1120	838	808
Carbon dioxide	381482	348926	314812	319082
Carbon monoxide	-	4547	3463	3318
Non-methane volatile organic compounds:	1121	1076	904	892
- anthropogenic sources	831	769	599	585
- nature	290	307	306	307
Ammonia	550	380	322	323
Ash[b)]	1950	1308	464[c)]	476[c)]

a) estimated data, b) for years 1990-1999 emission from stationary sources, for years 2000-2002 from stationary and mobile sources, c) data not compared with previous years, cf. "Methodological remarks" in the source study.

Source: Ochrona środowiska 2005. GUS. Warsaw 2005.

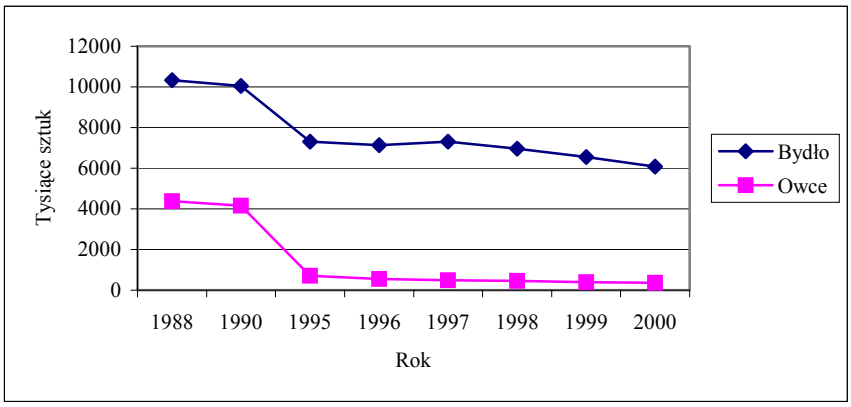
Agriculture is not a significant source of basic atmospheric pollution, such as sulphur dioxide or nitrogen oxides; nevertheless, it is a significant source of emission of specific substances, especially greenhouse gases. This sector in Poland is a source of 74% of total emission of nitrous oxide and 23% of methane. Therefore, from the point of view of climate protection the most important indexes in agriculture are livestock and the manner of animal breeding (especially cattle and sheep), the way of handling animal faeces and the level of nitrogen fertilisation of soils (*Trzeci raport…2001*).

Since 1988 there has been a constant fall in the number of cows and sheep bred (Fig. 1).Until 2000 the cow stock diminished by 40%, whereas the sheep stock by over 90%! (*Rocznik… 2002)*It imposed significant restrictions on the emissions of methane from this sector of economy.

Animal production is generally extensive and concerns over 51% of cattle and about 40% of pig. Keeping animals on the bedding and grazing animals (during the growing season) on pastures still prevails. Feeding animals in Poland is based mainly on roughages and

compound feeds produced on the basis of the crops received in a holding. A serious problem is the manner of storage of liquid livestock effluents – only a small group of holding has tight containers to store them in. The improper manner of handling natural fertilisers is a significant source of methane and ammonia emission.

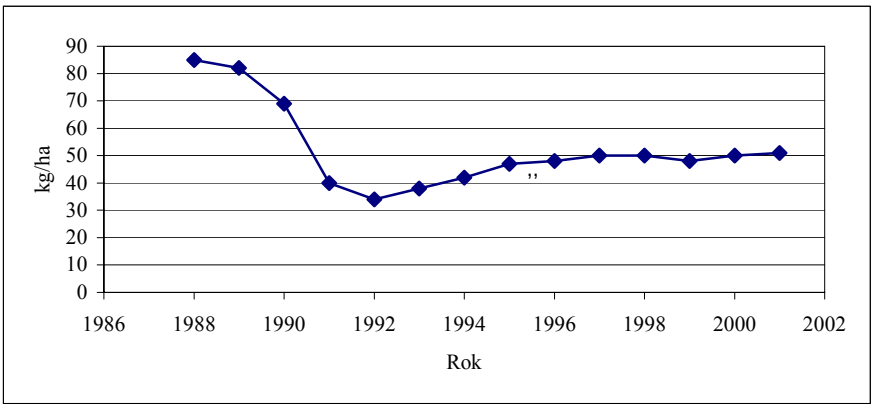
Figure 1. Cattle and sheep stock during 1988-2000 (in thousands of animals)



Source: drafted on the basis of Rocznik Statystyczny Rzeczpospolitej Polskiej 2002. GUS. Warsaw, 2002

Also the level of nitrogen fertilisation decreased significantly, especially at the beginning of the 90s. (*Rocznik… 2002*). Although later the level of fertilisation started to rise, currently it amounts to about 60% of the level from the end of the 80s (Fig. 2).It is also essential that in the soil and climatic conditions of Poland, the process of forming and evaporation of nitrous oxide happens with rather little intensity, which favours the reduction of nitrogen losses.

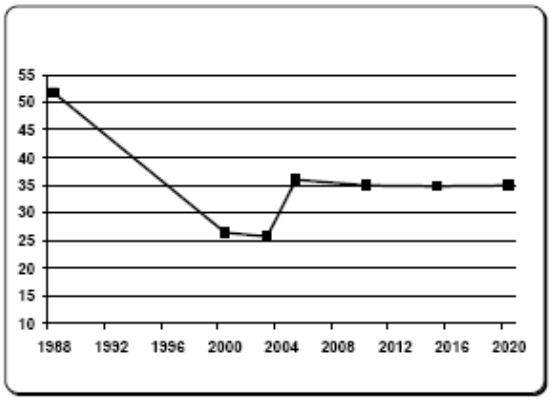
Figure 2. The use of mineral nitrogen fertilisers in kg/ha UR during 1988-2001



Source: drafted personally on the basis of Rocznik Statystyczny Rzeczpospolitej Polskiej 2002. GUS. Warsaw 2002

Nevertheless, the trends described above, positively from the point of view of climate protection, probably are not permanent in character. One of foreseeable consequences of the accession of Poland to the European Union is increasing the intensity of the Polish farming, which may be correlated with the increase in both farm livestock and the level of nitrogen fertilisation. However, the increase in livestock is restricted by the limit of milk quotas, and fertilisers - by increasing costs of production means. It is important to take preventive measures in farming reducing the risk of the increase in the level of emission in the future, as well as adaptation measures concerning the change of climatic conditions. Project IV of the Government Report for the Conference of the Parties of the United Nations Framework Convention on Climate Change in relation to farming states that in *"the sector of farming a general stabilisation of greenhouse gases during 2005-2020 is forecast, apart from the emission from enteric fermentation where a decrease is expected which is caused by forecast decrease in cattle livestock"* (Fig. 3)[13]

Figure 3. The emission of greenhouse gases from the farming sector [million tonnes CO_2 equivalent [14]]



Source: the Ministry of Environment

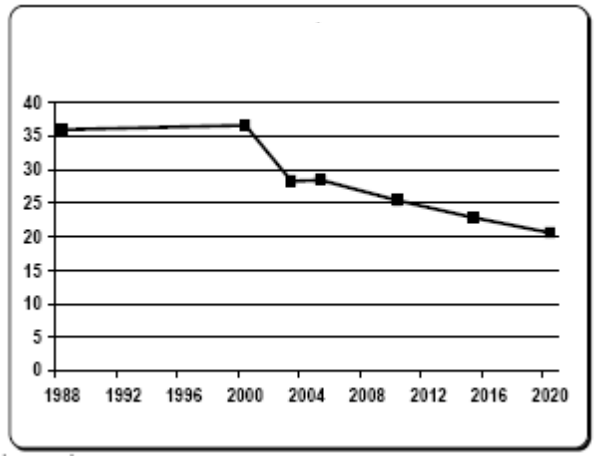
In forestry and in the changes of area use, the same report forecasts *"a downward trend in the net consumption of greenhouse gases, from approx. 28 million tonnes in 2005 to slightly more than 20 million in 2020. These changes are first of all the result of a forecast increase in logging during the period until 2020 which will influence the decrease in the net consumption despite the forecast increase in forest area (in.al. thanks to afforestation) and forecast increase of standing timber resources."* (Fig. 4.).

Of no little importance for greenhouse gases emission is their emission from dehydrated peat bogs which are subject to mineralization. Despite the lack of precise quantitative data, the problem has to be deemed serious, because it concerns the vast majority of agriculturally active peat soils in Poland. Dehydration of the majority of the Polish peat bogs, apart from the initiation of the CO_2 emission, means also "turning off" the mechanism of permanent carbon bond as a result of peat formation process.

[13]It is difficult to compare data from the years of projection with the data from 2000-2003 due to the recalculation of the greenhouse gases emission in progress in this sector.

[14]Definition of the CO_2 equivalent is connected with the Global Warming Potential, i.e. an index for comparing the level of share of different gases in the global warming. It is a relative index relating to the changes in the balance of radiation caused by the constant emission of 1 kg CO_2.

Figure 4. Changes of net consumption of greenhouse gases from the sector "Changes of land use and forestry" [million tonnes CO_2]



Source: The Ministry of Agriculture

An important measure from the point of view of climate protection is substituting renewable resources for the production of energy and fuels from non-renewable resources. According to experts, technical possibilities of the use of renewable energy sources (RES) in Poland amount to 1750 PJ i.e. 47% of the current share in the consumption of primary energy sources, which is divided into: 43% biomass, 28% water power, 25% solar power, 13% geothermal power and 16% wind power. In 2004 the share of renewable energy amounted only to 4.71% in the consumption of primary energy sources, whereas its share in electric energy production amounted to about 2%. Below there are lists (Tables 4-6) depicting the installed power in RES in the use of primary energy sources during 2000-2004 and installed power and energy production from renewable sources in 2004. One can notice the great importance of biomass in the development of renewable energy, and its potential is the greatest of all of its types. The market gradually starts to open to biofuels, but a lot still has to be done. The Sejm passed an act on biofuels. It is estimated that in 2010 a 5% share of biofuels in the general use of fuels in transport can be reached. The development of RES, especially creating biomass, production of new technologies and devices may have positive influence on the rural development (*Żmijewski… 2006*).

Table 4. The share of RES in the consumption of primary energy sources.

	2000	**2001**	**2002**	**2003**	**2004**
	in thousands of tonnes				
Consumption of primary sources	90 050	90 039	89 185	93 189	91 705
RES	3 801	4 076	4 139	4 157	4 315
Including:					
Geothermal	3	3	6	7	8
Biomass	3 587	3 830	3 901	3 929	4 062
Wind	0.5	1.0	5.0	11.0	12.0
Water	181	200	196	144	179

Total share of RES	4.2%	4.5%	4.6%	4.5%	4.7%

Source: Working materials of the EC Baltic Renewable Energy Centre and the Polish Foundation for Energy Efficiency.

Table 5. Installed power in RES as of 1 March 2006 (URE data[15])

Source type RES	Installed power [MW]	Percentage share in power
Water	1002.6	77%
Wind	83.2	15%
Biogas	31.97	2%
Biomass	189.8	6%

Source: Working materials of the EC Baltic Renewable Energy Centre and the Polish Foundation for Energy Efficiency.

Table 6. The Production of electric energy in RES in 2005 (URE data).

RES source type	Energy [MWh]	Percentage share in production
Biomass plants	467 018.483	12%
Biogas plants	103 120. 614	3%
Wind plants	135 043.313	4%
Water plants	2 175 060.244	58%
Co-incineration[16]	877 000.321	23%
In total	**3 757 251.975**	**100%**

Source: Working materials of the EC Baltic Renewable Energy Centre and the Polish Foundation for Energy Efficiency.

I.2.1.3. BIODIVERSITY

Poland is characterised by high biodiversity of agricultural areas. Half of around 482 plant communities found in Poland are connected with agricultural areas, and 45 plant assemblage types are used as meadows and pastures. Their existence depends on specific types of agriculture. Marshy meadows and pastures, as well as extensively utilised meadows and pastures situated in natural river valleys, Molinia meadows, fresh mountainous meadows, mountainous Nardus grasslands, and patches of bushes in agricultural fields, mountain and xerothermic grasslands have retained their natural and semi-natural character. Valuable (however dispersed in rural landscape) flora components include field thickets (mainly hawthorn, blackthorn), small marshes, peat bogs and small ponds. Patches of uncultivated plants in fallow lands and field baulks, as well as patches rich with ruderal species in roadsides and on the side of fences and buildings, next to abandoned houses and other rural

[15] The Energy Regulatory Office

[16] Co-incineration of coal and biomass stirs up serious controversy. It concerns mostly the restricted amount of wood (worsening of the conditions of furniture and paper industry), energetic costs of transport as well as monoculture plantations using chemical plant protection products and a significant pressure on water resources).

areas not used for agricultural purposes are still frequent in agricultural landscape and constitute important biodiversity sanctuaries.

Diversity of habitats in agricultural areas contributes to stable occurrence of around 100 species. Data on the Monitoring of Common Nesting Birds confirm the role of Poland as an outstanding European sanctuary rich with agricultural landscape avifauna. Poland is considered to be of great importance to the preservation of global populations of birds typical of agricultural landscape such as: white stork, ortolan bunting (both species of European importance), lark, partridge, and whinchat. Unfortunately, in the recent years, negative quantitative trends as regards populations of a number of birds associated with agricultural landscape have been noted in Poland as well. In the years 2000-2004 populations of agricultural landscape birds were decreasing by 3% a year in Poland, while populations of inner forest birds were increasing by 3% a year.

Agricultural areas of Poland are also important flora sanctuaries. Numerous field weed species[17] which are quickly becoming extinct throughout Europe are still found in Poland. Among important components of the Polish flora there is also a group of species associated with extensive use of meadows (e.g. orchids, globe-flower, and gladiolus). Extensive grazing conditions the preservation of a group of halophytes (in saline habitats, which are very rare in the country) and steppe plant species (rare, in xerothermic habitats) in the Polish flora. Unfortunately, sites and populations of a majority of plant species associated with agricultural areas have been clearly vanishing in the recent years. The whole group of field weed species is one of the most endangered components of the Polish flora. Negative trends spreading eastward affect even the most common, until recently, meadow plant species (e.g. marsh marigold or kingcup and common bistort).

In Poland, a diversity of traditional animal breeds and crop plants is quite well preserved. Special actions aimed at its protection have been taken since 2000.

Agricultural areas are estimated to constitute around 30% of the Natura 2000 areas in Poland, which means that they constitute an important element of the network established in Poland. As regards its function, specific agricultural use is essential for the preservation of at least several hundreds of potentially protected objects e.g.:

- Natural habitats: saline coastal marshes, inland halophytic meadows, xerothermic grasslands, mountain and lowland Nardus grasslands, Molinia meadows on calcareous, peaty or clayey-silt-laden soils, alluvial meadows, extensively used lowland and mountain meadows, extensively used Trisetum hay grass meadows, and alkaline peat bogs (certain types);
- Plant species: *Angelica palustris*;
- Animal species: aquatic warbler, tawny pipit, spotted eagles (feeding grounds!), white stork, hen harrier, Montagu's harrier, European roller, corn crake, ortolan bunting, great snipe, red-backed shrike, lesser grey shrike, ruff, European fire-bellied toad, large copper, dusky large blue and scarce large blue.

[17] Field weed species are species of wild plants found in farmland.

Private forests are another component of Polish agricultural landscape. Despite the fact that they constitute only around 17% of the Polish forests, their share in the regional forest area exceeds 30% in the Małopolskie, Mazowieckie, Lubelskie, Podlaskie, Łódzkie and Świętokrzyskie Voivodship. Private forests are characterised by low yield and poor taxation characteristics, and are often located in very small complexes. They however constitute very important sanctuaries of e.g. lady's slipper orchid, eastern pasque flower, black grouse, lichen pine and orchid beech forest. The importance of private forests to biodiversity stems from the very extensive and low quality forestry management; consequently possible intensification and improvement of forestry management in private forests may decrease their importance (usefulness) for the preservation of biodiversity.

In Poland, the level of biodiversity preservation in rural areas varies depending on the region. In this regard, the country is clearly divided into two zones: the extensive agriculture zone characterised by better preserved agri-biodiversity and located in north-eastern Poland (approximately: the Mazowieckie, Lubelskie, Łódzkie, Świętokrzyskie, Śląskie, Małopolskie and Podkarpackie Voivodship), and the intensive agriculture zone where agricultural landscape biodiversity has already suffered severe damage, and continues to be lost relatively quickly (Zachodniopomorskie, Lubuskie, Dolnośląskie, Pomorskie, Wielkopolskie, Opolskie, Kujawsko-Pomorskie, Warmińsko-mazurskie and part of the Podlaskie Voivodship). The extensive agriculture zone is also where "extensive forestry" prevails in private forests and where such forests are of great importance to the preservation of biodiversity.

In the recent years, the following clearly negative trends spreading eastward and southward and affecting the whole country have been observed:

- Nearly complete regional extinction of certain agricultural landscape ecosystems of environmental value, in particular those associated with very extensive or historic methods of cultivation (e.g. Molinia meadows and Nardus grasslands have lost around 95% of sites in western Poland and have still retained most of their sites in eastern Poland);
- Rapid decrease in the size and number of sites of most of amphibian species, which is a trend noted throughout the country, however of various intensity, and related also but not only to the changes in agricultural landscape, including mass disappearance of small ponds in fields;
- Extinction of field weed species (field weed species are becoming extinct throughout Europe, a great number of them is practically extinct also in Poland: last sanctuaries of weed species are found in the Ponidzie, Lubelszczyzna, some regions of the Opolskie Voivodship, the Kraków-Częstochowa Upland, Podkarpacie);
- Rapid, regional decline of populations of numerous meadow species (e.g. kingcup, common bistort, eyebrights) which have been common until recently;
- Clear decline of populations of numerous agricultural landscape bird species, common until recently (e.g. hoopoe, northern lapwing, tree sparrow, tawny pipit, goldfinch, crested lark), noted mostly in western and northern Poland (areas of more intensive and

modern agriculture); a clear negative trend as regards the Farmland Bird Index (FBI)[18] has been noted.

There is a clear correlation between the level of biodiversity preservation and the parameters of agriculture structure. However diverse species are dependent on diverse structural features (e.g. the size of numerous bird species populations is related to the mosaic structure of agricultural landscape, the occurrence of hoopoe to the presence of pastures, grazing animals and old trees, high diversity of weeds to rendzina soils accompanied by low level of agricultural technology and high fragmentation of holdings), there is an evident overall regularity: the best preservation of agricultural landscape is associated with the structure of small, usually private, agricultural holdings which operate close to the limit of economic profitability, and as a result practising diversified, but in general extensive farming. Therefore, economically unprofitable agriculture is optimal for biodiversity, a contradiction constituting the greatest threat to agricultural landscape biodiversity in Poland and one of the major challenges to biodiversity conservation. Although the level of biodiversity preservation has been satisfactory so far, Poland may face its dramatically rapid loss. However, the process is decelerated by direct payments scheme, as well as by the agrarian and demographic structure. At the same time it is possible and necessary to adapt a direction of development that takes account of the biodiversity conservation needs, mostly through the agri-environmental programmes.

Prior to the accession of Poland to the European Union, abandoning the cultivation (in particular mowing and grazing) of agricultural lands of marginal economic and high natural value constituted an important threat to biodiversity of agricultural landscape. Following the accession of Poland, mainly due to the introduction of the direct payments scheme, the process was stopped and reversed within several months. At present, the greatest threats to biodiversity of agricultural landscape include:

- Development of intensive large-scale agriculture: in Poland, the trend occurs not owing to the enclosure of small private holdings in south-eastern Poland, but as a result of sale or lease of large areas of agricultural land mostly in north-western Poland by the Agricultural Property Agency. It is often associated with significant intensification of land use, as well as with elimination of its small components essential to biodiversity.
- Intensification of agriculture, striving at the establishment of large holdings and complete use of agricultural lands, which may lead to the extinction of environmentally valuable areas that are currently set aside: baulks, thickets, bogs, field ponds. It is essential to provide RDP with schemes limiting those potential adverse effects of agriculture.
- The expected intensification of agriculture, including increased fertilisation and agricultural technology (increased effectiveness of weed elimination), modernisation of breeding methods (closed breeding) due to *inter alia* increased incomes and improved investment capacities of farmers;

[18] A synthetic indicator calculated on the basis of population trend of 19 farmland bird species, considered an indicator of agricultural landscape biodiversity. Since 2004, the FBI is an official indicator of biodiversity conservation level under the EU's Lisbon Strategy, and since 2007, it will also be used for the environmental assessment of the EU rural development programmes implementation.

- Standardisation of farming methods triggered by economic factors and enhanced by *inter alia* the requirements of good agricultural practice (conditions of direct payments) and even partly by implementation of the agri-environmental programmes (requirements of the common good agricultural practice).

The above information indicates the importance of agricultural activity to the conservation and preservation of biodiversity. Since Poland, as a party to the Convention on Biological Diversity[19], has undertaken to implement its objectives, it may be expected that the need to protect biodiversity will lead to the imposition of certain restrictions and obligations regarding the directions and methods of rural and agricultural development and related to the necessity of biodiversity conservation.

One of the major requirements resulting from the Convention on Biological Diversity is to curb the rate at which biodiversity is being lost by 2010, and the European states, including Poland, set themselves a more ambitious goal – to stop the loss completely within these time limits. The impact of agriculture on biodiversity has to be considered also in the context of this goal.

I.2.1.4. LAND SURFACE

Agriculture influences land surface to an extremely great extent by transforming it, adapting to its needs, changing the lie of the land or polluting the soil. Land surface is also influenced by other sectors and types of activity, the influence sometimes being strong enough to make agricultural production impossible. In general, it may be stated that basic threats to the land surface are associated with:

- Physical degradation – mostly through soil erosion and transformation of agricultural and forest land into areas of other purpose, posing a particular threat to biodiversity.
- Chemical degradation – soil acidification, salinisation and, to a slightly lesser degree, pollution with heavy metals.
- Decarburisation of soil due to organic matter loss as a result of simplified crop rotation and lower production of natural fertilisers as regards low quality soils.

The hazard of water and wind erosion occurs at varied intensity in around 1/3 of the country's area. The threats result both from the natural physical and geographical conditions and from the unfavourable agrarian structure, improper agricultural practices and the soils not being maintained in good agricultural and environmental condition. Individual regions are exposed to the process to a various degree (Table 7), e.g. the share of land area at risk of wind erosion in the Łódzkie Voivodship (45.7%) is almost ten times higher than in the Lubuskie Voivodship (4.8%).

Table 7. Agricultural land in potential danger of wind erosion and agricultural and forest land in potential danger of surface water erosion, broken down into voivodships, in 2004.

Voivodship	Area in danger of wind erosion	Area in danger of surface water erosion

[19] The Convention was signed in June 1992, in Rio de Janeiro, but it was ratified by Poland in 1996.

	in km^2	**in % of total area**	**in km^2**	**in % of total area**
POLAND	86332	27.6	89074.9	28.5
Dolnośląskie	5374	26.9	5665.9	28.4
Kujawsko-pomorskie	6156	34.3	5141.9	28.6
Lubelskie	8928	35.5	7578.0	30.2
Lubuskie	676	4.8	3113.0	22.3
Łódzkie	8330	45.7	3735.9	20.5
Małopolskie	3806	25.1	8572.2	56.6
Mazowieckie	11739	33.0	5356.7	15.0
Opolskie	2694	28.6	1160.2	12.3
Podkarpackie	2232	12.5	6502.1	36.3
Podlaskie	8588	42.6	5561.1	27.6
Pomorskie	2534	13.9	7507.4	41.0
Śląskie	4278	34.8	5005.4	40.7
Świętokrzyskie	4334	37.1	4867.6	41.7
Warmińsko-mazurskie	4165	17.2	7079.0	29.2
Wielkopolskie	8025	26.9	5023.8	16.8
Zachodniopomorskie	4473	19.5	7204.7	31.5

Source: Ochrona środowiska 2005. CSO. Warsaw 2005

Transformation of land into non-agricultural and non-forest lands (Table 8) is another form of land surface degradation, which is of great significance since the transformations are of permanent nature.

Table 8. Agricultural and forest lands excluded for non-agricultural and non-forestry purposes, broken down into voivodships, in 2004.

Voivodship	**Total**	**Including**		**Direction of the exclusion:**					
		Agricultural lands	**Forest lands**	**Areas**			**Mines**	**Water bodies**	**Other**
				communications	**estate**	**industrial**			
in hectares									
POLAND	4097	3445	652	402	1821	736	469	16	653
Dolnośląskie	321	246	75	27	73	71	30	8	112
Kujawsko-pomorskie	46	37	9	6	19	4	8	-	8
Lubelskie	85	75	10	5	52	8	7	-	14
Lubuskie	261	155	106	45	71	92	1	-	52
Łódzkie	415	309	106	36	43	155	126	-	55
Małopolskie	216	199	17	9	127	16	11	-	53
Mazowieckie	202	154	48	8	89	37	29	-	39
Opolskie	64	42	22	4	13	26	20	-	1
Podkarpackie	151	123	28	50	65	6	13	-	16
Podlaskie	103	41	62	35	13	3	19	-	34
Pomorskie	612	578	34	57	343	106	18	6	82
Śląskie	357	330	27	49	205	44	15	-	45
Świętokrzyskie	65	55	10	8	34	8	7	2	6
Warmińsko-mazurskie	94	89	5	15	34	6	8	-	31
Wielkopolskie	269	214	55	12	53	28	142	-	34
Zachodniopomorskie	833	798	35	36	587	125	15	-	70

Source: Ochrona środowiska 2005. CSO. Warsaw, 2005

The quality of soils depends on a number of factors; it is *inter alia* influenced by the intensity of agricultural use, industrial emissions, public utilities and transport, emissions of transboundary pollutions. The threats may be of super-regional, regional and local nature. In Poland, super-regional and regional threats include mostly soil acidification owing to acid deposition. Local threats are associated with pollutants falling onto the earth in the vicinity of large industrial sources of emissions, with the contamination of soils near roads with heavy traffic and the impact of intensive farming.

The threat arises mostly from the lack of a developed recycling system, lack of habits to reduce waste at its source (and systems supported by such reduction), predominance of the simplest methods of waste disposal (e.g. over 90% of municipal waste is landfilled), insufficient system of dangerous waste isolation in the municipal and industrial waste flow. Furthermore, in 2003, only around 1.5% of paper, metal, glass and plastics were isolated from municipal waste. Municipal waste was most frequently neutralised by landfilling; incineration covered 0.4% and composting only 1.3% (*Ochrona… 2004*). In 2002, over 44% of 2.9 million agricultural holdings disposed of solid waste on their own. It also results from the poor operation of waste collection services in these areas. Great majority of waste produced in rural areas is buried in the ground or taken out to illegal landfill sites (*Ochrona… 2003*).

In 2004, the area of land devastated and degradated (Table 9) owing to various negative impacts amounted to 67,550 ha (around 3% of soils total) and was 24% lower than the area in 1990. (*Ochrona… 2005*).

Table 9. Devastated and degradated lands requiring rehabilitation and development, broken down into voivodships, in 2004.

Voivodship	**Lands requiring rehabilitation**		
	Total	**Devastated**	**Degradated**
	in hectares		
POLAND	67550	62053	5497
Dolnośląskie	8378	6222	2156
Kujawsko-pomorskie	4434	4416	18
Lubelskie	3445	3234	211
Lubuskie	1256	780	476
Łódzkie	4484	4306	178
Małopolskie	3143	2995	148
Mazowieckie	4344	4318	26
Opolskie	3273	2956	317
Podkarpackie	2691	2638	53
Podlaskie	2848	2752	96
Pomorskie	2549	2336	213
Śląskie	4809	4132	677
Świętokrzyskie	2940	2876	64
Warmińsko-mazurskie	4962	4840	122
Wielkopolskie	10852	10653	199
Zachodniopomorskie	3142	2599	543

Source: Ochrona środowiska 2005. CSO. Warsaw, 2005

Threats to land surface will be influenced by the provisions on environmental protection adopted by EU, as well a the requirements arising from international agreements and conventions ratified by Poland and regarding the protection of land surface and the

reduction of emissions into the atmosphere (since deposition of pollutions from the atmosphere constitutes an important source of chemical degradation of soils). As regards the EU regulations, Directive 31/1999/EC on the landfill of waste should be considered of great significance to this issue, as it *inter alia* imposes restrictions on the possibility to deposit waste in landfills, introduces the requirement to dispose of biodegradable waste using methods other than landfill, requires isolation of hazardous waste in the flow of municipal waste and introduces a range of technical standards for the landfill of waste etc. It is even more important, as a great number of landfills in rural areas do not meet the technical standards required by the provisions of the Directive and should be either modernised or closed down and undergo rehabilitation.

I.2.2. FORECAST CHANGES TO THE CONDITION OF THE ENVIRONMENT AS A RESULT OF PLANNED MEASURES OR THEIR ABSENCE

The implementation of RDP provisions between 2007-2013 will be carried out by the implementation of measures provided for in RDP within the Polish rural areas, i.e. on the majority of this country's area (93-95% of the country's area, depending on the method used for measuring it). These measures will have a diverse impact on the environment - direct and indirect, negative and positive. Moreover, the various elements of the natural environment will be influenced by these changes to a different extent. In addition, this impact will be the result of the changes introduced in the manner of management (methods used, intensity); the manner of discharges to the natural environment and introducing changes to it as a result of support and use of resources, including the nature-value areas. Moreover, this impact, being the result of the RDP implementation, will overlap with other impact, which is the result of the other measures carried out in rural areas (e.g. direct payments for farmers or measures specified in the Operational Programme "Infrastructure and Environment"). It will therefore pose a difficulty to explicitly determine the reasons for specific changes.

At the same time, it should be borne in mind that the development of the direction of management within rural areas, such as agriculture, forestry and tourism, is inseparably connected with the natural values of these areas. Thus, the protection of these values in the process of development should not only be in the "interest" of environmental protection as such, but also in the interest of all fields of economy directly benefiting from them. The integration of rural development objectives within all fields of economy developed there with the aid of support provided for rural areas can be carried out only if the formal environmental protection requirements are observed, but also through the application of the sustainable development principles.

I.2.2.1. CHANGES FORECAST TO THE CONDITION OF THE ENVIRONMENT DUE TO THE IMPLEMENTATION OF THE PROPOSED MEASURES, WITH PARTICULAR CONSIDERATION OF BIODIVERSITY

It is a well-known fact that Polish agriculture is not adjusted to the requirements laid down by the European Union. The backwardness of the Polish rural areas as far as the

development of infrastructure is concerned has been pointed out. Moreover, it has been indicated that the average size of agricultural holdings is too small to be able to effectively compete on the EU market (this has been stated even though the average size of agricultural holdings on Cyprus or Malta is much smaller, in the Greek agrarian structure the agricultural holdings are of similar size as in Poland and in Italy holdings of a similar size can also be found). It has also been pointed out that agricultural production activity needs to be intensified for the Polish farmers to be able to compete with those from the other member states.

On the other hand, the intensification may also involve a threat to biodiversity. The studies conducted by BirdLife indicate that an increase in the harvest collected from a hectare by 1 tonne will result in a shrinking of bird species population living within the rural areas by 8.7%. At the same time, the shrinking of endangered bird species is even greater and reaches 11%.

The production intensification will also mean a greater impact of agriculture on other elements of the environment:

- soil degradation takes place when productivity of soil is increased as a result of simplifying crop rotation (with profit-maximising plants domination), the use of increasingly heavy agricultural equipment and increasing amount of mechanical operations;
- restriction of the gene pool of plant crops and breeding animals – the most efficient varieties and species will be used in order to maximise production, cultivation and breeding of traditional varieties and species that mature unevenly, with inappropriate chemical composition, lower increase in weight (pigs, other animals for slaughter), lower milk yields (cows), or lower number of laid eggs will be abandoned.
- the risk of a higher concentration of the residue of chemical agents in products caused by higher dosage of fertilizers and plant protection products,
-
- chemical contamination of soils and water – which may lead to the application of increased doses of fertilizers and pesticides by farmers, increase of animal stocking per the unit of area, liquidation of biogeochemical obstacles limiting the surface flow of contamination,
- increased pressure of agricultural activity on the climate – intensification of agriculture requires greater energy devoted to obtaining harvest and results in larger emission of ammonia and nitrous oxide (fertilizing), methane (animal breeding) etc.,
- disruption of local water relations – through increased pressure on arable land reclamation and increased demand for water (arable land reclamation, washing of fruit and vegetables intended for sale, introduction of water absorbent technologies in animal breeding – not indoor breeding requires 3.5-4 times more water per animal then indoor breeding),
- landscape will undergo unfavourable changes - in the present mosaic of field monocultures will increasingly dominate and therefore the attractiveness of rural areas to tourists will decrease.

The analysis of the strategy proposed under RDP 2007-2013 makes one assume that the implementation of this strategy will reflect to a considerable extent on the condition of nature of rural areas, result in positive (certain Axis 2 measures designed especially for that purpose) and negative (numerous measures from practically all axes, also including Axis 2) changes to biodiversity.

The risks may be a result of measures aimed at the intensification of agriculture and the development of infrastructure in rural areas. This in turn, in many instances, determines the increase of competitiveness of Polish agriculture and improvement of farmers' quality of living. The main risks, resulting from improperly implemented measures, include:

- modernization and extension of agricultural holdings – when main requirements for restricting pollution emissions are not meet, including area requirements,
- extension of non-agricultural activities, including infrastructure relating to tourism and leisure and the development of micro-enterprises, when the rural area is not properly fitted with water and sewage system, sewage treatment plant and waste stockpiles,
- development of water drainage infrastructure and technical flood control measures, if they are not preceded by a properly conducted assessment of the impact of the project on the environment, as well as by a detailed study of the need to regulate water relations of soils indented for plant production,
- consolidation and increase of the area of agricultural holdings – if the agricultural spatial planning and spatial planning protection fails to take into account the protection or establishment of environmental enclaves, such as strips and cluster of trees and bushes, small ponds, bogs etc.

Structural changes, occurring mainly in agriculture, pose great risk to the condition of biodiversity within the rural areas. In certain cases, the abandonment of agricultural use of unprofitable land by farmers (with poor soils, difficult farming conditions) may pose threat to the natural values. These changes are a result of global economic and social tendencies exerting, on one hand, great pressure on increasing the effectiveness of farming, and, on the other, these trends provide the rural residents with other models of living and working.

As a result of support for holdings located within LFAs, the speed of introduction of structural changes in agriculture is slowed down. This in turn slows down the negative changes in biodiversity within rural areas. Other NSP and RDP measures, which could have opposite effect (increase the pace of structural changes – e.g. early retirement, support for young farmers, consolidation, irrigation), will in general not overbalance the mitigating impact of direct payments and LFA payments. Thus, from the perspective of biodiversity protection and the landscape of agricultural space, the continuation of such payments should in general be considered positive – is considerably mitigating or at times liquidating the expected threats.

This, however, does not mean that the both types of payments can be assessed solely in positive terms as far as their impact on biodiversity is concerned. It should be borne in mind that due to the increase of farmers' income (the effect of all payments and types of support), their agri-technical knowledge (the effect of trainings and advisory services), and improvements in management, the farmers will intensify their management. The resulting

threat will to an extent mitigate the general increase of the level of agricultural culture, including rationalisation of the use of fertilizers and chemical agents (reduction of their excessive and unnecessary use, that is not adapted to the soil conditions and the amount of harvest), yet not completely eliminate it. The mitigating factor in this respect may include projects implemented by farmers under the agri-environmental programmes or the planned water and environmental projects. It should be taken into account that the mechanisms available under NSP and RDP will in way be able to halt the negative tendencies relating to e.g. the population of weed (extinction of numerous species significant for biodiversity of agricultural areas), and the increase of agricultural culture and agri-technical knowledge may even enhance these tendencies (the quality of seed is increasing, the elimination of weed is becoming more effective). The introduction of buffer zones for weeds may partly prevent this course of action. The changes concerning biodiversity will be hardly visible at first. However, after the period of about 5-10 years the irrevocable decrease of the population of certain plant and animal species may be observed.

The majority of measures proposed under Axis 2 constitute an indirect element of water resources protection, which will be significant the protection of biodiversity. However, these measures are insufficient to ensure water resources protection, especially as regards the decrease of the effect of droughts and floods. There are grounds for hope as regards the implementation of the Water Framework Directive, yet the process is difficult and costly. From all the sectors of national economy, agriculture will participate in the implementation of WFD to the greatest extent. This is due to the fact that agriculture is a special user of water and significantly differs from other users. This results from the spatial nature (over 50% of the country's area), great water consumption in the process of evapotranspiration, channelling area or dispersed contamination to the environment, regulation of water relations (fertilization and drainage) within large areas, including nature-value areas and the water-dependent ecosystems. The Water Framework Directive requires the following measures to be implemented in rural areas:

- point sources of contamination of waters due to extension and modernization of sewage systems, construction of safe fertilizers' and pesticides' storage fittings, including watertight tanks for liquid animal faeces, should be eliminated;
- it is vital to restrict pollution emissions from surface water sources, *inter alia*, by rationalising the use of fertilizers and adapting it to the fertilizing needs of the plants, introducing biogeochemical barriers, maintaining permanent grassland, especially close to waterways and spring areas, adapting the breeding animals stock to the fodder area, etc.;
- an important element of water resources protection is proper shaping of agricultural landscape and fitting and use of the rural areas. It is of utmost importance to keep a mosaic structure of the landscape, even in the area of intensified agricultural production. These issues should be taken into consideration upon the consolidation of agricultural land and extending the area of holdings;
- all measures that contribute to the decrease of water outflow in a drainage basin should be supported, especially: halting the outflow of water from drainage systems, recreating small ponds, proper shaping of the agricultural landscape;

- it is necessary to protect and recreate water-dependent ecosystems. In the majority of cases, these are meadows and pastures, including valley areas fitted with irrigation devices. It will often be necessary to limit agricultural production within these areas. It will allow for periodical flooding of these areas and a permanent maintenance of high water table.

The scope of the tasks is confirmed by the fact that assurance of good environmental condition of surface waters in Poland by 2015 (one of the objectives of the Water Framework Directive) will concern over 300 thou kilometres of rivers, canals and ditches (including nearly 70 thou kilometres of small flows) essential for water relations regulation in agriculture. The above mentioned data indicate that the intensification of agricultural production, leading to increased agricultural competitiveness and improved quality of living has to take into account the conditions resulting from the protection of natural values of the agricultural landscape needs, including water resources protection. It should be borne in mind that the protection of water quality and the improvement of the structure of the water balance (including the reaching of WFD objectives) may frequently extort the limitation or abandonment of agricultural production within the selected areas. However, consequent observance of binding environmental standards, especially including the minimum requirements and the application of environmentally-friendly agri-technology (e.g. intercrops), may in many cases be sufficient from the point of view of WFD.

Not only the cleanliness of water, but also water quantity are very important for biodiversity within the rural areas (within agricultural and forest areas). The changes of the water resources that are the result of various measures and phenomena that are difficult to predict, will in turn cause the changes of the hydrogenic ecosystems, i.e. those which are closely dependent on water. As a result of the implementation of various measures within agricultural areas, positive and negative changes may be expected. Essential positive effects (e.g. halting the loss of boggy meadows) may result from the accessibility of agri-environmental payments (ban on establishing new drainage systems). On the other hand, support for projects optimizing water management (including specific drainage, basic drainage) may create significant threat for boggy ecosystems, if appropriate restriction are not introduced. Such restrictions are introduced, *inter alia*, within the Natura 2000 areas. Support granted for small retention and flood control may create local threats, which can occur within many places, to valuable ecosystems in flow valleys. It seems most probable that the summary effect of certain measures may involve the increase of retention of water, yet related to unfavourable shifting of their allocations from groundwater retention (in boggy soils, peat bogs) to retention storage (in small and medium-sized reservoirs). This change will result in significant negative effect for biodiversity – the current tendency for the loss of biodiversity related to boggy agri-ecosystems will neither be hindered nor mitigated. On the other hand, the small retention measures related to water swelling in drainage ditches or hindering for the benefit of surface water outflow, may significantly contribute to the improvement of natural values of the currently drained boggy ecosystems.

In order to maintain the biodiversity of agricultural areas changes of the groundwater level is vital. However, the changes are difficult to predict as they depend mainly on the climatic factors. Drainage and retention measures play a significant role, too. Continuation of negative tendencies involving the disappearance of bogs and small ponds will result in the

continuation of the present negative tendency concerning the population of amphibians. This will also be the result of fragmentation of habitats (stimulated mainly by non-agricultural factors – area occupation as a result of projects location). The measures implemented for small retention (planned modestly both under RDP and in the regional operational programmes) may mitigate this process on a local level. However, they will probably not turn out sufficient to hinder the process on a larger scale.

A significant positive impact on biodiversity can be expected as a result of the implementation of agri-environmental programmes and Natura 2000 payments[20] and the implementation of the Water Framework Directive. However, the scope of impact is difficult to predict due to the fact that the spatial scope of the implementation of these programmes and the types of agri-environmental projects implemented will depend on the interest of farmers in their implementation. Generally, on the national level, a very positive impact, yet not one hundred percent certain, of the agri-environmental programmes for biodiversity is possible. The hindering of the fall of the number of species connected with meadows and pasture landscape should be expected in the first place.

Greater share of holdings applying organic farming methods in the total number of holdings, and effect of support under the agri-environmental programmes, will be positive from the perspective of biodiversity protection, even though the scale of the phenomenon will relate only to 4% of farmers participating in the agri-environmental programmes. It is not possible to predict the scope of these changes – the interest of farmers in transforming their holdings into organic farms will depend on the above mentioned support, and to a large extent on the economic phenomena related to agriculture (the demand for organic farming products, the functioning of the market in organic products). However, the support will be very important for the maintenance of such type of agriculture in Poland.

Excessive "standardisation" of the methods of using nature-value habitats (unifying the basic elements of the system of use) may be a negative phenomenon on the local level, resulting from that fact that farmers strictly adhered to the requirements specified. It may result within 5-7 years in certain losses in some biodiversity elements (e.g. loss of natural elements relating to stages of succession), yet the losses definitely do not outweigh the benefits from the implementation of agri-environmental programmes.

Payments for farmers from the Natura 2000 areas will probably result in the increase of farmers' acceptance of the fact of existence of the Natura 2000 areas, and social pressure on the establishment and extension of boundaries of those areas may be even expected

[20] The Natura 2000 network includes the so called "habitat" and "bird" areas. In 2004 the government of the Republic of Poland submitted for acceptance by the European Commission the proposal of 184 "habitat" areas. Next to these areas there is the so-called "Shadow List", which contains the proposal for the increase of numerous "habitat" areas and for the inclusion of 282 additional areas. In January 2006 Poland submitted another 9 areas in the Carpathian Mountains (the so called alpine area) to the European Commission and proposed an extension of one of the area in this region. In September 2006 Poland submitted another 41 areas from the continental region and increased 7 previously submitted areas. The submission of the other necessary areas from both bio-geographical regions is postponed; various lists of such areas are considered by the Ministry of the Environment. Nevertheless they have not been submitted to the Commission yet. The "bird" areas have already gained their formal status in Poland – 72 such areas were established in 2004 by the Ordinance of the Minister of the Environment (of 21 July 2004). Another 68 areas identified on the basis of the BirdLife criteria are still to be become the Natura 2000 areas, as the IBA (Important Bird Areas).

locally. The implementation of agri-environmental projects, required under the Natura 2000 payments, will contribute to the enhancement of habitats and species important for that network.

Resources provided under NSP and RDP for afforestation will result in increased pressure on afforestation of the outermost agricultural land, fallow land and wasteland within the agricultural area. Even though this will lead to the increase of the country's forest cover, the study of the outcome of afforestation implemented currently reveals that the increase may be expected first of all within areas of the already relatively high, on the contrary to low, forest cover. The changes will be favourable to common forest species (currently not endangered in Poland), whose conditions of life will improve due to the afforestation, but will be negative for the situation of largely endangered species connected with the open area, because their living space will be limited. Afforestation failing to take into account the natural conditions may cause the risk of destruction of the local "key points" for biodiversity – the consent for afforestation should depend on the assessment of the natural values of those areas to be subject to afforestation. It would be appropriate to introduce the obligation to carry out assessment of impact on the environment for the Natura 2000 areas projects, which should be a precondition of participation.

The general modernisation of the rural areas and increase of knowledge of farmers and private forests owners will result in paying greater attention to the forest management within those forests. Projects aimed to make them available will be implemented (e.g. through consolidation), the level and intensity of their management will increase too, especially in the period of increased demand for timber or other forest products. This will have a positive impact on the forest resources, but not on biodiversity (currently related to the negligence and extensive nature of management in these forests). The changes, which are relatively slow, will be probably notable already within 7-10 years. The unfavourable changes will be significant within the Natura 2000 areas. The areas will witness a conflict, not mitigated by any support mechanism, between striving to modernise and party intensify the private forests management, and species and natural habitats protection within those areas.

As a result of support under agri-environmental programmes for the protection of genetic diversity relating directly to agriculture, one may expect the hindering of the process of loss, and as regards certain traditional farmed animal breeds and cultivated plant varieties, even their effective rescuing.

In general it may be found that the loss of biodiversity within rural areas will not be halted completely, nevertheless its nature and the arrangement of the most endangered species may be changed – within certain fields the threats for agricultural biodiversity will be considerably mitigated, and within other fields they will be stimulated or can even increase. As compared to the "zero option" (discussed below), positive effect will outweigh the negative one - it is forecast that the total pace of loss of agricultural biodiversity will decrease, yet the process cannot be halted, which means that the "2010 objective"[21] will not be reached , even by 2013.

[21] The „2010 objective" was set out as part of the implementation of the Convention on Biological Diversity, confirmed in the Biodiversity Protection Strategy issued by the European Union, indicating that the hindering of biodiversity disappearance tendency is expected by 2010, both on the global scale and within the EU.

Positive effect of NSP and RDP in the scope of biodiversity could probably be greater, if the measures supporting protection were allocated more resources to, and if the use of greater number of measures to achieve those objectives was planned.

The Farmland Bird Index[22] is a positive indicator of changes in the scope of biodiversity within agricultural areas. It is the indicator of the number of species of 19 common birds of the agricultural landscape used by the EU member states. The value of this indicator in Poland has decreased within the last 5 years by 12% and it is estimated that the birds of the agricultural landscape continue to decline in Poland at the rate of about 3% per annum. The further tendency of those changes is difficult to forecast, because the expected impact of changes in agriculture on the respective bird species of the FBI will be various.

The success in NSP and RDP implementation, achievement of rural areas sustainable development objectives will to a considerable extent depend on awareness and professional skills of farmers. Therefore it is of the utmost importance to implement various trainings and courses for persons employed in agriculture and forestry. It should be clearly indicated that trainings must contain factual issues concerning environmental protection, especially including biodiversity and water management within rural areas.

I.2.2.2. ASSESSMENT OF ENVIRONMENTAL CHANGES WHICH COULD OCCUR IF THE PROPOSED MEASURES ARE NOT IMPLEMENTED WITH PARTICULAR EMPHASIS ON THE IMPACT ON BIODIVERSITY – SO CALLED „0" OPTION

Though it is not easy to carry out an analysis of potential environmental impact for a case of failure to implement the rural strategy provided for in NSP and RDP, an attempt to formulate the following general conclusions may be made:

- Whether NSP and RDP are implemented or not, the structural changes in agriculture, including agricultural holding size changes and abandonment of farming in unprofitable areas, will occur. Rate of the changes depends, however, on numerous factors, as apart from the planned support there are other vital economic factors such as agricultural insurance and taxes. The direct payments scheme (independent from NSP and RDP) is one of the major regulatory schemes in this respect: it will act as a powerful mechanism which will both restrain agricultural abandonment in less favoured areas (even without the LFA payments provided for in RDP) and preserve the existing structure of agriculture. Therefore, from the point of biodiversity view and agricultural space landscape, this phenomenon (i.e. slowdown of structural change) should be considered a positive one which eliminates or considerably relieves the expected threats associated with structural change in agricultural sector. However, without NSP and RDA these slow unfavourable changes would be a little faster.
- The level of farming standard will rise spontaneously, even if the measures are not implemented though it would be slower then. The conditions of agricultural environment will be decisive in this respect, and a generally improving access to the sources of knowledge as well. If NSP and RDP are not implemented and good economic situation for agricultural production perseveres, the use of fertilisers and plant protection products may be expected to rise and result in a nation-wide increase of the use of chemicals in

[22] See footnote 18.

agriculture (including the use of chemicals also in the areas currently under very extensive cultivation without any fertilisers or chemicals).

- If the measures provided for in NPS and RDA for 2007 – 2013 are abandoned, further deterioration of the water balance structure will occur (higher frequency of droughts and floods) and surface and underground water will become more polluted.
- Water regime is crucial to biodiversity. It is, however, difficult to assess the tendency in water resources changes, whether the NSP and RDP measures are implemented or not. In general, if the measures are not implemented, a clearly negative trend should be expected in the condition of hydrogenic ecosystems. Further organic soil degradation and erosion of will occur as a result of soil drying up. However, RDA measures should lead to a restricted water losses and an increase in the humidity in hydrogenic habitats used for agricultural purposes. All these measures together will certainly bring about an increased retention of water and an improvement of the water balance. It is, however, feared that this effect may be associated with unfavourable reallocation of the funds from groundwater retention (in moor and bog soils) to retention storage (in small and medium-sized reservoirs).
- Measures planned under Axis 2 are of great importance for water resources protection. Abandonment of these measures may result in further deterioration of water quality due to lack of restrictions imposed on the emissions and spreading of diffuse pollutants, nitrogen compounds in particular. Protection of surface water quality my be strongly affected by slowed water outflow from the drainage basin.
- Possible failure to implement NSP or RDP would be very unfavourable for the protection of biodiversity values of the Natura 2000 agricultural areas; there would be no schemes that would help maintain such values and create positive attitude among the society towards the Natura 2000 network and towards the gradually implemented principles of farming in such areas (as protection plans for these areas are prepared). Without agri-environmental programmes, Natura 2000 payments, training and consultancy support, farmers will not be positively aware of the meaning of these areas. Hence, the farmers would perceive the Natura 2000 areas as an neutral element from the point of view of agricultural economy (farming on such land would not differ from that on the ordinary land, there would be no activity to achieve the network objectives) or as an obstacle to possible investments in agricultural areas, including those associated with the plans of economy diversification. It may be assumed that the Natura 2000 restrictions would be financed from the State budget, though to a lesser extent.
- Lack of payments associated with implementation of the Framework Water Directive will significantly limit any activities aimed at the water balance improvement, conservation of water-dependant ecosystems, improvement in the ecological condition of surface waters, implementation of non-investment flood protection measures.
- Should NSP and RDP be not implemented it is believed that the present agricultural use of valuable natural habitats would not undergo major changes, i.e. neither a significant process of agricultural activity abandonment (prevented by the direct payments scheme) nor its restoration in the habitats previously abandoned and therefore subject to

increasing natural succession should be expected. Therefore, in such a case it would be very unfavourable to lose the chance to restore valuable semi-natural habitats subject to secondary succession which are now "on the brink of restoration possibility". Furthermore, as the use of valuable natural habitats would not be optimized, economic factors and legislative conditions (e.g. poorly designed requirements of Common Good Agricultural Practice) might strongly stimulate use of such lands that would be improper from the point of view of habitat protection. There is a high risk that the resources of valuable natural habitats may be lost in agricultural areas and that their protection may deteriorate (visible negative changes may occur within 2 or 5 years), therefore, lack of agri-environmental measures and Natura 2000 payments provided for under NSP and RDP would be very unfavourable (e.g. cultivation of energetic crops in river valleys).

- Failure to implementing NSP and RDP measures may result in a continuation of the existing negative trends regarding some animal and plant species essential for maintenance of the agricultural land biodiviersity.
- Lack of NSP and RDP support would probably slow down the process of afforestation of agricultural and non-agricultural lands by private owners and thus eliminate the afforestation threat to biodiversity in certain areas. Withdrawal of support for afforestation might contribute to retaining of the desirable land use structure as regards the possibility to preserve the flora and fauna characteristic for fields and grasslands. Therefore, the rate of forest cover increase in Poland would be considerably limited – this fact may have both positive and negative meaning, depending on the region, and there would be no scheme that would reduce minimum hazards associated with erosion of light soils, which might be reduced by means of afforestation in some areas. Neither strengthening of ecological corridors, needed in some areas, would be possible.
- As for private forests it is difficult to forecast what would happen as their condition is hardly (and probably will be) stable and will strongly depend on the economic conditions. As there are no other support schemes for private forests planned under NSP and RDP, apart from supports for afforestation measures and disaster recovery (a scheme available for all forest owners), it will not especially matter for these forests whether RDP is implemented in this form or not. However, lack of support that would help reduce forest losses caused by fire (strengthening of the fire protection system) would adversely affect the environment.
- Without the support provided for under NSP and RDP almost the whole genetic biodiversity associated with traditional animal breeds and plant varieties which are not economically viable today would be lost by 2013 (except of fruit trees as they are long-lived, though they could be threatened with replacement by more up-to-date varieties. Preservation of these breeds and varieties is extremely important form the point of view of future work on improvement of animal breeds and plant varieties used in agriculture.
- Abandonment of the planned training courses for people dealing with agriculture and forestry and limited access to advisory services would be a great risk for the natural environment, including water resources. There are well-founded fears that inappropriate methods of farming would be regularly applied, while implementation and dissemination of the proper water management methods in rural areas would become restricted.

To conclude, failure to implement NPS and RDP provisions will cause that biodiversity deterioration in rural areas will not be held back and certain processes that would occur may even accelerate such deterioration. Therefore, "2010 objective" aimed to prevent the tendency of biodiversity deterioration would neither be achieved in 2010 and 2013 nor in further future.

I.2.3. SYNTHETIC COMPARISON OF THE PRESENT TRENDS IN ENVIRONMENTAL CONDITION WITH THE EXPECTED FUTURE CHANGES OF THIS CONDITION

Component of the Environment	The present tendency	Expected changes resulting from NSP/RDA implementation	Expected Changes as consequence of failure to implement NSP/RDP
Water environment	• Reduced consumption of water • Gradual improvement of water quality	• Local water regime disturbances; • Increased chemical pollution; • FWD implementation and wastewater treatment plants.	• Further deterioration of water balance structure; • Increased water pollution; • Problems with FWD implementation.
Air	• Gradual improvement: decreased load of emitted pollutants.	• Increased/stabilisation of the pressure on the climate resulting from intensification of agriculture • Reduction of GHG[23] emissions in consequence of RES promotion	• Decreased/stabilised pression on climate • No RES promotion
Biodiversity	• Deterioration of biodiversity progressing from the West towards East.	• Reduction of biodiversity deterioration rate • Introduction of biodiversity protective measures	• Continuation or even acceleration of the present negative tendencies • No protective measures.
Land surface	• Degradation threat • No improvement in waste management	• Increased soil productivity; • Possible increase in chemical pollution	• Increased amount of chemicals in soil
Environmental awareness	• Low	• Increased environmental awareness in consequence of trainings, introduction of good agricultural practice and quality systems.	• Environmental awareness remaining low.

[23] Greenhouse gases.

I 2.4. EXPECTED ENVIRONMENTAL EFFECTS OF FAILURE TO TAKE THE OPPORTUNITY TO INCLUDE CERTAIN PROENVIRONMENTAL MEASURES INTO RDP AND ITS IMPACT ON NSP OBJECTIVES ACHIEVEMENT

Renouncing implementation of a few new measures offered to the Member States in regulation No 1698/2005, which has been the basis for RDP formulation, should be perceived as a particularly significant loss of chance for protection of agricultural area environment. It is worth stressing that the amount of money available for NSP and RDP implementation has increased for the reasons associated with the rate of exchange of EUR and PLN. These financial means could be used to launch new measures. This mainly applies to the following measures:

- Payments for Natura 2000 forest areas – because of the lack of this measure (Article 46 of the a.m. Regulation) private forests within the Natura 2000 areas will be not covered by any support schemes to encourage the proecological behaviour of forest owners and build respect for protection of natural values while compensating potential losses associated with the forest protection obligations in this area – this will particularly disadvantageous and will provoke a potential unsettleable conflict between forest protection and its exploitation. This situation may be manifested in that the forest owners will manage forests in a kind of "gray zone" manner to oppose the restrictions and, therefore, may greatly damage the forest environment – this could adversely affect both the stability of forests and their biodiversity.
- Forest-environment payments – for the private forest nature it would be preferable to leave these forests in the present untended and extremely extensive form, however, as it is little realistic and practically impossible, the lack of this scheme (Article 47) will be highly disadvantageous from the point of view of biodiversity protection in these forests. It should be taken into account that the general improvement of farming culture and modernisation of rural areas as well as support granted under different other RDA measures (mainly under Axis 1) will imply that the forest owners will attempt to manage the forests more intensively. Old habits and poverty in rural areas result in that the forest owners obtain wood from their own forests (sometimes in a wasteful manner) for the farm needs or for fuel instead of buying wood on the market. Besides, with a low profitability of forest production the private owners will not take any initiative to improve sanitary or breeding condition of the tree stands without additional support. Introduction of such a support scheme could also have helped to increase the share of shelterwoods in private forests (now shelterwoods form only 5.3% of the private forests area, whereas in the state owned forests the share of shelterwoods is 39.1%) – this could help convince the private owners that sustainable forest management is worth trouble also from the economical point of view. The forest-environment measure packages developed during preliminary work on RDP for: self-seeding plantations, maintenance of dead wood resources, detaining overmature stand, development of transition zone between two ecosystems at the forest border, introduction of admixed species (biocenotic intermixture) and natural conversion of stands would considerably help reduce the a.m. threats, and would additionally improve the awareness of

the importance of environmental problems among the private forest owners. Renouncement of this measure will be a great loss for the nature.

Application of the a.m. measures would also mean implementation of the strategy provided for in the National Strategic Plan. According to NSP there are schemes planned to contribute to the protection and preservation of biodiversity of the forests. Only the above mentioned schemes can fulfil this role. Besides, abandonment of the support under the a.m. schemes leaves in the minds of private owners a conviction that forests have only productive function, i.e. timber harvesting and sale. It would also be important to implement another measure in Poland, namely:

- Non productive investments (a measure associated with the forest-environmental programmes and with the previous measure) according to Article 41(b) the support could be granted for "on-farm investments which enhance the public amenity value of a Natura 2000 area or other high nature values to be defined in the programme", and according to Article 49(b) the support could be granted for investments "which enhance the public amenity value of forests and wooded land". Such investments would eliminate the existing blockage agri-environmental package implementation in respect of valuable habitats and would also considerably improve the water resources condition (subsurface retention in the right place!). This would have quite considerable and certainly positive influence of the biodiversity in rural areas both for farmland and forests and would improve public approval for proenvironmental measures. Failure to include this measure in RDP and to prevent financing of the following projects: Arrangement of small-scale retention, afforestation and maintenance of forests, fencing of grasslands or fencing of valuable habitats, construction of facilities preventing damage caused by beavers and other animals (as planned for support according to preliminary work on RDP 2007 – 2013) - obvious losses from the point of view of nature interest.

The following other opportunities provided in Regulation 1698/2005, which could be advantageous for the environment (though not directly for the biodiversity itself), have not been taken into account under RDP:

- Measure "Encouragement of tourism activities" (Article 55) was not planned and this must be regarded as a loss. Income from tourism activities in rural areas (particularly those with high natural values) may be as important for "environmental reorientation" of such areas as agri-environmental payments; tourist demand for good local products may result in positive changes in rural areas better and faster than other instruments. This instrument cannot be replaced by any measures of regional operational programmes because in this case "microinfrastructure" and support for rural tourism was involved, i.e. undertakings which are to small for all voivodship programmes. The need to apply this measure also results from the NSP which provided for stimulation of the tourism development – without this instrument implementation of this NSPO objective will not be possible. It should be stressed that tourism also provides the best opportunity to create of—farm jobs in rural areas – jobs which do not collide with the main functions of these areas, namely: agricultural, forest-bound and environmental.
- Wider application of the measure associated with "village renewal" was not provided for, apart from undertakings related to the preservation of cultural heritage and social values it

was possible (in accordance with Article 57(a)) to provide for support for active nature protection undertakings of tiny scale (e.g. removal of bushes from 0.5 ha blanket of xerothermic grass the local inhabitants want to be proud of) – briefly, micro-undertakings that will be supported neither under I&E OP nor under ROP, but which are often more important for the natural (and cultural as well) tissue of rural areas than large projects. As a result of the lack of such more comprehensive understanding of village renewal measure the objective provided for under Axis 3 of NSP, i.e. improvement of natural heritage, will not be implemented.

The analysis shows that environmental impact of the alternative "0" consisting in failure to implement measures planned under RDP, would be even more negative than in the case of their implementation. First of all, this concerns a slowdown of the rate of losses and preservation of biodiversity (habitats, landscape, plants, wild animals, crops and farm animals), water resources, and social impact (growing poverty in the rural areas could lead to pathologies which would adversely affect natural environment). Therefore, it is recommended to implement RDP, and in order to avoid the relevant negative impact it is recommended to take into account the recommendations provided below and in the next chapter in the final version of the document. However, as far as biodiversity is concerned, even full implementation of RDP in its present form will not lead to the implementation of strategic objectives pursued by Poland in the rural space.

Recommendations

1. It is recommended to consider the possibility to allocate larger funds for the measures intended to protect biodiversity and water resources in rural areas and to use more measures under RDP for this purpose (see below).
2. Achievement of the objectives of sustainable development of rural areas will largely depend on the awareness and professional skills of farmers. Hence, it is extremely important to carry out trainings and courses on biodiversity and water management in rural areas for people employed in agricultural and forestry sectors.
3. In order to strengthen the positive impact of measures undertaken under axis 2 on water resources it seems necessary to add the following elements to these measures:
   - stronger emphasis on the fact, that LFAs include also those with disadvantageous water conditions, particularly with excessive water content in spoil (high level of ground water, periodical floods), because of crop production problems,
   - taking into account payments for farmers who locally undertake actions compliant with the Framework Water Directive requirements, these actions being not accounted for in the catchment basin management plan because of their small extent.
4. It is desirable to reduce support for afforestation to the areas on which such activity is actually needed to obtain better landscape structure (infiltration areas, in which underground reservoirs are supplied, wild-life corridors, poor forest stands).
5. Consider a possibility to include in the RDP certain interventions referred to in Council Regulation (CE) 1698/2005 and not intended to be applied in Poland. Particularly, these

should be:

a) Payments for Natura 2000 forest areas;

b) forest-environmental payments;

c) Non-productive investments (both for farmland and forest areas);

d) encouragement of tourism activities;

e) Besides, village renewal should be applied in wider context, as mentioned above.

Their implementation in Poland would contribute to a slowdown of biodiversity deterioration process, better protection of water resources, preservation of cultural heritage in rural areas and sustainability of rural area development.

II. RURAL DEVELOPMENT PLAN – FORECAST ENVIRONMENTAL IMPACT[24]

II.1. DOCUMENT EVALUATION BASED ON FORMAL CRITERIA

1. Czy analiza sytuacji gospodarczej, społecznej i środowiskowej (w tym SWOT) w wystarczający sposób uwzględnia zagadnienia związane ze zrównoważonym rozwojem i ochroną środowiska?

Assessment: 'Analysis of the situation with respect to strengths and weaknesses, choice of the strategy' (chapter 2) was not elaborated with reference to the sustainable development rules. Issues relating to sustainable development failed to be both raised in the assessment and presented as the basis for implementation of strategies of this type, they are neither referred to in the preliminary, general description of the situation in rural areas, nor in assessment's socio-economic part or subsequent thematic subchapters of the assessment relating to environmental issues.

Subchapter 2.5 entitled 'Resources and cultural as well as natural environment' presenting environmental issues contains a lot of important information, which from the point of view of characteristics of these areas, may be deemed sufficient but they require correction and structuring (ordering) (see recommendations below).

Comments: Community strategic guidelines for rural development programming period 2007-2013[25], which should constitute the basis for programming support for rural areas, identify areas important for the realization of Community priorities, in particular in relation to sustainability goals provided for by the European Council of Göteborg in 2001. Authors of these guidelines frequently make references to these provisions concluding that strong economic performance must go hand in hand with the sustainable use of natural resources, limited levels of wastes, maintaining biodiversity, preserving ecosystems and avoiding desertification, etc. They provide that in order to meet the challenges, one of the most important objectives of rural development and all of its functions should be the contribution to achieve sustainable development.

Therefore references to sustainable development should be included both in strategic part of RDP as well as its assessment part. Assessment part of the Programme entitled *'Analysis of the situation with respect to strengths and weaknesses, choice of the strategy'* (charter 2) is constructed in a totally different way compared to NSP. In the Rural Development Plan, as the title of the chapter suggests, only strengths and weaknesses in rural areas were considered, which makes the analysis incomplete. The perspective from which these strengths and

[24] Numbers provided in boxes refer to respective formal criteria listed in Annex 1.

[25] Council Decision of 20 February 2006 on Community strategic guidelines for rural development (programming period 2007 to 2013) [2006/144/EC].

weaknesses were identified is not clear though, Yet another shortcoming of this chapter lies in the fact that the structure in unclear, making it difficult to identify conditions for sustainable development and presented information is not well structured.

The SWOT analysis was not incorporated in RDP. Therefore, it should be assumed that strengths and weaknesses were identified on the basis of the SWOT analysis made for the purposes of NSP. Comparison fails to prove so. In addition to this, the chapter was constructed in such a way that in is unclear what is to be considered strength, on the one hand and weakness, on the other. The SWOT analysis for NSP and RDP should be the same, the analysis for RDP being more detailed.

Recommendations:

1. In the introduction to the assessment chapter reference to sustainable development should be made. Since the layout of the assessment chapter is unclear it should be put in order and 3 areas crucial for sustainable development, namely social, economic and environmental should be separated and on the basis of this structure individual aspects should be presented.
2. Results of the SWOT analysis made during preliminary stage of NSP elaboration should be presented in RDP as basis for support offered by RDP or reference to these findings should be made. If not at the very beginning of chapter 2 entitled 'Analysis of the situation with respect to strengths and weaknesses, choice of the strategy' then at the beginning of each of its principal parts, including the part concerning the environment (2.5 'Resources and cultural as well as natural environment') strengths and weaknesses associated with each area should be enumerated and subsequently presented in a more detailed form. In the abovementioned preliminary part of subchapter relating to the environment it would be worth including, in the first place, part referring to relations between agriculture and environment (pages 25-27 and fragment on page 28), and then information concerning areas considered important from the point of view of these strengths and weaknesses. Order in which subsequent issues are presented should also be well-grounded. It should either reflect the title, i.e. strengths as first and then weaknesses, which is not a case here, as the chapter begins with 'less-favoured areas' or at the very beginning a hierarchy of subsequent thematic issues should be laid down together with strengths and weaknesses (since it happens that in the framework of one and the same thematic issues both strengths and weaknesses occur). [Incidentally, LFA is such a thematic (scope) issue and not a weakness, and so are treated nature and phenomena occurring in theses areas. It is, therefore a substantial error of RDP]
3. Moreover, in relation to chapter 2, the second part of its title '… choice of the strategy' should be deleted as there is no reference to it in its content. It does not mean, though that the general presentation of the strategy adopted in NSP should be altogether abandoned, it should be included in chapter 3 (in its introductory part) modifying it in the following way: '3. Choice of the strategy, support for rural areas under priority axes'.

The following incorrect or not fully adequate information should be corrected:

4. On page 35 it was stated that *'A list of further 238 potential bird special protection areas*

(SPAs) and special areas of habitat conservation (SACs) was elaborated, ... ' – this information is no longer up-to-date. In March 2006 a new version of Natura 2000 habitat conservation areas was published and, according to the present situation, it should state: *'A list of additional areas covering 68 potential bird special protection areas (SPAs) and 282 special areas of habitat conservation (SACs) was elaborated, ... '*. It gives the total of 350.

5. On page 35, paragraph 1 from the bottom. The first sentence should be modified in the following way: *'By virtue of provisions laid down in the Nitrate Directive (91/676/EEC) the areas endangered with nitrate pollution (OSN), where particular bans and orders are imposed on agricultural production.'*

In addition to this, several paragraphs should be transposed to other subchapters of chapter 2.5 as they refer to issues presented there:

6. Page 34, fourth paragraph from the top referring to ecological awareness should be transposed to introductory general part of chapter 2.5, which should be added, as this is not an element of biodiversity.
7. Page 35, third and fourth paragraphs from the bottom and page 36, second and third paragraphs from the bottom referring to general aspects of biodiversity should be copied after the paragraph about ecological awareness on page 34. Issues presented there do not relate exclusively to Natura 2000 network, and thus they should be transposed to the general part of this subchapter.
8. Page 35, first paragraph from the bottom should be transposed to the part relating to water resources, preferably to page 30, where nitrate contamination is presented.

2. Czy strategia ogólna i w podziale na poszczególne osie odnosi się do zrównoważonego rozwoju i ochrony środowiska?

Assessment: Measures proposed in the framework of all axes, and especially axis 2, will contribute to implementation of the national ecological policy and the VI Environmental Protection Programme of the European Union and will bring Poland closer to meeting the requirements provided for in the amended Göeteborg Sustainable Development Strategy for the EU.

Certain measures may contribute to intensification of agricultural production and agri-food industry, which may potentially threaten the environment if the environmental protection and sanitary provisions as well as the code of good agricultural and forest practice are not observed. Diversification of activities outside agriculture in rural areas may potentially constitute a threat (if not controlled from the point of view of sustainable and integrated development of rural areas and neighbouring towns).

Comments: Support strategy is clearly described in the document and relates to:

- activities relating to economic development in rural areas, notably not only by means of agriculture and processing industry but as a result of supporting other economic activities as well.
- mobilization/activation of people leaving in rural areas;
- improvement of living standards;
- maintaining the environment and assuring its sustainable functioning, conservation of biodiversity and improving its quality.

Measures aimed at preventing depopulation in rural areas are worth mentioning – ecological cost of a person living in rural area is lower than that of a person living in a city (especially big one). Intensification of agricultural production and food industry in order to provide competitive position on the market requires, in order not to overburden the environment, to monitor and closely control whether respective provisions are met. It seems that agricultural and environmental control system is too weak to meet this challenge. At the same time, voivodship nature conservation services should play an important role in the decision-making process regarding implementation of individual projects, especially the ones which may affect biodiversity.

Recommendations:

It is recommended to introduce the following changes to the evaluated document:

1. p. 38, sixth line from the top, add *‚Also employees of services responsible for monitoring and controlling whether these rules, norms and provisions are met need training.'*
2. p. 41, ninth line from the top after *'public'* add *'including protection of the environment and nature.'*
3. p. 41, twentieth line from the top after *'area'* add *'with particular care to resources and quality of natural environment'*
4. p. 43, sixth line from the bottom after *'agricultural'* add *'as well as employees of authorities monitoring and controlling meeting environmental protection provisions, sanitary rules and good agricultural and forest practice.'*

3. Czy ma miejsce integracja treści dokumentu, w tym strategii w podziale na osie, z wymogami ochrony środowiska i zrównoważonego rozwoju?

Assessment: RDP integrates to a substantial extent issues related to environmental protection taking them into account in the assessment and partly in proposed measures.

Sustainable development rules are considered in RDP to a lesser degree, the need to carry out economic activity in rural areas in a way not creating barriers hampering or preventing from such activities in future is insufficiently underlined.

Various solutions acceptable by virtue of Council Regulation 1698/2005, the implementation of which in Poland would facilitate solving some problems related to environmental protection and allow for a more sustainable development in rural areas were not used in RDP.

Comments: Agriculture is a specific sector. On the one hand, its development depends on the environmental conditions – good quality soil, access to good quality water resources and clean air. On the other, this sector has a strong influence on the environment - transforming it, simplifying its structure and adjusting it to its needs. In addition to this, non-agricultural sources influence the environment; these are emissions from industry, energy sector or transport, which in some cases may cause such degradation that further agricultural activities are impossible.

From the point of view of sustainable development the above factors should be included in the rural development strategy, since omission of even one of them may make such development impossible in a long term. Unfortunately, this fact was not fully recognized in RDP. Although virtually all basic negative impacts of agriculture on the natural environment were identified in the document, the need to control development of this sector in such a way that these impacts do not create obstacles in future was insufficiently referred to. Only with respect to contamination of water resources in Poland was the limiting role of this factor regarding agriculture recognized. Presenting, among others, contamination of soils or the problem of erosion, the authors do not prove that preventing these phenomena is a necessary element providing for stability of host ecosystems. It is important owing to the fact that some of the measures to be implemented in the framework of RDP will be connected with potentially negative impacts. This is a reason why they should be identified, so that it becomes possible to set out limits of support for rural development where this development could endanger natural resources and possibility to exploit natural resources in a long term.

The document does not make reference to negative tendencies taking place in Poland's economic space, and which may influence reaching the objectives of the RDP. These tendencies are, in the first place, pressure of automotive industry causing contamination of soil and permanent loss of areas taken up by transport infrastructure, progressive urbanization reaching areas around bigger cities as well as areas of high tourist, landscape and natural values, too slow an improvement of quality of water in rivers and increased pressure to exploit underground waters, which may limit its supply for drinking and agricultural production purposes. Making reference to the above tendencies in assessed document is important owing to the fact that it would facilitate coordination of activities aimed at environmental protection supported in the framework of other national and European programmes.

Among measures proposed and supported under RDP, some of them sanctioned by virtue of provisions of Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development are missing. These measures would efficiently support implementation of sustainable development rules in our country (for example payments for less favoured areas or areas where farming should be continued with a view to maintaining or improving natural environment, non-production investments, animal welfare payments, meeting norms based on the community law). The fact that they were omitted should be examined from the point of

view of a missed chance for further integration of objectives of environmental protection and sustainable development to practice of rural development.

Evaluation and monitoring system concerning implementation of RDP, including the system of indices used for assessing its realization are very important from the point of view of environmental protection. At present, indices relating to environmental objectives were presented merely with respect to measures under axis 2, whereas in the remaining ones they have been almost totally neglected. As a consequence, possibility to assess the influence of RDP realization on the natural environment, its protection and possibilities to implement sustainable development rules in rural areas will be limited.

Recommendations:

1. It is therefore proposed in chapter 2.5 point 'Influence of agriculture on the environment' on page 28, after point 5 to add the following paragraph: *'One of the most important objectives of RDP will be to stop and reverse these negative tendencies. It is very important due to the fact that implementation of some measures in its framework will create potential threats for quality of rural environment and thus may have negative influence on its sustainable development. For this reason limits relating to intensification of agricultural production will be set out in order to avoid degradation of natural resources and strengthening the abovementioned negative impacts. This will be achieved on the one hand due to the introduction of environmental criteria of assessment of applications for support under various measures, and on the other, the introduction of environmental criteria of monitoring the implementation of axes and measures of RDP.'*

Fuller integration of objectives relating to environmental protection and sustainable development to contents of the document (as well as to activities undertaken in order to implement objectives put forward in it) will be made possible by taking into account recommendations laid down for each of the axes in the framework of their detailed evaluation made on the basis of formal criteria.

2. It is also recommended to introduce new indices used for assessing implementation of environmental objectives in the framework of individual axes according to guidelines laid down in recommendation concerning evaluation of formal criterion no 5.
3. In addition to this, it is also recommended to analyse the possibility of implementing in the framework of RDP some of these measures which are acceptable by virtue of Regulation 1698/2005, and for which no support under RDP programming period 2007-1013 was foreseen (see recommendation in chapter I.2.4.).

4. Czy proponowane rozwiązania prawne, instytucjonalne i instrumenty finansowe mogą zapewnić realizację prośrodowiskowych celów i działań ?

Assessment: In description of the system regarding management of RDP implementation no reference is made to issues of environmental protection or sustainable development as elements which will be taken into account by the managing authorities. There is also no reference made to legal background giving high priority to these elements during implementation of RDP. Nevertheless, adopted institutional, legal and financial framework does not entail major threats for environment.

In all its axes and measures, RDP puts forward the rule of meeting sustainable development rules, including respect for protection of natural environment as one of the participation criteria. Declaration of including non-governmental organizations in the consultation process is to be considered as a positive element of the institutional system.

Comments: Involvement of public authorities responsible for environmental protection and sustainable development guarantee that these issues will be dealt with properly during implementation process of RDP. Unfortunately, evaluated document fails to acknowledge the role of public administration responsible for environmental protection and water management in implementation of RDP and assessment of impact on the environmental that the realization of RDP will bring about. It fuels fear, especially due to the fact that indices of environmental impact assessment for RDP intervention were not proposed.

Implications adverse to the environment may arise in relation to the proposed distribution of funds. This is because the decisive majority of funds is allocated to measures supporting economical growth. 35% of the funds have been allocated to measures most beneficial to environment, of which ca. 5.6% to payment of obligations from previous period, and only 3.5% of RDP funds to development of a measure related to establishing of Natura 2000 areas and implementation of Water Framework Directive. Organizational infrastructure related to RDP management, implementation and monitoring is shaped in a similar way: the key role is played by institutions responsible for improvement of economic situation of rural areas. When RDP relates to compliance of proposed measures with environment protection and sustainable development principles, institutions, organizational units or experts specializing in these problems should play an important part on management, implementation and control (monitoring) levels.

Tying LEADER program to Axis 2 measures would benefit the condition of the environment. The activities of Local Action Groups presume functioning on the basis of development strategies, which may also refer to environmental questions. In this context LAGS could support the development of organic farming or Natura 2000 network.

Recommendations:

1. It is recommended to consider the possibility to allocate a larger share of funds to measures protecting biodiversity and water resources in rural areas as well as to use more measures serving this purpose in RDP (see recommendation to chapter *Forecast changes to the condition of environment in case proposed measures are implemented/not implemented.)* The necessity to increase the flow of finance to

proenvironmantal measures also results from broadening the scope (number) of RDP interventions available to environment.

2. The possibility of including organisational units of institutions responsible for enforcing the standards of environment protection in the management process of implementation of RDP should be considered.
3. It is also recommended that environment protection research and development units are included in the organisational structure of the Monitoring Committee. It is also important to define to what extent a negative opinion on environmental impact of specific projects may lead to them being disqualified in spite of their beneficial economic effects. In other words: how binding will be the opinions of institutions, organisations or experts who evaluate projects from the environmental point of view. These questions should be clearly defined in RDP.
4. It is also recommended that LEADER programme is tied to Axis 2 measures so that activities aiming at ensuring appropriate condition of rural areas environment may be an objective of Local Action Groups.

Evaluation: The proposed monitoring and evaluation system does not guarantee adequate evaluation of RDP implementation impact on environment, mainly because of the lack of appropriate indicators.

Comment: Agreed monitoring and evaluation system is not complete. Despite the fact that it mentions creating a set of indicators and assuming some baseline values, only product indicators are presented in RDP. Neither result and impact nor productivity or effectiveness indicators have been include, which in practice makes it difficult to assess the impact of RDP on rural areas environment. Neither the values of baseline indicators nor information on data collection sourced, methods of their possible processing or institutions responsible for their preparation and presentation have not been included. Neither does RDP contain information on the planned target values of indicators[26].

[26]According to the information from the Contracting Party these data will be supplemented in the subsequent stage of work on RDP.

Recommendations:

1. Unclear paragraphs of chapter *„Monitoring strategy implementation"* should be changed. The connection between NSP monitoring and RDP presented in this paragraph should rather be included in the NSP document.
2. Result, impact, productivity and effectiveness indicators (including sources and institutions responsible for data collection and processing) should be included. In the minimal version these indicators should be related to: quality of underground waters, condition of biodiversity in rural areas (including FBI index), condition of biodiversity in afforested areas, condition of soils, impact on species protected under Directives establishing Natura 2000 network, landscape quality (including following the standards of landscape quality in relation to Europan Landscape Convention) the state of cultural values preservation, energy effectiveness, renewable energy sources utilization, air quality and space fragmentation.

6. Czy projekt jest spójny ze strategicznymi dokumentami międzynarodowymi (w tym UE) i polskimi dotyczącymi zrównoważonego rozwoju i ochrony środowiska, w tym zahamowania utraty różnorodności biologicznej (cel 2010) oraz ochrony krajobrazu?

Evaluation: The comparison of the coherence of basic Polish and EU strategic documents related to economic development and environment protection shows that objectives and proposed measures included in theses documents are to a large extent compatible with objective and measures included in PROW. However the impossibility to fulfil the objective related to slowing down the pace of biodiversity degradation (so called 2010 target) raises serious doubt.

Comment: RDP does not contain the analysis of coherence of this document with other – Community and national – strategic documents – such analysis is only included in NPS. The coherence evaluation presented in NPS has been verified and made more detailed within this Forecast and analysed from the point of view of RDP objectives and measures coherence with these various documents. While analysing coherence the relation between RDP and studied documents of strategic nature was assessed in the following categories:

1) Formally non-colliding (NC) – the coherence requirement is fulfilled, mainly due to the generality of provisions
2) Strengthening (S) - the coherence requirement is fulfilled, however the provisions included in a studied are of a higher rank or more detailed, by which they add more importance to specific measures included in RDP.
3) Conflicting (C) - the coherence requirement is put in question by difference in opinions.

The results of the evaluation are shown in the following table.

Document	Description	Coherence evaluation	Comment
Sustained Europe for	So called Goteborg strategy, its objective is to ensure that the	NC	Efforts have been undertaken within RDP to incorporate the objectives of ecological

the better world – Strategy of the sustainable development of the European Union	economic development of the European Union will run according to the principles of sustainable development. It point to the necessity of reducing the consumption of resources in the development process (through the growth of effectiveness) and transition from non-renewable to renewable sources. The basic assumption is that the needs of the present generations shall not be satisfied at the expense of future generations.		policy into agriculture and rural areas development policies. This, despite the fact, that some of the measures supported under RDP will have negative impact on environment it was decided that that the document is not in conflict with strategy of sustainable development of EU.
Sixth Programme of Environmental Measures „Environment 2010: Our Future, Our Choice“	European Union document setting EU environmental policy objectives till 2010 and Community priorities in this respect (e.g. climate protection, protection and preservation of biodiversity, proper waste management, etc.)	S, NC partly C	RDP supports a lot of objectives of 6th Programme (e.g. RES development, climate protection, water protection). Implementation of the Programme will not allow to reach 2010 target though, but only to reduce the pace of biodiversity degradation.
European Landscape Convention (Florence 2000)	The aim of the Convention is to ensure better preservation of landscape in Europe, particularly in relation to natural, semi-natural and cultural landscape.	S, NC partly C	RDP proposes instruments aiming at landscape protection (inter alia: LFA payments, support of agri-environmental and Nature 2000 programmes) RDP implementation will lead to alteration of the cultural landscape of Polish rural areas (inter alia: land reparcelling, meliorations, afforestation)
National Development Strategy 2007-2013	NDS is a basic strategic document describing supported paths of development for 2007-2013 and transferring Lisbon Strategy objectives to the home ground.	S	RDP objectives and measures aiming at achieving improvement of the quality of life of rural areas inhabitants are in line with the basic objective of NDS, which to increase the level and quality of life of the inhabitants of Poland: single citizens and families. Almost all of NDS priorities referring a less or more significant manner to support measures defined in RDP.
National Reform Programme 2005-2008 for implementation of Lisbon Strategy	The objectives of NRP are: keep up the pace of economic growth beneficial to creation of new jobs while following the principles of sustainable development. The emphasis is placed on – inter alia – development of entrepreneurship, modernisation of infrastructure and creation or retention of new jobs in order to reduce unemployment.	S	RDP contains description of instruments facilitating implementation of NRP in rural areas and agricultural sector. Support of innovativeness is worth stressing. Proposed RDP measures aiming to increase the level of education of rural areas inhabitants and to diversify activities are in line with suggestion included in NRP.
National Strategic Reference	NSRF is a strategic programming document which expands and details this part of National Development	S	RDP in a way responds to the needs defined in Reference Framework, which obviously makes the documents

Framework 2007-2013	Strategy 2007-2015 which refers to Poland's activities related to its implementation of EU coherence policy, and which are co-financed from European Regional Development Fund, European Social Fund and Coherence Fund. The document defines activities which Polish government intends to undertake in 2007-2013 in the scope of promoting sustained economic growth, increasing competitiveness and employment. At the same time NSRF facilitates effective aid to regions and social groups threatened by marginalisation and support of problem sectors and regions restructuring.		comparable and compatible. However RDP has a certain advantage over NSRF, as it is to a greater extent able to take into account the requirement to protect environment in particular measures, thus becoming a document which is more modern and suited to respond to the challenges of 21st century.
2nd State Ecology Policy (PEP) and State Ecology Policy for 2003-2006 with a perspective for 2007-2010	The basic national strategic document setting objectives for environment protection and sustainable development. It relates to all environmental problems; its aim is to improve the quality of life through preserving appropriate condition of environment. The document sets a number of targets related to Poland's membership in the EU and to the necessity of achieving Community objectives as regards ecology.	NC, S partly *C*	Attempt to incorporate the objectives of ecological policy of agriculture and rural areas development policies and RDP is particularly important. A lot of targets of 2nd PEP will be supported through implementation of PROW. Some of the measures proposed under RDP (land reparcelling, meliorations, increase of intensification) may make achieving some of the 2nd PEP targets difficult or even impossible.
Updated proposal for spatial management of the country	The proposal for spatial management of the country is the basic document describing the state policy towards spatial management of the country. It points to the importance of sustainable development, social, cultural, economic and natural potential. The document, however, does not relate directly to rural areas.	NC	RDP aims at using the potential of the Poland's territory to ensure faster development of rural areas. Attempt to preserve the agricultural use of agricultural land should be considered as having particular importance.
National Regional Development Strategy	It is difficult to conclude what the current status of NRDS is. The document has defined the situation of rural areas and unfavourable and requiring structural changes.	S	Diagnosis contained in both documents is similar, the objective of RDP is to implement the structural changes of rural areas to which NRDS points.
National strategy of protection and moderate utilisation of biodiversity and implementation programme	The superior objective of both strategies is to preserve the wealth of biodiversity in local, national and global dimensions and ensuring sustainability and possibility of its development on all levels of its organisation (intraspecies, interspeciess and supraspecies).	S partly C	Instruments aiming at ensuring protection of biodiversity in rural areas will be implemented under RDP (inter alia: agri-environment payments and Nature 2000 payments) Supporting intensification of agriculture will have a strong, adverse impact on biodiversity – it will create a threat of losing some biodiversity related to rural areas. These threats result from the fact

and **Working version of National strategy pf protection and moderate utilisation of biodiversity**			that not enough importance is attached to the problem of slowing down the pace of losing biodiversity, and unfortunately RDP will not change this situation. There is a clear incoherence as regards field weeds[27] – they are indispensable for implementation of biodiversity protection strategy (there is absolutely no intention of supporting them under RDP). Excessive and not supported by detailed reconnaissance development of technical water management equipment coupled with intensification of agriculture may lead to simplification of agricultural landscape, and thus to reduction of biodiversity, especially of water ecosystems. Land reparcelling and water meliorations depreciate the importance of biodiversity favouring economic benefits instead. These threats result in the target of reducing the pace of losing biodiversity – 2010 target - is impossible to achieve.
Strategy of protection of water-muddy areas	The superior objective of this Strategy is a widespread protection of water-muddy areas in the country through: a. ensuring sustained existence and natural character and the ecological functions of water-muddy areas preserved so far b. stopping the process of degradation and disappearing of water-muddy areas and c. natural restitution of degraded areas	S partly C	Some of the instruments introduced under RDP (agri-environment programmes and Nature 2000 payments) aim at ensuring biodiversity in rural areas – they will be implemented in areas which are of interest to the Strategy in a smaller extent. There is essential incoherence as regards the management of water resources and ecosystems which depend on water. Important strategic objectives of water-muddy ecosystems protection (including stopping the drainage of peat soils) will be insufficiently supported under RDP. There is a justified danger that Axis 1 measures will support drainage of marsh meadows. One of the conditions of the agri-environment programme is prohibition of construction of new drainage systems, but this will not prevent drainage if it is strengthened by reconstruction or desludging of existing ditches – in some cases it will also be very destructive to hydrogenic ecosystems.
National Programme	NPA is a strategic document on forestry development policy which	S	On of the objectives supported under RDP will be afforestation of areas excluded

[27] According to naturalists' estimates, around 95% of field weed species diversity is concentrated on 5% of agricultural land (mainly on the rendzina soils of the Opolskie and Jura region, as well as in the basin of the Nida River and in the vicinity of Lublin). In the remaining areas, diversity of field weed species has been significantly reduced, and thus there is a necessity to establish "areas of special importance to field weed species" where actions to protect them should be concentrated.

of Afforestation	includes guidelines for development of spatial development plans as regards afforestation.		from agricultural production, which supports the implementation of NPA objectives.

The conclusion from information presented above is that there is an incompatibility between the measures supported under RDP and the documents analysed, as regards some strategic objectives.

Recommendations:

Better coherence of objectives of analysed strategic documents with RDP will be served by taking into account recommendations proposed in relation to other formal criteria, as well as detailed recommendations for axes 1-4.

Furthermore, to ensure the coherence of RDP with the strategic objectives of Polish and international documents pertinent to sustained development and environment protection, the following is recommended:

1. wide inclusion of the subject of environment protection, including biological and landscape diversity, in training for both beneficiaries and advisors,
2. expanding the scope of agri-environment programmes to include undertakings related to protection of landscape values,
3. introduction of criteria related to the manner in which afforestation is performed, in order to limit it to areas, where they will not cause adverse effects to biodiversity[28],
4. supplementing RDP measures as regards the possibility to support the protection of wild growing plants (including so called field weeds) and as regards measures stimulating ground water retention and protection of water-muddy ecosystems in agricultural space[29],
5. strengthening of RDP Axis 2 through – inter alia – increasing the allocation of funds and increasing the number of available measures and agri-environment packages, so that RDP measures give stronger support to achieving 2010 target in relation to biodiversity of agricultural space.

II.2. PROGRAMME (PLANNED MEASURES) EVALUATION ACCORDING TO SUBSTANTIVE CRITERIA

II.2.1. AXIS 1: IMPROVING THE COMPETITIVENESS OF THE AGRICULTURAL AND FORESTRY SECTORS

[28] Because afforestation plans are prepared by Forest authorities, there is a possibility od introducing and observing the afforestation criteria when they are elaborated.

[29] The ban on co-financing technical works, which allow for intensification of agricultural production in valuable water and sludge areas, should be clearly specified in the RDP.

II.2.1.1. *GENERAL ASSESSMENT OF THE AXIS*

The aim of the measures under this axis in to ensure that Polish agricultural and forest holdings will increase the effectiveness of their operation in order to become competitive on the Community market. The scope of works proposed is very wide in this case as it covers the "soft" measures, consisting mainly in increasing the level of knowledge of farmers and forest owners, in supporting their cooperation and participation in high-quality food production systems, facilitating access to advisory services rendered to them, and creating conditions supporting their abandonment of profession, as well as the "hard" measures, i.e. those which most often relate to the implementation of specific projects or measures in the agricultural area and in practice increase the competitiveness, i.e. support modernisation of agricultural holdings and processing of agricultural products, improvement and development of infrastructure related to the development and adjustment of agricultural and forest holdings to the Common Market conditions. Therefore the impact on the natural environment of works carried out under this axis will be various – some of them will be of absolutely positive nature (e.g. educational measures in the scope of rural environment protection – which enhance environmental knowledge of farmers and forest owners), whereas other may have significant negative effect (such as land consolidation), followed by those of mixed nature - positive impact may be accompanied by the negative one.

It is forecast that in the case of "soft" measures, their effect will in majority of cases be of indirect nature - relating to the effect of decisions, works and projects implemented as a result of obtaining aid under the "soft" measures of this axis. Therefore, on this stage it is impossible to unambiguously state which effect – negative or positive – will predominate, because it depends to a considerable extent on the practical way of implementation of the measures planned. If the trainings or advisory services are predominated by environmental protection issues or the cross-compliance rule, positive impact will predominate. On the other hand, if the measures focus on production issues, negative effects may predominate in the future.

Nevertheless, the "soft" measures proposed under this axis have great potential for increasing environmental awareness of the population – farmers and consumers – and implementation of good environmental protection practice in agricultural management, thus resulting in the increase of competitiveness of the Polish agriculture.

From the point of view of environmental protection and sustainable development it is important for RDP authors to notice the need in the description of the axis and measures implemented under it to adjust Polish agricultural holdings to increasing environmental requirements of the EU provisions and to indicate the necessity to increase the level of knowledge of farmers and forest owners as regards sustainable rural development instruments: cross-compliance, application of good agricultural and forest practice, compliant with the environmental protection provisions and assurance of animal welfare. On that account there is hope that these issues will be implemented appropriately also at the RDP implementation stage.

II.2.1.2. GENERAL ASSESSMENT OF "SOFT" MEASURES

MEASURE: VOCATIONAL TRAINING FOR PERSONS EMPLOYED IN AGRICULTURE AND FORESTRY

The aim of the measure is to increase the level of farmers' knowledge and thus the impact on the competitiveness of Polish agriculture and forest management. It will be achieved through supporting trainings for farmers and private forest owners. The justification of implementation of this measure indicates that the need to implement such trainings results *inter alia* from the increasing demand as regards environmental protection, animal welfare and production safety.

The beneficiaries of this measure should include non-governmental organisations – many of them carry out extremely effective and efficient training and educational activity within the rural areas.

Monitoring indicators provoke reservations – they only measure the product and it seems that they are in excess and some of them will provide insignificant information. Actual effects of this measure will strongly depend on the content of training, including "saturation" of the detailed training curricula with the issues relating to the water resources protection, agricultural area biodiversity and methods of its preservation, environmentally-friendly management in forests, landscape protection and landscape quality standards, cultural values.

MEASURE: EARLY RETIREMENT

The aim of this measure is to establish a mechanism facilitating the transfer of agricultural holdings to their successors through granting early retirement to persons abandoning agricultural production. The early retirement will be a source of income for persons who had abandoned agricultural production and transferred their holdings to successors or other holdings.

It seems that this measure will bring about two types of effects: positive impact associated with the obligation to apply good agricultural practice by the successors as far as the environmental protection, application of these requirements under cross-compliance, hygiene standards, animal welfare and environmental protection within an agricultural holding are concerned. On the other hand, this measure will probably lead to agricultural production intensification, unification of the landscape in consequence of land enclosure on the farms run by the successors. This measure will also make small farms to go out of business (and agricultural production), which is demonstrated by the preference for new agricultural holdings having at least the area comparable to the average size determined for a given voivodship (this accessibility criterion does not concern only the transfer of a holding to the descendants). Even though the criterion is justified from the point of view of agricultural production economy, it may have negative effect on the natural resources.

Monitoring indicators provoke reservations – some of them seem not to provide any significant information, and none of them relates to issues of sustainable development or environmental protection needs.

The scope and strength of impact relating to this measure will depend on the fact whether the transfer of a holding takes place in practice, or if the fact of transfer of ownership is noted only. Lessons learned so far indicate that in the majority of cases, upon transfer of a holding, the actual production management is still carried out by the previous owner, and the ownership was transferred only to obtain payments. In such case the implementation of this measure will have no practical environmental impact.

MEASURE: PARTICIPATION OF FARMERS IN FOOD QUALITY SYSTEMS

The aim of the measure is to support high-quality food production by supporting products covered by the Community (regional products) or a national system. Aid will be aimed at farmers carrying out production within one of the systems.

The assessment shows that this measure will bring positive effects for the environment both through replacing quantity oriented production with quality oriented production and higher environmental requirements imposed on such a type of production.

Full assessment of impact of this measure on the Polish environment is hindered by failing to provide the number of beneficiaries, who obtain aid of this type. Therefore this gap must be filled.

MEASURE: INFORMATION AND PUBLICITY

The aim of the measure is to increase the popularity of high-quality products among the consumers by supporting measures aimed at the promotion of products of this type.

Such activities will have positive impact on the ecological awareness of the public because they will attract attention to the environmental protection issues in the process of production of such products and in the promotion materials.

MEASURE: AGRICULTURAL PRODUCER GROUPS

The aim of this measure is to support the cooperation of farmers under producer groups. It will be achieved through supporting these groups in the first period of their activity.

Methods and scope of environmental impact for this measure cannot be now explicitly assessed – both positive and negative effects may occur. The former may be associated with scale effect – streamlining of production, product preparation, storage and transport. The negative effects will be those associated with production intensification, standardization within the group and narrowing specialization. These effects will be both direct and indirect.

MEASURE: ADVISORY SERVICES FOR FARMERS AND FOREST OWNERS

The aim of the measure is to increase the level of farmers' knowledge and thus the impact on the competitiveness of Polish holdings by facilitating farmers' and forest owners' access to advisory services. It will be achieved by reimbursement of costs of advisory services. Advisory will relate to modernisation of holdings, their adjustment to the Community requirements (including those concerning environmental protection), carrying out production, etc.

The measure will have mixed impact – both positive and negative. The positive impact will occur in the case of assurance of appropriate level of advisory services relating to information on the adjustment needs of agricultural holdings to the environmental protection requirements, the cross-compliance principle, animal welfare, etc. The negative impact occurs when the advisory services result in the increase of production intensity, its standardisation, land consolidation, etc. Both positive and negative impact will be indirect and rather long-term.

In order to ensure positive environmental impact of this measure, the improvement of advisory services and enhancement of institutions involved will have to take place (*inter alia*, it is necessary to increase the knowledge of advisors in the scope of environmental impact of various agricultural practices, requirements resulting from the implementation of the cross-compliance rule, environmentally-friendly technologies, etc.).

II.2.1.3. DETAILED ASSESSMENT OF "SOFT" MEASURES

MEASURE: VOCATIONAL TRAINING FOR PERSONS EMPLOYED IN AGRICULTURE AND FORESTRY

Evaluation criteria, for which dependence between the proposed measure and a criterion was identified:

No.	Criterion	Impact	Type of impact
1	Impact on the implementation of environment protection, environmentally-friendly changes in the structure of economy, environmentally-friendly transformations in applied technologies, and application of environmental management	positive (on the condition that appropriate programmes of trainings are prepared)	All the identified impacts will be of direct and long-term nature.
2	Impact on development of sustainable and environmentally-friendly forms in the power industry	positive	
3	Impact on sustainable rural development with account taken of its friendly forms, as well as extension of other business activity, including the environmentally-friendly one, in the context of improvement in the effectiveness of resource use.	positive with negative elements	

No.	Criterion	Impact	Type of impact
4	Impact on sustainable management of natural resources – biodiversity, landscape	Positive; on the condition that appropriate programmes of trainings are prepared	
5	Impact on sustainable management in forestry	positive with negative elements	
6	Impact on sustainable management of water resources	positive with negative elements	
7	Impact on land development	mixed	
8	Impact on environmental awareness among the society	positive; on the condition that appropriate programmes of trainings are prepared	
9	Impact on the promotion/assurance of environmental health	positive; on the condition that appropriate programmes of trainings are prepared	
10	Impact on the changes in the condition of waters and water-dependant ecosystems	positive; on the condition that appropriate programmes of trainings are prepared	
11	Impact on the changes in the condition of land surface, soil, waters and water dependant ecosystems, and of fauna and flora	positive; on the condition that appropriate programmes of trainings are prepared	

Comments:

The nature of indirect impact will depend on the type of training. The trainings will enhance both positive and negative impacts identified in the elements of RDP which will be the subject of the education. The trainings will not have a direct impact on the environment but only on the awareness and the resulting skills but they will indirectly decide whether the measures with a potentially negative impact on the environment will be eliminated by the farmers. In addition, a considerable cautiousness is required for the impact assessment. For example, if the trainings result in the increased level of hygiene and tidiness in the holding, which seems to be unequivocally positive, it may have a very negative impact on the population of swallow and tree sparrow (which is a serious problem since these species are becoming extinct everywhere). Negative impacts will also appear when the trainings will

result in the increase in the farming intensity and the abandonment of traditional, extensive agricultural and forestry methods.

Mixed impact may appear in the case of trainings concerning renewable energy sources, their use in rural areas, the introduction of energy crops and biofuels production. On the one hand, there will be unequivocally positive effects for the development of this form of energy production and thus the decreased dependence on non-renewable resources, lower volume of pollution released to the environment and the support of activities aimed at the climate protection. On the other hand, one must not forget that renewable energy sources may pose a threat for landscape (wind power industry), local water relations (water power industry) or the local air quality (burning of biomass). Moreover, the development of energy crops may contribute to the simplification of landscape, intensification of production or the introduction of crops based on genetically modified species and varieties.

From the point of view of sustainable rural development it is important that such threat were identified so that they could be discussed during the trainings.

On the other hand, this measure provides a unique chance for raising ecological awareness of farmers in respect of potential negative impacts of their activities on the environment and the resulting consequences, the necessity to implement the principles of good agricultural and environmental condition in the production, animal welfare, importance of good condition of the environment for health and the possibilities to conduct sustainable economy. If this chance is used, it will mean the environmentally friendly modernisation of Polish agriculture and as a result the reduction of its negative pressure on the environment.

It is impossible to establish the importance of the measure for the improvement of the condition of the natural environment in Poland, since only the number of institutions which will receive the support for trainings is provided and there is no estimation of the number of farmers which will receive the training.

MEASURE: EARLY RETIREMENT

Assessment criteria for which dependencies between the proposed measure and the criterion have been identified:

No.	Criterion	Impact	Type of impact
1	Impact on sustainable rural development with account taken of its friendly forms, as well as extension of other business activity, including the environmentally-friendly one, in the context of improvement in the effectiveness of resource use	mixed	indirect, medium and long-term
2	Impact on sustainable management of natural resources – biodiversity, landscape	mixed	
3	Impact on space management	positive with negative elements	direct, medium-term

Comments:

Early retirement will contribute to the maintenance of spatial order by ensuring that the agricultural production will not be abandoned and agricultural land will not be used for other purposes (e.g. the development of buildings for recreation purposes) since the successor will have an obligation to continue the agricultural activities. It will be the only direct impact related to the implementation of the measure.

Other impacts will be indirect and will be related to the fact that the requirements concerning the access to this form of support give preference to the creation of large area holdings. It may particularly dangerous in environmentally valuable areas, e.g. areas situated in sites protected within the Natura 2000 network.

Therefore, the measure may generate both positive and negative impacts. If the successor begins to implement agri-environmental programmes or to apply organic farming methods in his/her holdings, then significant positive impacts will occur. However, if the production is intensified and the environment-related requirements are only partly taken into account, then the impacts will be negative.

Nevertheless, due to a relatively small number of potential beneficiaries (50,400 people, i.e. approximately 2.5% of agricultural holdings), the scope of impacts of the measure in the scale of the whole country will be relatively limited and its effects will be mostly local. There will be no impacts if there is just the transfer of the ownership right and not the real transfer of the holding.

MEASURE: PARTICIPATION OF FARMERS IN FOOD QUALITY SYSTEMS

Evaluation criteria, for which dependence between the proposed measure and a criterion has been identified:

No.	Criterion	Influence	Kind of impact
1	Influence on the attainment of environmental protection aims, proenvironmental changes in the structure of economy, proenvironmental changes in the applied technologies and application of environmental management	positive	direct, immediate but also indirect, long-term
2	Impact on the promotion of sustainable consumption model, including space consumption	positive	indirect, long-term
3	Influence on sustainable rural development with account taken of its friendly form as well as on extension of other kinds of business activity, including the proenvironmental one, in the context of improvement in the effectiveness of resource use	positive	direct, immediate but also indirect, long-term
4	Impact on the sustainable management of natural resources – biodiversity, landscape	positive	

No.	Criterion	Influence	Kind of impact
5	Impact on the protection and optimum use of the existing cultural values	positive	
6	Influence on the society's environmental awareness	positive	indirect, long-term
7	Influence on promoting/providing environmental health	positive	direct, immediate but also indirect, long-term

Comment:

Since one of the factors influencing food quality is the condition of the environment, one should assume that the supporting of measures for farmers' participation in high-quality food production systems will positively influence the natural environment. It is a measure which is going to encourage the cultivation of traditional farming methods and the maintenance of the cultural values existing in rural areas. The supporting of traditional products and the agricultural production methods related to them should lead to the maintenance of the cultural rural landscape, to the limitation of the aspiration for production intensification or for the introduction of modern production methods which could have a significant negative impact on the environment. Some of the results are going to be of immediate nature – e.g. maintenance of cultural values, introduction of aspects of sustainable agricultural production into every-day farming practice, impact on the landscape and support for multidirectional rural development.

The support for food quality systems will also influence the level of ecological awareness, especially thanks to emphasising the significance of the condition of the environment and the quality of its elements for the production of high-quality agricultural produce. It will also have direct influence – both immediate and long-term one - on consumers' health.

Due to the lack of an indicated number of potential beneficiaries of this measure, it is impossible to define how important it is at national level.

MEASURE: INFORMATION AND PUBLICITY

Evaluation criteria, for which dependence between the proposed measure and a criterion has been identified:

No.	Criterion	Impact	Kind of impact
1	Influence on the achievement of environmental protection goals, proenvironmental changes in the structure of economy, proenvironmental transformations in the applied technologies and application of environmental management.	positive	indirect, long-term
2	Impact on the promotion of sustainable consumption model, including space consumption	positive	

No.	Criterion	Impact	Kind of impact
3	Influence on the sustainable development of rural areas with account taken of its friendly forms, as well as extension of other kinds of business activity, including the proenvironmental one, in the context of improving the effectiveness of resource use	positive	
4	Impact on the sustainable management of natural resources – biodiversity, landscape	positive	
5	Impact on the protection and optimum use of the existing cultural values	positive	
6	Influence on the society's environmental awareness	positive	
7	Influence on promoting/providing environmental health	positive	

Comment:

All the kinds of impact are going to be of positive but indirect nature. The strength of this impact will mostly depend on the significance assumed by the issues of environmental protection and ecological values of areas where high-quality products (which are going to be promoted) will be produced. If these issues are treated as significant ones, then the measure may play a very important role as far as raising the society's ecological awareness is concerned.

MEASURE: AGRICULTURAL PRODUCER GROUPS

Assessment criteria for which dependencies between the proposed measure and the criterion have been identified:

No.	Criterion	Influence	Type of impact
1	Influence on implementation of environmental protection, proenvironmental changes in the structure of economy, proenvironmental transformations in applied technologies, and application of environmental management.	mixed	mostly indirect, instant and long-term
2	Impact on sustainable management of natural resources – biodiversity, landscape	mixed	
3	Impact on the changes in the condition of waters and water-dependant ecosystems	positive, with negative elements	direct instant, but also indirect long-term

Comments:

Producer groups are established mostly in order to increase the cost-effectiveness and efficiency of the production, as well as the profit brought in by the activity carried out by the group members. Therefore, negative impacts may be expected to arise as a result of increased intensity of production, specialisation, simplification of crop rotation and spatial variability of crops, as well as of the expansion of fields. It will adversely affect the landscape, biodiversity,

and may result in increased water consumption (e.g. for irrigation, washing the produce, etc.) or increased amount of waste produced.

On the other hand, joint actions may contribute to the increase in the effectiveness of the use of resources – shared storage of agricultural produce will raise the energy effectiveness of the measure, joint transportation systems will reduce transport needs (one means of transport instead of many). Furthermore, the establishment of groups may foster joint actions, e.g. construction of shared liquid manure tanks.

Positive effects should also be expected if the groups are involved in organic production, produce high quality regional products or implement common agri-environmental packages.

However, owing to the limited number of beneficiaries, the abovementioned measures will be of local importance mostly.

MEASURE: USE OF ADVISORY SERVICES BY FARMERS AND FOREST HOLDERS

Assessment criteria, for which dependencies between the proposed measure and the criterion have been identified:

No.	Criterion	Influence	Type of impact
1	Influence on implementation of environmental protection, proenvironmental changes in the structure of economy, proenvironmental transformations in applied technologies, and application of environmental management.	positive with negative elements	all the identified impacts will be of direct and long-term nature.
2	Impact on development of sustainable and pro-environmental forms in the power industry	positive	
3	Impact on sustainable rural development with account taken of its friendly forms, as well as extension of other business activity, including the pro-environmental, in the context of improving effectiveness of resource use	positive with negative elements	
4	Impact on sustainable management of natural resources – biodiversity, landscape	mixed	
5	Impact on sustainable forestry management.	positive with negative elements	
6	Impact on sustainable management of water resources	positive with negative elements	
7	Impact on land development	positive with negative elements	
8	Impact on the protection and optimum use of the existing cultural values	mixed	

9	Impact on the environmental awareness among the society	positive with negative elements	
10	Impact on the promotion and assurance of environmental health	positive with negative elements	
11	Impact on the changes in the air condition	positive with negative elements	
12	Impact on the changes in the level of noise and radiation	positive with negative elements	
13	Impact on the changes in the condition of waters and water-dependant ecosystems	positive with negative elements	
14	Impact on the changes in the condition of land surface, soil, fauna and flora and landscape	positive with negative elements	

Comments:

The influence of this measure on the environment and on sustainable development will be very similar to the one of trainings: all the impacts will be of indirect (as they will arise from the practical implementation of knowledge acquired by farmers and forest holders) and rather long-term than instant nature (due to the time span between the date of obtaining legal advice and any action taken by a farmer; what is more, such impacts may only occur after some time).

As regards the impacts, the following two aspects should be pointed out. Firstly, importance of this measure for sustainable development will be a function of the amount of proenvironmental advisory services rendered by advisers and entered into the register of works reimbursed under this measure Secondly, effectiveness of the measure will depend on the level of technical advice, and thus on the knowledge of the issues of environmental protection in agricultural production among the advisers. At present, numerous advisers have insufficient knowledge of environmental protection and sustainable development in the broad sense; therefore it is important that their competences in the field be continually improved.

Since around 1/3 of all the Polish farmers are planned to be covered by the measure, its results will affect the whole country.

Recommendations concerning the "soft" Axis 1 measures:

1. As regards the measure description: *Vocational training for persons employed in agriculture and forestry*, under the item *Beneficiary* (p.44), after the wording *legal persons*... and after the comma, it is suggested to add: *associations and NGOs* and retain to the rest of the sentence unchanged.

2. It is recommended that any negative impacts which may result from implementation of the measures, production methods, practices, new products etc. covered by the trainings be identified at the time when recommendations regarding the scope of trainings are drawn up and their programmes developed. The presentation of those hazards and indication of possible preventive measures may be successful in preventing the potential negative impacts occurring in the natural environment due to the trainings.
3. As regards the measure description: *Early retirement,* under the item *Accessibility criteria*, indent 1a (p.49), at the end of first paragraph, after the wording *transferor's descendants*, to replace the full stop with a comma and add *and to holdings located in the areas covered by forms of nature conservation such as Natura 2000 areas or National Parks.*
4. As regards the measure description: *Participation of farmers in food quality schemes,* it is recommended to introduce information on the estimated number of beneficiaries to be granted aid under the measure.
5. As regards the measure: *Information and Promotion Activities*, the number of 1350 beneficiaries seems arguable since, pursuant to the present RDP provisions, these may only include producer groups involved in the production eligible for aid under the measure, and such groups may not be as numerous. Therefore, it is suggested that under the item Beneficiary, page 64, after the first paragraph, be added the following: NGOs whose statutory aims include the objective to promote and popularise products eligible for aid may also become the Beneficiaries.
6. As regards the measure description: *Use of advisory services ...,* under the item *Form and amount of aid*, it is suggested to replace the amount *EUR 1,500* with *PLN 6,000.*
7. There is a need to analyse all the monitoring and implementation indicators as regards all the assessed measures. For part of the suggested indicators seems excessively detailed, and others do not provide information necessary to assess the effectiveness of support, and some may be difficult or very expensive to calculate (e.g. gender of persons participating in the trainings, turnover of producer groups covered by the support, age of the persons granted aid with regard to the advisory services reimbursement). Furthermore, none of the assessed measures involves indicators regarding environmental protection.

II.2.1.4. GENERAL ASSESSMENT OF THE „HARD" MEASURES

MEASURE: YOUNG FARMERS

This measure may result in an intensification of agriculture and production specialisation, which may have negative environmental impact. The negative effects may however be relieved by improved knowledge concerning the issues of environmental protection among persons who acquire the holdings and by implementation of modern proenvironmental methods of farming.

MEASURE: MODERNISATION OF AGRICULTURAL HOLDINGS

The positive effect of the measure will stem from the reduction of environmental hazards produced by agricultural holdings as a result of improved water or waste management or modernization of the machine fleet and construction of technical facilities (such as manure pads or liquid manure tanks). Nevertheless, the agricultural holdings' modernization will be associated with the production intensification, which may disturb the balance of the economic and environmental development aspect and as a result adversely affect the environment. The land consolidation process (if any) associated with the sale of land by neighbours; liquidation of baulks (adverse impact on biodiversity) may also bring about a negative effect. Extension of agricultural land will also lead to an intensified mechanisation of farm work, including the use of heavy equipment, and will adversely affect soil properties. Modernisation may also affect the biodiversity through the reduction of the number of species and varieties of cultivated plants.

MEASURE: INCREASING THE ADDED VALUE

The positive effect of the measure is mainly associated with the need for adjustment of the establishments which apply for support to the environmental standards; the adjustment consisting mainly in reduction of pollution emissions. The negative effects may arise mainly from excessive concentration of processing plants in a specific region or from their location in the most sensitive regions, application of technologies with an increased consumption of water or other resources.

MEASURE: IMPROVEMENT AND DEVELOPMENT OF INFRASTRUCTURE RELATED TO THE DEVELOPMENT AND ADJUSTMENT OF AGRICULTURE AND FORESTRY

In general, these measures may lead to negative changes as regards biodiversity, water resources and water-related ecosystems and landscape. Land consolidation will cause liquidation of baulks and, in many cases, of mid-field forest patches, which will result in the transformation of landscape and in biodiversity reduction[30]. Land consolidation transforms the “patchwork” of various crops and affects e.g. populations of certain bird and insect species (some FBI species are connected with the crop mosaic itself rather than with particular ecosystems).

Land consolidation may result in lowering the density of housing, which will lead to rural landscape transformation. When these works are carried out simultaneously with land improvement, there is a risk that land which, due to its features, has so far only constituted a natural environment component will be used for agricultural production or by non-agricultural national economy sectors.

[30] Baulk is defined as a line which separates agricultural parcels; therefore land consolidation leads to liquidation of baulks, even if the consolidation project respects the preservation of riparian buffer zones, of thickets, anti-erosion forest patches and windbreaks. Baulks, which are so important to the environment, are not only the vegetation found in forest and shrub patches constituting natural buffer zones along watercourses, gorges, ravines, high baulks”, but also the low green uncultivated baulks separating lands of various owners.

Technical infrastructure for the purposes of proper management of agricultural water resources and of the improvement of the air and water conditions in the soil and reduction of water erosion is an important factor enabling the intensification of agricultural production. Such activity however poses major threat to the natural environment, and in particular to the hydrogenic habitats. Therefore, implementation of these measures requires particular caution and prior analysis of needs and effects of water conditions improvement.

Potential positive impacts of the measure will be limited in scope and will mainly affect the economic environment through the improvement of agricultural production effectiveness.

II.2.1.5. DETAILED ASSESSMENT OF THE "HARD" MEASURES

MEASURE: YOUNG FARMERS

Assessment criteria for which dependencies between the proposed measure and the criterion have been identified:

No.	Criterion	Impact	Type of impact
1	Impact on sustainable rural development with account taken of its friendly forms, as well as extension of other business activity, including the pro-environmental, in the context of improving effectiveness of resource use	positive; negative impacts possible	indirect long-term
2	Impact on the environmental awareness among the society	positive; negative impacts possible	indirect long-term

Comments:

This measure may lead to intensification and specialization of production, which may adversely affect the environmental aspect of development, e.g. increase the fertilisation. Increased propensity to invest may also bring about threats to the environment. These negative effects may however be relieved by improved knowledge of the natural environment protection. The measure may also result in the implementation of farming methods which are more environmentally friendly. Young farmers are more prone to search for alternative sources of income (e.g. by applying the methods of organic farming). An assumption should also be made that they constitute a group of farmers whose interest in the services is much greater, which may foster the sector's development.

The measure covers only 35 thousand of farmers though; therefore the potential environmental threats and benefits resulting from its implementation will be considerably limited. However, the identified impacts will occur only in the case of actual transfer of the holding, and not in the case when only the ownership rights are transferred.

Obtaining aid under the measure should involve an obligation to use mainly environmentally friendly technologies and the knowledge of at least basic environmental protection issues. It will favour the transfer of knowledge to the holdings which do not use the instrument through innovation diffusion if there are no such obligations, the environmental awareness may be adversely affected, as young farmers might choose production models other than the pro-environmental ones.

MEASURE: MODERNISATION OF AGRICULTURAL HOLDINGS

Assessment criteria for which dependencies between the proposed measure and the criterion have been identified:

No.	Criterion	Impact	Type of impact
1	Influence on implementation of environmental protection, proenvironmental changes in the structure of economy, proenvironmental transformations in applied technologies, and application of environmental management	potentially positive	direct short and long-term, indirect long-term
2	Impact on sustainable rural development with account taken of its friendly forms, as well as extension of other business activity, including the pro-environmental, in the context of improving effectiveness of resource use	positive; negative impacts possible	indirect long-term
3	Impact on sustainable management of natural resources – biodiversity, landscape	positive; negative impacts possible	direct short- and long-term, indirect long-term
4	Impact on sustainable management of water resources	positive; negative impacts possible	
5	Impact on the environmental awareness among the society	positive	
6	Impact on the changes in the condition of waters and water-dependant ecosystems	mostly positive, negative impacts possible	
7	Impact on the changes in the condition of land surface, soil, fauna and flora and landscape	positive; negative impacts possible	

Comments:

Modernisation of machine fleet and construction of technical facilities (such as manure pads or liquid manure tanks) clearly contribute to the attainment of environmental protection objectives. Positive influence on the condition of ecosystems will mainly result from the reduction of the seeping of pollutants (manure, liquid manure) into the surface and groundwater. Moreover, investments regarding the storage of manure and liquid manure contribute to the optimisation of the periods when these may be used, which in turn contributes to improved use of the fertilisers by plants, increased share of organic fertilisers in the nutrient balance, reduced mineral fertilisation and eventually to reduced release of

nutrients, in particular nitrogen compounds, into the ground water. Potential danger occurs if the water supply and sewage systems, as well as home wastewater treatment plants (if there are any), are not used properly. Nevertheless, the agricultural holdings' modernization will be associated with production intensification, which may disturb the balance of the economic and environmental development aspect. Modernization of machine fleet and extension of technical facilities will influence the development of maintenance services. Furthermore, development of the irrigation systems may, although not necessarily, disturb the local water conditions.

Improved hygiene in agricultural holdings enables significant improvement of the landscape values of a given area as a result of e.g. increased rural aesthetics standards. Modernisation of buildings may result in biodiversity reduction, as it may lead to the reduction of populations of animal and plant species (e.g. swallows).

Land concentration (if any) may also have negative effects. Increase in the area of agricultural parcels in a holding (sale of parcels to neighbours) results in liquidation of baulks, which constitute natural shelter for numerous animal species. Extension of agricultural land will also lead to an intensified mechanisation of farm work, including the use of heavy equipment, which will adversely affect soil properties. Modernisation may also influence the biodiversity through reduction of the number of species and varieties of cultivated plants (but it may also have positive impact owing to the support for development of "niche" trends in agricultural production, e.g. cultivation of traditional fruit, ornamental or other varieties or breeding of domestic and endangered breeds.

Positive impact on environmental awareness may be expected. It will result from the necessity to familiarise with the hygiene, environmental protection and animal welfare standards, which have to be met in order to enable the participation in the programme.

Environmental impact of this measure, both the positive and the negative, will be of a limited scope though, as it covers only 50 thousand of farmers, which constitutes a minor share of agricultural holdings of the whole country.

MEASURE: INCREASING THE ADDED VALUE

Evaluation criteria for which dependencies between the proposed measure and the criterion have been identified:

No	Criterion	Impact	Type of impact
1	Influence on implementation of environment protection, pro-environmental changes in the structure of economy, pro-environmental transformations in applied technologies, and application of environmental management.	positive; possible slight negative impact	direct, short- and long-term, indirect, long-term
2	Impact on development of sustainable and pro-environmental forms in the power industry	positive	
3	Impact on sustainable development of rural areas with account taken of its friendly forms, as well as extension of other business activity in the context of improving effectiveness of resource use	positive; possible slight negative impact	
4	Impact on the changes in the air condition	positive; possible slight negative impact	

No	Criterion	Impact	Type of impact
5	Impact on the changes in the condition of waters and water-dependant ecosystems	positive; possible slight negative impact	

Comments:

The positive effect of the measure is mainly associated with the need for adjustment of the establishments, which apply for support, to the environmental standards, and the adjustment mainly consists in reduction of polluting emissions. Implementation of this measure provides opportunity of investment in bio-refineries and other establishments engaged in processing of energetic raw materials of agricultural origin, which may considerably contribute to an increase in the area of land occupied by crops of such plants and increasing the share taken by renewable energy sources in the Poland's energy balance.

What may be an important factor is the support for processing plants engaged in the production of regional and local products. Production of dairy products combined with traditional, extensive grazing of milk cattle may be a good example. What is created as a result is a specific local product (and related new jobs) as well as conducive conditions to preserve natural and semi-natural permanent grassland. This, in turn, will contribute to preservation of biodiversity and prevent soil degradation to a considerable extent.

Some negative effects may, but not must, arise first of all with the excessive concentration of processing plants in a specific region or with their location in the most sensitive regions.

Development of production of highly processed food means also an increase in the demand for water, which in some places may lead to lower groundwater levels This, in turn, may result in potentially negative results for ecosystems present in these areas and for agricultural production.

Another threat may be increased importance of energy crops because of potential impact on landscape simplification (introduction of monoculture plantation) or the possibility of using GMOs to maximise the quantity of energy crops yield.

MEASURE: IMPROVEMENT AND DEVELOPMENT OF INFRASTRUCTURE RELATED TO THE DEVELOPMENT AND ADJUSTMENT OF AGRICULTURE AND FORESTRY

Evaluation criteria for which dependencies between the proposed measure and the criterion have been identified:

No	Criterion	Impact	Type of impact
1	Impact on sustainable development of rural areas with account taken of its friendly forms, as well as extension of other business activity in the context of improving effectiveness of resource use	positive and/or negative	both direct and immediate (e.g. as a result of land consolidation and/or land
2	Impact on sustainable management of natural resources – biodiversity, landscape	negative	

No	Criterion	Impact	Type of impact
3	Impact on sustainable management of water resources	positive and/or negative	reclamation) as well as indirect and long-term
4	Impact on physical planning	positive and/or negative	
5	Impact on the changes in the condition of waters and water-dependant ecosystems	positive and/or negative	
6	Impact on the changes in the condition of land surface, soil, fauna and flora and landscape	positive and/or negative	

Comments:

Having regard to the agricultural system in Poland and negligence in the area of land reclamation, both measures for land consolidation and measures for land reclamation investments may contribute to a considerable improvement in the effectiveness of agricultural production. To a certain extent, they will also contribute to improvement of water and air relations in soil and to prevent erosion.

Positive effects of impact of land reclamation may result mainly from prevention of valuable meadows from becoming marshland. Moreover, similar effects may be achieved by creation of retention tanks with renaturation of marshland. Rand reclamation has also a positive influence on the quality and condition of soil used for agricultural purposes.

However, in general, these measures may lead to changes for worse in biodiversity, water resources and ecosystems associated with water and landscape. Land consolidation will cause baulk liquidation and, in many cases, mid-field afforestation, and will lead to changes in landscape and reduction of biodiversity. Land consolidation may also cause dispersion of development, which will result in urbanisation or the rural landscape, and in the long run, will contribute to an increase in the costs of water supply and operation of wastewater and solid waste disposal systems.

When land consolidation is carried out at same time with land reclamation there is a risk that land, which has so far had only natural functions, will consequently be used for agricultural production or by non-agricultural economy sectors.

It is essential to impose limitations on land reclamation carried out so that it does not lead to disappearance of small ponds in fields, which are both landscape elements and specific ecosystems. Possible environmental losses should be compensated by construction of small retention tanks (reconstruction of small ponds, renaturation of land not used for agricultural purposes, regulation of water outlets from the existing land reclamation systems).

It is not allowed to carry out land reclamation in the area of marshland.

Recommendations concerning "hard" measures of Axis 1:

1. It is recommended to introduce the following new criterion in the accessibility criteria of the measure *Modernisation of agricultural holdings* (p. 51) after Item 2: "Investment is compliant with environment protection requirements", and to add in the present Criterion 3 (after the change – Criterion 4) after "EU legislation" the following phrase: "including legislation concerning environment protection".
2. It is recommended to insert in the measure *Increasing added value* the following sentence (as the one but last sentence): "Support will be given only to projects which

will not cause any considerable impact on the environment".

3. It is recommended to expand the description of Criterion 2 for Scheme I in the Accessibility criteria of the measure *Improvement and development of infrastructure related to the development and adjustment of agriculture and forestry*, inserting the phrase "including the impact on Natura 2000 areas" after "environmental impact assessment"; and as regards Scheme II expand Criterion 2 by adding after "Water Law" the following phrase "and provided that an environmental impact assessment, assessing inter alia the impact on Natura 2000, areas, has been carried out in compliance with the Environment Protection Law Act of 27 April 2001 (Dz. U No 62, item 627, as amended). -

II.2.2. AXIS 2: IMPROVING THE ENVIRONMENT AND COUNTRYSIDE

II.2.2.1. GENERAL EVALUATION OF THE AXIS

As far as the level of funds earmarked for implementation of RDP measures is concerned, Axis 2 is one of the two most important ones – about 35% of the Programme's funds were allocated to this axis[31]. The objectives of support under the Axis are however so crucial (sustainable agricultural and forest land use) the needs for support in this respect in Poland are so huge, that it would be fully justified to assign this Axis a higher status and allocate more funds to the implementation of its basic objectives.

The General objective of rural support for rural areas to be offered under Axis 2 is to contribute to the improvement of the environment and to promote sustainable rural development. It is planned to implement a great number of various measures having diverse direct objectives. In their environmental current, Axis 2 objectives will be in keeping with striving after solution of the two most important environmental problems of Polish rural areas, namely:

1) protection of natural values (including biodiversity) and landscape and soil structure;
2) protection of groundwater resources and enhancing the quality of surface waters.

Division of funds into individual Axis 2 measures indicates that over 42% of these funds is earmarked for support of less favoured areas (LFA), and only 17% for agri-environmental payments and 10% for Natura 2000 payments and RDP implementation. Unfortunately about 20% of funds allocated to this axis will be earmarked for obligations following from RDP 2004-2006 related to this Axis' measures, which significantly diminishes funds available for implementation of environmental objectives under RDP 2007-2013.

[31] In NSP it accounts for about 37%. In the case of Axis 2, the change is significant as compared to NSP (even more significant in the case of Axis 4 – in NSP it was 4.7%) – this change is hard to understand and it evaluated as negative by the authors of the assessment. Pursuant to Regulation 1698/2005, the measures of this Axis could have been allocated from 25% to 80% of RDP funds.

Axis 2 measures targeted at environmental objectives proposed under the present RDP draft are limited when compared with detailed objectives of this Axis provided for in NSP and with the possibilities which were provided in this respect by the provisions of Council Regulation 1698/2005. Thus, some opportunities designed in NSP and offered by the European Union through the above mentioned Regulation will unfortunately be lost. What should be considered a particularly significant untapped opportunity for rural areas' environment is the resignation from implementation in Poland of several new measures offered to the Member States by the European Union in Regulation 1698/2005, as part of support under Axis 2[32], and whose premises were prepared in the Ministry of Environment. This refers mainly to the following three measures: *Payments for forest areas covered by Natura 2000*, *Forest-environment payments* and *Non-productive investments* (measure supporting pro-environmental measures). Moreover, abandoning this type of support is a clear communication for forest owners that forests are limited to their production function, obtaining and selling timber. The same is valid for non-existence of a wider range of undertakings (packages) under agri-environmental programmes (e.g. non-existence of a very important package concerning natural land). At present it is not possible to provide for measures related to the implementation of the Water Framework Directive in detail. Further specification may be carried out after water management plans of the basin are prepared. On the other hand, it is possible and advisable to take into consideration measures for improvement of the water balance structure and protection of ecosystem from dependent waters. These measures may be implemented under "non-productive investments".

The impact of the implementation of measures planned under this Axis on the environmental and on the implementation of sustainable development will be generally favourable, and in some cases even very favourable. This concerns mainly agri-environmental programmes, payments for Natura 2000 areas and for RDP implementation (in the case of the latter - if they are actually implemented – for the time being, there is no description of this measure). It is assumed that all Axis 2 measures are aimed to contribute to improvement of the environment. However, attention should be drawn to the fact that in some cases there is a threat that incorrect activities will be undertaken and that they may have negative outcomes. This phenomenon should be prevented by creating (at the level of Programme implementation) adequate criteria for selection of applications submitted by beneficiaries.

Some negative environmental consequences may be expected in the case of implementation of two measures of Axis 2 - as a possible effect of payments for mountain areas and LFA, and above all in the case of afforestation. In the case of the first one of these measures, threats will concern mainly waters (possible increase in contamination level), while in the case of the second – biodiversity (possible considerable losses). Therefore LFA payments should be related to preservation of the present condition of agricultural use (with no considerable intensification of production).

II.2.2.2. GENERAL EVALUATION OF INDIVIDUAL MEASURES

[32]Environmental outcomes of failure to use these measures are described in the chapter concerning forecasted changes in the condition of the environment.

MEASURE: SUPPORT OF MANAGEMENT IN MOUNTAIN AREAS AND IN LESS-FAVOURED AREAS (LFA)

Measure 1 will be continuation of the like measure implemented under RDP 2004-2006. It is aimed to: to ensure continuity of agricultural use of land, to maintain the landscape values of rural areas, and to promote environment-friendly agriculture. The measure, which is allocated most funds in RDP (15% of the programme's funds and over 40% of Axis 2 funds) has the nature of financial support for agricultural holdings located in areas where the agricultural production is impeded due to difficult natural conditions or unfavourable population structure, i.e. in mountain or hill areas, or other less favoured areas.

The draft RDP does not provide any information about possible change in the area covered by LFA as compared to the area currently used for effecting payments under RDP 2004-2006. However, figures show that this area has been corrected but without explanation of the reasons - the draft RDP states that these areas will cover 56.5% of agricultural land in Poland (in RDP 2004-2006 they accounted for 53.4%).

MEASURE: PAYMENTS FOR NATURA 2000 AREAS AND AREAS ASSOCIATED WITH THE IMPLEMENTATION OF WATER FRAMEWORK DIRECTIVE

Measure 2 is new and very important. It is aimed mainly to maintain due condition of natural habitats and sanctuaries of plants, animals, including birds, specified in the Ordinance of the Minister of the Environment of 16 May 2005 (Dz.U. No 94, item 795) in Natura 2000 areas, as well as to achieve environmental objectives set in accordance with the Water Framework Directive. Measure 2 will be implemented under two schemes – Scheme I: Payments for Natura 2000 areas, and Scheme II: Payments relating to the implementation of Water Framework Directive, Directive 2000/60/EC (Water environment programme). Scheme I has not been fully prepared yet and it is only signalled, not described, in the draft RDP, so it may not be evaluated in any other way than in terms of its main objective, which is positive by any standards. Non-existence of a detailed description of Scheme II results from different schedule of implementation of the Water Framework Directive. Data necessary to make Scheme II more specific will be available only after the National Water Management Board has prepared courses of development and assumptions of water management plans in basins.

MEASURE: AGRI-ENVIRONMENTAL PROGRAM (AGRI-ENVIRONMENT PAYMENTS)

This measure is to contribute to improvement of natural environment in rural areas and to achievement of not less than five detailed objectives in this respect, namely: restoring the values or maintenance of the status of valuable natural habitats used for agricultural purposes; promotion of sustainable management system; proper use of soils and water protection; landscape structure development; protection of native species of farm animals and native crop varieties. The Measure will be implemented by means of 8 agri-environmental packages (each providing for agri-environmental variants) targeted at the above mentioned detailed objectives. The draft RDP provides for the possibility of extending the measure with an additional package regarding the maintenance of natural land. This package is highly valuable form the environmental point of view and should definitely be added.

MEASURE: AFFORESTATION OF AGRICULTURAL AND NON-AGRICULTURAL LAND

Measure 4 is aimed at increasing the forest cover, which will in turn lead to increased forests participation in global carbon balance, as well as conservation and consolidation of ecological stability of afforested areas through reduction of fragmentation of forest complexes and creation of ecological corridors. Measure 4 will consist of two schemes – Scheme I: Afforestation of agricultural land, and Scheme II: Afforestation of land that is not cultivated for agricultural purposes. Extension of the measure (as compared to RDP 2004-2006) with the possibility of afforestation of non-agricultural land, i.e. targeting support for self-afforestation by natural succession must be considered a positive element of the Programme which increases its positive impact.

MEASURE: RESTORING FORESTRY PRODUCTION POTENTIAL THAT WAS DESTROYED BY DISASTERS AND INTRODUCTION OF PREVENTION ACTIONS

The objectives of Measure 5 include the following: support for forests that were destroyed by biotic and abiotic factors and introduction of mechanisms for preventing natural disasters and of fire protection devices in particular. Measure 5 will consist of two Schemes – Scheme I: Support for the areas hit by the disaster, and Scheme II: Introduction of preventive mechanisms in the areas classified as areas representing the two highest fire hazard categories. The measure is partially new (Scheme II) and the fact of broadening its scope should be considered positive.

II.2.2.3. DETAILED EVALUATION OF INDIVIDUAL MEASURES

MEASURE: SUPPORT OF MANAGEMENT IN MOUNTAIN AREAS AND IN LESS-FAVOURED AREAS (LFA)

Assessment criteria for which dependencies between the proposed measure and the criterion have been identified:

Criterion	Impact	Type of impact
Impact on the implementation of the environmental protection objectives	positive with negative elements	long-term direct and indirect
Impact on sustainable development of rural areas with account taken of its friendly forms	definitely positive	long-term direct and indirect.
Impact on sustainable management of natural resources – biodiversity, landscape	positive with negative elements	long-term direct
Impact on sustainable management of water resources	positive with negative elements	long-term indirect

Impact on space management	definitely positive	long-term direct and indirect
Impact on the protection and optimum use of the existing cultural values	definitely positive	long-term indirect
Impact on the "environmental awareness" of the society	positive	short-term / long-term (?) indirect
Impact on the changes in the condition of land surface, soil, waters and water-dependent ecosystems and the condition of fauna and flora and landscape	positive with negative elements	long-term direct and indirect

Comments:

The impact of the implementation of the measure in question on the environment and the implementation of sustainable development principles will be mostly of benefit, although some negative impacts also have to be taken into account.

The measure is important from the pint of view of the environment, as it maintains agricultural activities in agricultural areas, in which otherwise it would be completely unprofitable, which would result in abandonment of agricultural activities. Preventing the abandonment of traditional forms of space use and of extensive agricultural management is of benefit to biodiversity protection and landscape values, as it prevents intensification of natural succession, i.e. loss of ecosystems of open areas and replacement with forest ecosystems, which in the case of some high nature-value areas is definitely undesired. This allows for preservation of high nature-value agri-ecosystems and favourable space structure, as well as better management of this structure. Support for agricultural activities in LFA may be a certain counterbalance to the pressure of urbanisation and building development in agricultural areas.

Support for agriculture in LFA will also be highly beneficial for preservation of cultural values of these areas, both in material terms – related to building development and traditional management practices, and in non-material terms – related to customs and other forms of local heritage (mainly through decreased migration from these areas).

It doubtful however that no additional requirements will be imposed on farmers who obtain these payments – the draft RDP states that farmers from LFA have to undertake to comply with the minimum requirements, and that "the minimum requirements define obligatory standards, which must be observed when undertaking agricultural activity, connected in particular with environmental protection." Therefore, it follows that they will receive these additional funds only for the location of their holding – it is a negative change as compared to the present RDP. This will also reduce the environmental effect of this measure. The RDP draft does not explain the reasons for changing this attitude towards support for such holdings.

Maintenance of an extensive agricultural holding in LFA will be beneficial form the environmental point of view, but it must be taken into account that farmers who receive more funds may increase the intensity of their activities, which, combined with non-existence of adequate precautions, may result in increased pressure on the environment – mainly in respect

of contamination with fertilisers and chemical plant protection products (earlier in these areas, such substances were often not used at all or used in small quantities).

Popularisation of knowledge that not only social and economic aspects justify additional payments for LFA, and that also environmental objectives are achieved in this way, will have (provided that implemented, since RDP does not guarantee this) major importance for shaping the ecological awareness of inhabitants of these areas and other citizens who have to do with the issue of rural development. However, additional minimum environmental requirements for these payments will result in higher effect in respect of this awareness.

MEASURE: PAYMENTS FOR NATURA 2000 AREAS AND THOSE ASSOCIATED WITH IMPLEMENTATION OF WATER FRAMEWORK DIRECTIVE

Assessment criteria on account of which relationships between the proposed measure and criterion have been identified[33]:

Criterion	Impact	Type o impact
Impact on implementation of environmental protection objectives	definitely positive	long-term direct
Impact on pro-environmental modernisation of the technologies applied	definitely positive	long-term indirect
Impact on sustainable rural development account taken of its friendly forms	definitely positive	long-term direct
Impact on expansion of other business activities, also pro-environmental, in the context of improved resource use effectiveness	definitely positive	both short-term and long-term indirect
Impact on sustainable management of natural resources – biodiversity, landscape	definitely positive	long-term direct
Impact on sustainable management of water resources	positive	long-term Indirect*
Impact on space management,	definitely positive	long-term direct
Impact on the "environmental awareness" of the society	definitely positive	long-term indirect
Impact on the changes in condition of land surface, soil, waters and water dependent ecosystems and on the condition of fauna and flora and landscape	definitely positive	long-term direct and indirect.

* - as RDP does not contain description of the planned measures intended to support implementation of the FWD objectives, the full assessment based on this criterion has not been possible.

Comments:

The measure is by all means desired and expected. It is forecast that its impact on the environment and on the implementation of sustainable development principles will be definitely positive, especially in respect of preservation of the natural values of Natura 2000

[33] The assessment in the table below refers only to Scheme 1 – payments for Natura 200 areas; the project under assessment no data was provided which would allow for the assessment of Scheme II – payments related to RDP implementation.

areas (Scheme I), and on waters and their management (Scheme II, if it is actually implemented).

However, we must be explicit on the fact that the expected positive effects of scheme I for Natura 200 areas biodiversity will not be sufficient to ensure achievement of the protection objectives of Natura 200 network in farmland areas of Poland.

For efficient application of the mechanism provided for under scheme I of this measure it is necessary to complete establishment of Natura 2000 network in Poland (to the extent corresponding to the identified country natural values which are eligible for protection under this network), and to prepare all necessary instruments needed for the network operation and protection (particularly, establishment and approval of the protection plans, appointment of services responsible for these areas, training of agri-environmental advisors focused on the protection aims and identification of the basic values of such areas and on the cooperation with naturalists who will elaborate the required habitat and ornithological documentation sets. Obviously, it will be also necessary to enforce the ban on spoiling the condition of habitats and species protected under this network (this is to be compensated by the scheme I packages) – the requirements concerning each individual Natura 2000 area must be already prepared and disseminated and the authorities responsible for enforcement have to be already in place.

The scale of possible positive impact of the Scheme I implementation may be diminished by a reduced funding scale – only 20% more resources for the implementation of identical projects under the agri-environmental programmes plus the costs return for the nature-related documentation. Therefore, though relatively high, the payments will not be competitive as compared with other interventions. On the other hand, the announcement, that it is possible to extend the list of packages available under this scheme if the elaborated protection plans require so, has positive overtones.

In Poland, the measure addressed to the Natura 2000 areas was planned exclusively for the agricultural areas, whereas no analogous measure was planned for non-state forests in Natura 200 areas, thereby there will be no counterbalance for the changes caused in the forests by other measures .

Apart from the above mentioned positive effects of scheme I measures implementation, they will have a visible positive impact on the enhancement of public environmental awareness, in particular for the communities from the Natura 2000 areas, but not only for them. The support will evidently gain wider approval of the Natura 2000 network and will help improve its knowledge and form proecological attitudes of the public.

However RDP is missing information on the way to solve the problem of payments for Natura 2000 areas after the cross-compliance scheme becomes effective. It is important in so far as the certain agricultural undertakings in the areas included in NATURA network will be obligatory, but in accordance with cross-compliance rules the farmers will not be additionally paid for them.

MEASURE: AGRI-ENVIRONMENTAL PROGRAM (AGRI-ENVIRONMENT PAYMENTS).

Assessment criteria on account of which relationships between the proposed measure and criterion have been identified:

Criterion	Impact	Type of impact
Impact on implementation of environmental protection objectives	definitely positive	long-term direct and indirect
Impact on the pro-environmental changes in economy structure	definitely positive	Long-term direct
Impact on pro-environmental modernisation of the technologies applied	definitely positive	long-term direct
Impact on sustainable rural development account taken of its friendly forms	definitely positive	long-term direct
Impact on expansion of other business activities, also pro-environmental, in the context of improved resource use effectiveness	definitely positive	long-term direct and indirect
Impact on sustainable management of natural resources – biodiversity, landscape	definitely positive	long-term direct
Impact on sustainable management of water resources	definitely positive	long-term direct and indirect
Impact on space management,	definitely positive	long-term indirect
Impact on the protection and optimum use of the existing cultural values	definitely positive	long-term indirect
Impact on the "environmental awareness" of the society	definitely positive	long-term direct and indirect
The impact on the promotion and assurance of environmental health.	definitely positive	long-term indirect
Impact on the changes in condition of land surface, soil, waters and water dependent ecosystems and on the condition of fauna and flora and landscape	definitely positive	long-term direct and indirect

Comments:

Agri-environmental programmes are ranked among the most important measures under RDP. It should definitely contribute to the implementation of environmental objectives (particularly those concerning biodiversity protection, including genetic resources of the species of breeding animals and varieties of crop plants as well as protection of soil and water). It will definitely have direct positive impact on the environment (first of all on biodiversity) and on the maintenance of landscape values and an indirect impact on the implementation of the sustainable development principles. The implementation of all these objectives will definitely contribute to the enhancement of environmental awareness of the rural population and all other citizens dealing with the RDP problems. However, the positive impact of agri-environmental programmes will not be sufficient to achieve the assumed objectives of biodiversity protection, including the areas of Natura 2000[34] (among other things it will be not sufficient to achieve the 2010 objective of biodiversity protection for

[34] Although agri-environmental programmes will contribute to the protection of biodiversity in the area of their implementation, they will not have significant impact on the degradation of biodiversity outside of these areas.

species of breeding animals and varieties of crop plants); the planned programmes will hold back agri-biodiversity losses and contribute to the achievement of proper protection of all habitats and species in Natura 2000 farmland areas only to a certain extent. Therefore, they cannot be perceived as a sole instrument in this objective.

Support for organic farming development is an extremely important element of agr-environmental programmes – an increased production of organic farms not only alleviates pressure on the natural environment (i.e. positive impact on soils and waters in particular), but also provides a wider selection of organic products on the market (very important form the point of view of human health). The scale of basic effects will however depend on the number of farmers who apply organic production methods on their farms.

Support for sustainable farming should also contribute, though to a lesser extent, to a reduced pressure on the environment because of restrictive control of fertiliser and plant protection product use. The only hazard associated with this aspect of farming is that for a number of farms even controlled use of fertilisers and plant protection chemicals may be higher then before the farms converted to sustainable farming, and, therefore the relevant environmental pressure may increase.

As in the case of LFA support, the measure description is lacking an explicit information whether the farmers, who obtain agr-environmental payments, will have to meet additional requirements in respect of the environmental protection or not. Neither is there information whether introduction of *cross compliance* will not lead to a reduction of possible agri-environmental payments package after 2009 [35].

Agri-environmental measures may also provide a basis for local development associated with tourism and local and traditional products.

The positive outcome of agri-environmental programmes would have been much better if the range of agri-environmental packages to be implement had been extended not only with "natural land" package already announced if draft RDP but also with other packages which would allow to protect both biodiversity, agricultural landscape (such as tree strips) and water ecosystems (waterholes, fish ponds and open waters). i.e. with water environment packages. Non-productive projects, such as construction of facilities to withhold water originating from the land drainage systems to increase groundwater level, would have considerable effects on nature.

MEASURE: AFFORESTATION OF AGRICULTURAL AND NON-AGRICULTURAL LAND

Assessment criteria on account of which relationships between the proposed measure and criterion have been identified:

Criterion	Impact	Type of impact

[35] Cross-compliance will make many requirements mandatory, which are not so at the moment. Therefore for the achievement of these requirements, farmers may receive agri-environmental payments.

Impact on implementation of environmental protection objectives	positive possibility of adverse impact (afforestation of wrong areas)	long-term direct
Impact on the pro-environmental changes in economy structure	positive	long-term indirect
Impact on sustainable rural development account taken of its friendly forms	definitely positive	long-term indirect
Impact on sustainable management of natural resources – biodiversity, landscape	mixed	long-term direct and indirect
Impact on sustainable forestry management.	positive with negative elements	long-term direct and indirect
Impact on sustainable management of water resources	positive with negative elements	long-term indirect
Impact on space management,	mixed	long-term direct
Impact on the "environmental awareness" of the society	positive with negative elements	long-term indirect
The impact on the promotion and assurance of environmental health.	definitely positive	long-term indirect
Impact on the changes of atmospheric air quality	definitely positive	long-term direct and indirect
Impact on the changes in condition of land surface, soil, waters and water dependent ecosystems and on the condition of fauna and flora and landscape	mixed	long-term direct and indirect

Comments:

Potential hazards resulting form this measure are associated with the fact, that possibility of afforestation was not restricted to these areas only which it is actually desired from the point of view of landscape structure optimization (groundwater infiltration areas, in which underground reservoirs are supplied, wild-life corridors, areas poor in forests). The draft RDP (measure justification) suggests that all areas with poor soils which have recently been or still are used for farming purposes are potential sites for afforestation – this is not advantageous. Not all areas may by afforested. Afforestation of certain areas may threaten biodiversity, particularly those with high natural values associated with open area ecosystems (especially in the areas counted among the Natura 200 network). Experience gathered over the recent few years shows a potential high risk in this respect. Certain habitats with extreme ecological conditions (very humid, marshes or very dry, particularly stenothermic) should be excluded form afforestation programme. Regional limitations should also be applied – afforestation should not be carried out at any cost in the mountains and on the uplands where biodiversity in non-forested areas is impressing (therefore, mountain pastures and clearings with very high natural and landscape values, water-logged meadows and mosslands, field peatbogs, xerothermic grasslands and many other most valuable open ecosystems. Wrong afforestation system of large slopes may reinforce erosion that is why natural succession should be supported in such places.

Therefore, the afforestation proposals have to be assessed for compliance with the guidelines of National Programme for the Augmentation of Forest Cover and with the Natura 2000 network requirements, from nature point of view (including the varieties of trees used

for afforestation). Under this measure a systemic solution should be provided in RDP to prevent afforestation of valuable habitats. Also afforestation intended to provide or replenish wild-life corridors must be carried out in accordance with professional assessments and guidelines to avoid new hazards. Also establishment of fast-growing tree plantations has to be carried out under strict environmental supervision – threat may be caused by the varieties introduced outside their native geographical areas and excessive exploitation of environment (impoverishment of ecosystem structure, excessive consumption of underground waters). The results of the afforestation actions carried out so far will be helpful in these assessments to be made by the forest inspectorates after 2 – 3 years of new RDP implementation, including the extent and location of afforested sites both over the period 2004 – 2006 and 2007 – 2009.

Because of land supply (large area of land with poor soils) and because of the impact of other plans/programmes implementation ("background"), afforestation programme will, unfortunately, be of much greater interest in heavily afforested areas than in the regions with forest deficits – hence the ultimate impact of the space structure may be definitely negative.

On the other hand, afforestation impact on abiotic environment elements (water, soil, air, including carbon capturing to counteract climatic changes) will be very favourable. Afforestation of infiltration sites would have particularly positive impact on water quality and amount.

Apart from the a.m. direct environmental effects afforestation will bring about a number of significant indirect results. Afforestation planned under RDP (for private farmland only) may have positive impact on realization of sustainable rural development. Afforestation will be in favour of inhabitants health and public environmental awareness (in respect of forest role). However, the environmental awareness may also be adversely affected if the known and identifiable natural values of agri-biodiversity are destroyed by afforestation.

MEASURE: RECONSTRUCTION OF THE FOREST POTENTIAL DESTROYED BY NATURAL DISASTERS AND INTRODUCTION OF PREVENTIVE MEASURES

Assessment criteria on account of which relationships between the proposed measure and criterion have been identified:

Criterion	Influence	Type of impact
Influence on the attainment of environmental protection aims	definitely positive	long-term direct
Impact on pro-environmental modernisation of the technologies applied	definitely positive	short and long-term direct and indirect
Impact on sustainable management of natural resources – biodiversity, landscape	positive Negative impact possible for afforestation of areas not intended for this purpose	long-term direct and indirect

Impact on sustainable management in forestry	definitely positive	short and long-term direct and indirect
Impact on sustainable management of water resources	definitely positive	long-term indirect
Impact on environmental awareness among the society	definitely positive	long-term indirect
Impact on the promotion/assurance of environmental health	definitely positive	indirect
Impact on the changes in the condition of atmospheric air	definitely positive	long-term direct
Impact on the changes in condition of land surface, soil, waters and water dependent ecosystems and on the condition of fauna and flora and landscape	definitely positive	long-term direct

Comments:

Environmental impact of the support under this measure will be positive or even highly positive. Support for restoration of forestry production in the areas destroyed by natural disasters (including fires) will be of particular importance for environmental objectives implementation, and within a short period of time will allow to recover the desired condition of forest ecosystems and to let them fulfil positive environmental and social functions. It will also have positive impact on environmental awareness of the residents by indicating the significance of forests and functions they fulfil.

Nevertheless, some parts of ruined forests should be restored under close environmental supervision – this first of all relates to the Natura 2000 areas – the restoration tree stands after a disaster must take into account protection objectives for these areas.. Besides, in some cases total elimination of natural biodiversity elements associated with the afflicted areas cannot be allowed.

The fire protection intended to prevent forest destruction is assessed to very positive. However, we must realize that there is a certain risk of adverse impact of some fire preventing projects (such as localization of "fire-fighting" reservoirs on valuable marshes) on valuable ecosystems – therefore, such risks must be taken into account when project localization is selected and eliminated as far as possible.

Recommendations concerning Axis 2 measures:

It is proposed to consider the following amendments of the RDP provisions:

In the general description of measures under the axis

1. it should be explained in what the modification of the implementation range of this measure will consist and what the reasons are behind it as compared with RDP 2004-2006 (the mentioned share of the country area is increased by 3.1%); besides, a LFA map should be enclosed with the Programme;
2. the description of measure 1 under RDP should be more explicit in respect of minimum requirements – whether the same environmental requirements will have to be met by the

LFA farmers and by other farmers throughout the whole programming period (2007 – 2015 – i.e. the rule n+2 being taken into account), or they will be different during first years and will be made equal later on.

In respect of measure 3 description the following amendments are recommended:

3. it is necessary to add additional agr-environmental package (announced as a possibility) concerning the preservation of agriculturally used natural land;
4. it is recommended to widen the range of agri-environmental packages to be implemented with other schemes which would allows to protect both the biodiversity, landscape of farmland (such as tree strips) and water ecosystems (waterholes, fish ponds and other surface waters – i.e. water-environment packages).
5. the description of measure 3 under RDP should be more explicit in respect of minimum requirements – whether the same environmental requirements will have to be met by the LFA farmers and by other farmers throughout the whole programming period (2007 – 2015 – i.e. the rule n+2 being taken into account), or they will be different during first years and will be made equal later on.

In respect of measure 4 description the following amendments are recommended:

6. the justification should clearly provide that the areas proposed for afforestation must be assessed form the environmental point of view whether they may be afforested and whether plantations of fast-growing trees may be established thereon;
7. it is proposed to supplement the eligibility criteria with information that the afforestation plan will be environmentally assessed by the Voivodship Nature Conservation Officer;
8. Pursuant to Article 50 (6) of the Council Regulation (EC) No 1698/2005, "…*areas apt for afforestation for environmental reasons in* …" should be established in Poland (not the whole country) and the map of such areas should be enclosed with RDP. Potential effects of afforestation work could less fearsome.[36]

In respect of measure 5 description the following amendments are recommended:

9. add a recommendation to include in the eligibility criteria that in the case of natural disasters afflicting forest complexes which belong to Natura 2000 network, recovery of damaged tree stands should be preceded by an environmental assessment in order to select the most appropriate method compliant with the environmental protection objectives for these areas.
10. add a recommendation that the future provisions for fire protection projects should take into account the need to assess the localisation of the projects from the point of view of environmental values of the proposed sites.
11. in measure objectives description at the end of paragraph the term "……*including forests*." should be replaced with "…..*including forest complexes.*" or "……..*including*

[36] It refers to the identification of areas by large-landscape-units, with the exception of areas not fit for afforestation (e.g. the valley of Łeba river is not subject to afforestation, meadows in the SPA Warmińskie Bociany). NPAFC selects gminas, where land for afforestation is open for sale, and not where there is a need for afforestation.

forest inspectorates."

II.2.3. AXIS 3 QUALITY OF LIFE IN RURAL AREAS AND DIVERSIFICATION OF RURAL ECONOMY

II.2.3.1. GENERAL EVALUATION OF THE AXIS

The axis and activities proposed therein are multi-directional, so one kind of services may have positive environmental impact, while the effects of others can be negative, mixed or neutral. The positive impact will be predominant, both directly (improving environment quality) and indirectly (improving management of environment and environmental resources or cultural sites); in most cases it will be permanent. Negative processes resulting from the start-up of services that may potentially harm the environment may develop to some insignificant extent, but if they concentrate in the nature-value and tourist areas, they may lead to their local degradation.

Building local economies and creating jobs based on a wide variety of services and non-agricultural activity that makes use of local resources is desirable. Along with improved basic environmental protection infrastructure, this will contribute to the improvement of environment condition and will have positive impact on local population's health and quality of life.

The positive environmental impact will be related to maintaining the level of rural population also because the influence of a rural dweller on environment is less significant than of an urban dweller.

II.2.3.2. GENERAL EVALUATION OF AXIS MEASURES

MEASURE: DIVERSIFICATION TOWARDS NON-AGRICULTURAL ACTIVITIES

The objective of the Measure through promotion of diversified activity of rural population and thus creation of non-agricultural sources of income, reduction of negative effects of unemployment and improvement of quality of life.

The proposed measure should have positive impact on the sustainable development of rural areas both through supporting social and economic development and environmentally-friendly types of non-agricultural activity of the rural population. This will concern the development of the services sector (especially immaterial ones), development of power industry based on renewable resources, supporting sustainable consumption in the case of supporting immaterial consumption or consumption based on local products (which is not however to be carried out directly).

Because of variety of proposed services, which include, above all, craft, handicraft and tourist services, the positive influence on cultural value of rural areas is quite likely. On the other hand, excessive commercialization and mass tourism may constitute a threat.

The development of following services will have positive influence on health: processing of local products (in particular of organic farming) or providing tourist and leisure services. It is also important that granting support is dependent on the fulfilment of legal requirements concerning such activity, i.e. also sanitary requirements.

However, the Measure is also related to potential threats to the environment. The need for an increase of the effectiveness of the use of resources and waste management was not sufficiently tackled; moreover, introduction of new services is not dependent on possession of Environmental Management Certificate (which encourages the use of environment-friendly technologies), which would ensure that the activity does not have significant environmental impact. The Measure will contribute to the development of power industry based on renewable resources (it may also have a negative influence due to the increase of monocultures area or the use of GMO); it does not, however, provide for support of effective use of energy.

An indirect influence on natural resources management may be observed, for example through excessive exploitation of forest undergrowth for commercial purposes or intensification of energetic crops production, which is related to following threats: large areas of monocultures, chemical stimulation of their growth, excessive use of water resources or use of genetically modified cultivars. Moreover, many of proposed kinds of services will result in local air pollutions and excessive noise levels or contribute to water pollution. They may also have an adverse effects in the environment. Protection against those negative processes is provided by the scale of the activity and the number of proposed beneficiaries, in particular in connection with the obligation to comply with legal requirements before obtaining support.

MEASURE BASIC SERVICES FOR THE ECONOMY AND RURAL POPULATION

The objective of this Measure is to improve the quality of life of rural population through the development of technical infrastructure in terms of wastewater and waste management, supply of electricity and/or improved access to Internet. It is expected that these activities will contribute to providing solutions to basic environmental protection problems within rural areas, and will indirectly contribute to the improvement of water and soil quality

The basic positive impact will relate to the introduction of solutions, which will allow the rural population to manage sewage and waste in compliance with the provisions. At present, due to lack of sufficient infrastructure, the access to sewage system and the use of appropriate solutions as regards waste management are limited, which sometimes induces behaviours that do not comply with good environmental practice.

The described Measure will have not only direct effects; also indirect impact will occur, consisting in the improvement of the quality of water, soil cleanliness and prevention of littering the landscape. Also the improvement of energetic network quality or wider access

to Internet may have positive impact on the environment, for example through the limitation of transportation needs. However, the direction of environmental impact in these areas cannot be assessed explicitly (for example, potential negative impacts being the result of environmentally burdening investment in areas made available for economic activity). In such cases, environmental impacts are to be evaluated in relation to individual investments.

Proposed activities will have an important influence on raising the level of public ecological awareness. At the same time, improved access to information resulting from the development of Internet services may also have positive impact on raising the level of ecological awareness. If the Internet services were universally accessible, they could be used to enhance public participation in the planning or investment decision-making process, involving spatial effects relevant for citizens and natural environment.

Implementation of appropriate methods of handling sewage and waste should have positive impact on rural populations' health.

However, the described Measure is also related to a number of potentially unfavourable impacts. They concern the likely increase of water consumption (as a result of access to water supply and sewage systems) and production of greater amounts of waste. Therefore, creating liaison between these works and educational activity as regards rational and effective use of resources, would be desirable.

Unfavourable impact – however on small scale – may be result from new investments: wastewater treatment plants, waste stockpiles, RES systems or construction of new electric power grids.

MEASURE: VILLAGE RENEWAL AND DEVELOPMENT

The Measure is aimed at improving the living conditions in rural areas through meeting their cultural and social needs and promotion of rural areas. Therefore it is predicted that this Measure will have a positive environmental impact due to maintenance, restoration and improvement of the condition of cultural and natural heritage. This will contribute to greater attractiveness of countryside and will be more favourable for non-material consumption as opposed to material one. Better condition of objects of cultural, tourist and similar value will be favourable – indirectly – for the decreased pressure on resources and improvement of environment condition.

Due to EU funding it will be possible to save numerous monuments from devastation and loss. This activity will indirectly contribute to better use of cultural values for educational and tourist purposes. From the other hand, the need for saving non – public historical objects (e.g. traditional homesteads) was not perceived – there is no support for their preservation, which significantly limits the positive results of the Measure. Degradation of the historical buildings in rural areas, which is of decisive importance, as regards cultural values of many villages.

In the case of obtaining assistance available within the Measure for building, restoration, rebuilding, restructuring or introduction of innovative solutions, there is a potential positive impact on saving water and energy resources which also promotes synergy between cultural values and natural environment.

Negative impact may take place in the case of interests of tourism and economy development (including tourist economy) dominating over the needs of environment protection and maintenance of natural resources in good condition – including features relevant for tourism. Undesired effects of such activity may include, i.a. destruction of the spatial order through inappropriate location of tourist infrastructure projects around renewed historic buildings or structures.

In general, due to limited number of projects, which will receive support, the impact of the Measure will be rather of local importance.

MEASURE: CREATION AND DEVELOPMENT OF MICRO-ENTERPRISES.

The Measure is aimed at improving the economic competitiveness of rural areas through supporting the entrepreneurship of local population. Financial assistance will be granted to entities implementing projects related to creating or developing micro-enterprises running a variety of activities in rural areas.

Description of Measure and proposed scope of support is identical, as in first measure of this axis. *Differentiation in the direction of non-agricultural activity*, the only different element are the beneficiaries (under the described measure, only natural persons, legal persons and organisations without legal personality that conduct activity as micro-enterprises will be able to receive support). Therefore the nature of impacts will be identical as in activity: *"Diversification towards non-agricultural activities"*. The impact scale, however, will be less significant, due to expected lower number of beneficiaries – 5,000, as compared to 30,000 in Measure 1.

II.2.3.3. DETAILED EVALUATION OF MEASURES

MEASURE DIVERSIFICATION TOWARDS NON-AGRICULTURAL ACTIVITIES

Evaluation criteria, for which the dependence between proposed Measure and criterion was identified:

Criterion	Influence	Kind of impact
Impact on structural changes in economy and technological changes of proenvironmental nature as well as the use of environmental management	Positive, with negative elements	long-term indirect
Influence on sustainable consumption	positive with negative elements	long-term, indirect
Impact on development of sustainable and environmentally-friendly forms in transport	positive with negative elements	long-term, indirect
Impact on the development of sustainable and environmentally-friendly forms in the power industry	positive with negative elements	possible direct positive impact, negative indirect impact

Impact on sustainable development of rural areas with account taken of its friendly forms, as well as extension of other business activity, including environmentally-friendly one, in the context of improving effectiveness of resource use	positive with negative elements	direct, short- and mid-term
Impact on sustainable management of natural resources – biodiversity, landscape	positive with negative elements	long-term, indirect
Impact on the protection and optimum use of the existing cultural values	positive with negative elements	both direct and indirect.
Impact on environmental awareness among the society	positive with negative elements	indirect, long-term
Impact on the promotion/assurance of environmental health	positive	indirect, short- and mid-term
Impact on the changes in the condition of atmospheric air, level of noise and radiation, waters and water dependant ecosystems condition, and of fauna, flora and landscape	negative, possible positive impacts	direct, immediate, as well as short- and mid-term negative impact; indirect, mid-term positive impact

Comments:

The scale of changes in environment condition which may take place as a result of support under this Measure is difficult to evaluate, because the nature of changes will differ from case to case (i.e. it will depend on kind and range of implemented activity and environmental conditions in the investment site). New enterprises should meet all environmental law requirements (which result from regulations in force); it should be noted, however, that the actual impact on local environment may be much greater than it could be predicted. This is due to the weakness of local community administration, inspection services and environment protection.

It is particularly important for the rural areas to develop non-material services, such as: supplementary education, supporting cultural initiatives for the rural residents, additional medical, recreational services, access to the Internet and possibility to use the sources of information on the Internet, and finally the development of public transport. Another important question is helping to promote local and regional products based on local resources that maintain local tradition, which meet the needs of local population and visitors – tourists. The development of renewable sources of energy is also important. This will contribute to Poland's achieving the 7.5% level of renewable resources contribution to energy production in Poland (according to provisions of the Accession Treaty)[37].

There are many eco-innovative solutions (eg. technologies, work organisation, equipment, materials), which may be used in the activities which are supported in this direction. They will be naturally favourable for the implementation of sustainable development, because they combine economic, social and environmental profits. Extensive provision of information concerning such opportunities becomes thus very important. Such information should be available i.a. on the websites of institutions directly cooperating with the beneficiaries; it should be also published in paper format etc.

[37]Moreover, it is worth remembering that Poland has a vast potential of saving and making effective use of energy. Also rural areas have such potential, which has been undervalued and unexplored up to now.

As regards areas of high natural value and with great density of objects of high cultural importance, it is extremely important to find an appropriate point of equilibrium between making them available for tourists, creating around them a network of services that are favourable for local economy and creation of new jobs, with the preservation of their unique value through the scale, form and period of availability to access.

According to forecasts, structural changes in economy which are expected to take place as a result of implementation of this Measure will not be significant even on local level and their environmental impact is going to be even less significant due to low number of beneficiaries (30,000). This means that in an average rural gmina only 2-3 projects a year will receive support. It can be presumed that with at least 3 times higher intensity of the Measure would result in much greater synergy for local economies and communities.

MEASURE BASIC SERVICES FOR THE RURAL ECONOMY AND POPULATION

Evaluation criteria for which dependence between the proposed measure and a criterion has been identified:

Criterion	Impact	Kind of impact
Impact on harmonisation of environmental protection objectives with measures in other sectors, especially the agricultural and forestry sectors	positive	direct and indirect. Immediate and long-term
Influence on sustainable consumption	positive with negative elements	direct, short- and mid-term
Impact on sustainable development of rural areas with account taken of its friendly forms, as well as extension of other business activity, including environmentally-friendly one, in the context of improving effectiveness of resource use	positive	Direct and indirect, immediate and long-term
Impact on sustainable management of natural resources – water resources	positive	
Impact on sustainable management of natural resources – spatial policy	negative, possible positive impacts	
Influence on the society's environmental awareness	positive	
Influence on promoting/providing environmental health	positive	
Impact on the changes in the condition of atmospheric air, level of noise and radiation, waters and water dependant ecosystems condition, and of fauna, flora and landscape	positive	direct, short- and mid-term

Comments:

The described Measure is very important for Poland's compliance with environmental law requirements; it will also contribute to the achievement of minimum standards of civilisation by rural population. In order to evaluate the results it is important to know the scale of this Measure, number of beneficiaries, will the system or individual solutions be preferred (which is not provided in RDP). In the case of individual projects it important to

point out – which is not provided in the document – would it be possible to support households in a way that will enable them to solve the problem of sewage on their own, which is favourable from the economic and environmental point of view (such solution in rural areas may be many times cheaper than the construction of sewage network). The Measure description also does not provide any information on the means of providing high environmental effects with the lowest investment costs and, subsequently, lower operating and maintenance costs.

In general, the stabilisation of the water and waste-water management in the rural areas is favourable for the improvement of water resources management and the decrease of volume of contaminants released to waters from spot sources. It is to be remembered, however, that connecting the farmsteads to water supply system results in significant increase in water consumption, and thus the volume of wastewater. This interdependence must be taken into account when supporting the construction of water supply systems within the framework of this Measure.

Improvement of environment quality, greater reliability of energy supply, as well as better access to Internet provides an opportunity to extend economic activity to other, non-agricultural areas. It can be presumed that proenvironmental activities, such as agro tourism and ecotourism, will be predominant, but there could be also attempts to locate also businesses, which constitute a burden for environment.

The planned investment in environment protection are not connected with educational activity. This reduces their positive influence on environment and public awareness. Connecting these two elements could contribute to reduction of resources consumption from the one hand and reduction of the stream of contaminants from the other hand, which will contribute to the reduction of expenses for environment protection. This concerns for example energetic services, the development of which does not necessarily mean that the building of new production capacity, but also may include activities towards energy saving (which may result in undisturbed supply).

Due to the fact that the number of potential beneficiaries was not provided it is not possible to assess the potential scope of influence. If the number of beneficiaries is low, the impact will be local in most cases; if the number of people using this form of support is greater – both results and effects will be of much larger scale.

MEASURE RURAL RENEWAL AND DEVELOPMENT

Evaluation criteria for which dependence between the proposed measure and a criterion has been identified:

Criterion	Impact	Kind of impact
Influence on sustainable consumption	positive	indirect, short- and mid-term

Impact on sustainable development of rural areas with account taken of its friendly forms, as well as extension of other business activity, including environmentally-friendly one, in the context of improving effectiveness of resource use	positive	direct and indirect, short- and mid-term
Impact on sustainable management of natural resources – spatial policy	positive; negative impacts possible	indirect, short- and mid-term
Impact on the protection and optimum use of the existing cultural values	positive	direct and indirect, with different time perspective (including immediate impact)
Influence on the society's environmental awareness	positive; negative impacts possible	indirect, short- and mid-term

Comments:

One of important objectives of tourist trips is to learn the spiritual and material culture of the visited region. Bad condition of cultural values restricts or even eliminates their tourist attractiveness. Good condition of cultural and historic monuments has a positive influence on local population, as it points on the importance of other values, not only of material nature. All six directions of the use made of resources within this Measure may have a direct or indirect impact on the improvement and use of existing cultural values.

This Measure is an extremely useful tool for the preservation and protection of cultural values. Its implementation should enhance the importance of public space and tourist value of areas covered by activities. In some cases it may, however, result in potentially negative impacts – for example in suburban areas or very attractive areas. The significant improvement of cultural monuments, greater importance of public space and greater density of tourist services may result in excessive pressure on settlement, which may have the following negative results: occupation of valuable areas, increase in individual car traffic or creation of closed enclaves of rich population. An appropriate spatial planning and effective enforcement of local law provisions may counteract this process.

The Measure has a significant fault. The support is restricted to public objects. Thus the important cultural values, such as traditional homesteads and small objects – e.g. rural techniques monuments, which are in hands of private persons, remain without support.

It is worth stressing that the use of cultural values and tourist objects, as well as other public objects for the promotion of eco-innovative solutions is important from the point of view of education. It refers both to local population and visitors, including tourists

MEASURE: CREATION AND DEVELOPMENT OF MICRO-ENTERPRISES

Evaluation criteria for which dependencies between the proposed measure and the criterion have been identified:

Criterion	Impact	Type of impact
Impact on the environmentally-friendly changes in the structure of economy, environmentally-friendly transformations in applied technologies, and application of environmental management.	positive with negative elements	long-term, indirect
Impact on sustainable consumption	positive with negative elements	long-term, indirect
Impact on development of sustainable and environmentally-friendly forms in transport	positive with negative elements	
Impact on the development of sustainable and environmentally-friendly forms in the power industry	positive with negative elements	possible direct positive impact, negative indirect impact
Impact on sustainable development of rural areas with account taken of its friendly forms, as well as extension of other business activity, including environmentally-friendly one, in the context of improving effectiveness of resource use	positive with negative elements	direct, short- and mid-term
Impact on sustainable management of natural resources – biodiversity, landscape	positive with negative elements	long-term, indirect
Impact on the protection and optimum use of the existing cultural values	positive with negative elements	both direct and indirect
Impact on the "environmental awareness" of the society	positive with negative elements	indirect, long-term

Comments:

Due to the similarity of the impact on the environment of this measure to impact of the first measure under this Axis: *Diversification towards non-agricultural activity*, due to the identical scope of support (varying only in terms of possible beneficiaries), the justification of the assessment is the same as of the first measure.

Recommendations concerning Axis 3 measures:

It is recommended to introduce the following changes and complements to the content of the document:

3) p. 91, the following should be added at the end in line 6 from the bottom (point 7): *with those used for obtaining and effective management of water resources and waste management.*
4) p. 91, the following should be added at the end in line 3 from the bottom (point 10): *and services contributing to effective energy use.*
5) p. 91, the following line should be added before line 2 from the bottom *(11) management of waste from agricultural activity and forestry;* As a result, number *11* in the line below shall be replaced by number *12.*

6) p. 92, the following should be added after line 12 from the top: *The following projects will be supported first:*
   - *at plants holding a certificate of environmental management or a document confirming the initiation of the process of its obtaining. This relates to plants providing material services solely;*
   - *those contributing to the processing of organic farming products as well as local products;*
   - *those relating to public and soft transport as well as those using biofuels;*
   - *those containing eco-innovative solutions.*
7) p. 92, in line 11 from the bottom *30 thousand* should be replaced by *100 thousand.*
8) p. 92, in lines 1, 4 and 7 from the bottom after the words *activity*, the phrase *including environmentally-friendly*[38] should be added.
9) p. 93, in line 10 from the bottom, the following should be added: *with measures contributing to its saving.*
10) p. 93, in line 9 from the bottom, *quantity limits* should be added after the word *system*, and the rest as is.
11) p. 93, in line 8 from the bottom the following should be added: *with measures for its saving;*
12) p. 94, after line 6 from the top, the following should be added: *3. Projects concerning water supply will not be financed, if the beneficiary fails to ensure appropriate sewage management, safe for the environment.*

    The following projects will be supported first:
    - ♦ those with the most beneficial relation between the environmental and the economic effect;
    - ♦ those contributing to creating environmentally-friendly development opportunities;

13) p. 96, after line 10 from the bottom, the following should be added: *The following projects will be supported first:*
    - ♦ those providing for the application of eco-innovative solutions (energy-, resource-, water-, space-saving) during projects implementation;
14) p. 98, in line 3 from the bottom, the following should be added: *intends or.*
15) p. 99, after line 17 from the top, the following should be added: *The following projects will be supported first:*
    - ♦ *at plants holding a certificate of environmental management or a document*

[38] The environmentally-friendly activity covers: agri-, and ecological tourism, organic farming products processing, fuel and energy production from renewable sources, sewage treatment and waste management as well as public and soft transport.

confirming the initiation of the process of its obtaining. This relates to plants providing material services solely;

- *those contributing to the processing of organic farming products as well as local products;*
- *those relating to public and soft transport as well as those using biofuels;*
- *those containing eco-innovative solutions.*

16) p. 99, in line 3 from the top, a replacement is recommended: *(1) the business plan has been submitted, from which it follows that the project is economically viable.*

II.2.4. AXIS 4 LEADER

II.2.4.1. GENERAL DESCRIPTION OF THE AXIS

LEADER is a cross-sectional approach, allowing for the implementation of the measures, in particular those of Axis 3. The aim of the LEADER-type measures is to establish active civil society, activate the residents to carry out measures contributing to the local community and wider, than so far, inclusion of the rural population in the process of taking joint decisions on the directions and manners of local development.

Three measures are to be implemented under Axis 4: Local Development Strategies, Interregional and international cooperation and acquisition of skills, activation and running costs of Local Action Groups.

For obvious reasons, the greatest relationship between the implementation of these measures and the environmental protection and sustainable development issues have been present and have had real impact on them, in the case of the first Axis 4 measure, i.e. Local Development Strategies. For they will have almost direct impact on the decisions concerning the directions and principles of the majority of projects concerning a given area, which is covered by them, and more specifically – within the area of interest of a given Local Action Group (LAG). The factual profile of the members of respective groups will determine the level of development of certain issues in a specific strategy. Therefore, if LAG will not include persons interested in the environmental protection issues, which is neither obligatory nor indicated as particularly desired in the document in question, it may be expected that the activation of local societies will not consider the environmental issues to a sufficient extent. The heart of the matter requires specialist knowledge and determination for its implementation. RDP fails to include such determination or to create favourable conditions for it – even though numerous places contain premises and objectives for better use of resources, including the natural ones.

Pointing out the possibility of implementation of Axis 3 objectives through Axis 4 only, thus also of Axis 3 measures, should be considered unfavourable. On the other hand, Regulation 1698/2005 (Article 64) indicates that it is possible to support actions provided for in the local strategies and compliant with the objectives of all the three axes, whereas the NSP only provided for a preference for Axis 3 measures. From the environmental point of view, it

is not favourable to omit measures suggested under Axis 2, as some of them have potential for environmental activation of local communities. For example, the implementation of agri-environmental programmes or the non-production projects so far not included in RDP may encourage to take up activities related to agri-tourism, because such activities often increase the touristic attractiveness of agricultural holdings within areas where they are located. As part of the strategies prepared by LAGs, such environmental priorities may be included as those which will relate to the determination of priority areas as regards the agri-environmental projects and promotion of their implementation among farmers.

II.2.4.2. GENERAL DESCRIPTION OF MEASURES UNDER THE AXIS

MEASURE: LOCAL DEVELOPMENT STRATEGIES – IMPROVEMENT OF THE QUALITY OF LIFE, DIVERSIFICATION OF ACTIVITIES IN RURAL AREAS

The measure objective is to support draft local measures accepted by the Local Action Groups (LAGs) and authorised by the Voivodship Government. Projects obtaining support should, according to RDP, relate to measures proposed under Axis 3 or contribute to the improvement of the quality of living and/or increase diversification of economic activity within the areas covered by the measure.

Impact of the implementation of the development strategies on achieving the environmental objectives is strong and therefore taking them into account should be one of the LAG establishment criteria. It is not the case, however. The structure of Local Action Groups requires of RDP to include partnership of the economic and social sector entities, however the particularly desired entities fail to involve specialists in environmental protection and sustainable development. It may result in undesired negative effect for the natural environment caused by local strategies, even in spite of the authors' intentions.

Support for applicants for aid for the implementation of projects of Local Development Strategies prepared in accordance with LEADER should have positive impact on the environment. This will take place only if balance – even if only in number – is lacking in practice between projects concerning the environmental protection issues directly or indirectly, and projects failing to take those issues into account. The point is that it should be ensured that as a result of RDP implementation there are far less projects, which raise environmental issues, or at least respect them, implemented between 2007 and 2013, than those, the effect of which is negative.

The measure in question will probably have great impact on the quality of Polish environment, first of all because it is assumed that the actual support for LEADER will relate to social activity within 40-50% of the rural areas, which means that the impact will cover the area of at least 40-50% of the Poland's area.

Nevertheless it should be taken into account that the positive impact of Local Development Strategies implementation will be achieved to the extent that the voivodship

governments, which authorise those strategies, demonstrate due understanding of the spatial management issues as a condition and one of the objectives of activity for rural development.

MEASURE: COOPERATION (INTER-REGIONAL AND INTERNATIONAL)

The measure objective is to support inter-regional and international cooperation, implemented by LAGs and authorised by voivodship governments. The measure should result in the transposition of good solutions – implemented in other regions and/or countries – onto the local ground. Support is significantly restricted by the fact that projects, which obtain support, cannot be limited to the exchange of lessons learned, but have to assume the implementation of common measures by partners of the project, basing of local resources. It should contribute to obtaining actual outcome of the cooperation, which is not limited to increasing the level of knowledge of the persons participating in the exchange.

The actual effect of this measure for sustainable development will depend most of all on the scope of considering the environmental issues in local strategies and the desire to include those issues in the plans of measures of LAGs. If the environmental protection is the significant element of the programme of measures, it should be expected that the exchange will feature the obtaining of information on the lessons learned in respect of the implementation of good environmental practice, which will then be transposed (and implemented) onto the local ground. If it is omitted, the cooperation under this measure will have no significant impact on the protection of the environment and sustainable development.

MEASURE: ACQUISITION OF SKILLS, ACTIVATION AND RUNNING COSTS OF LOCAL ACTION GROUPS

The aim of the measure is to support the activity of Local Action Groups by providing support for vocational training of persons participating in the preparation or implementation of Local Development Strategies, activation measures within the programming area of those strategies and support for running activity of LAGs.

Inasmuch as providing support for running activity seems reasonable and raises no reservations (because it is unreasonable to expect that LAGs will carry out their activity without support for their running functioning) and as a rule requires no detailed justification or description, two elements of this measure should be described in more detail. Unfortunately RDP failed to take these elements into account to a sufficient extent. The justification of the measure is as a rule a repetition of its objective, there is lack of indication of the accessibility criteria for beneficiaries, lack of justification of the reason why applications for aid may exceed the measures accepted by LAGs and authorised by voividship governments. There is the reason to believe that the actual objective of this measure is support for running activity and functioning of LAGs, and the two other directions of works under the measure are of marginal significance.

Nevertheless, similarly to other measures implemented under this axis, their actual (and indirect) impact on the environment will depend first of all on the significance, the issues of environmental protection and sustainable development will have to the activities carried

out by Local Action Groups, and on the extent to which they will be reflected by the prepared local development strategies.

II.2.4.3. DETAILED ASSESSMENT

MEASURE: LOCAL DEVELOPMENT STRATEGIES – IMPROVEMENT OF THE QUALITY OF LIFE, DIVERSIFICATION OF ACTIVITIES IN RURAL AREAS

Evaluation criteria for which dependencies between the proposed measure and the criterion have been identified:

Criterion	Impact	Type of impact
Impact on the implementation of the environmental protection objectives,	positive with negative elements	direct, immediate, but also indirect, long-term
Impact on the promotion of sustainable consumption model	definitely positive	indirect, long-term
Impact on development of sustainable and environmentally-friendly forms in transport	positive with negative elements	indirect, long-term
Impact on sustainable development of rural areas with account taken of its friendly forms	positive with negative elements	direct, immediate, but also indirect, long-term
Impact on the development of other economic activity, also environmentally-friendly in the context of improving effectiveness of resource use,	mixed	direct, immediate, but also indirect, long-term
Impact on space management,	mixed	both direct and indirect of various time of their disclosure
Impact on the protection and optimum use of the existing cultural values	positive with negative elements	direct, immediate, but also indirect, long-term
Impact on the "environmental awareness" of the society	positive with negative elements	indirect, long-term

Comments:

Local strategies should relate to a wide scope of problems. As the assurance of appropriate quality of the natural environment becomes an increasingly significant objective of social activity of the local communities, it can be expected that the issues will be reflected also by the strategies. It will require cooperation of local groups with specialists is this field. Unfortunately, it is not indicated in RDP.

There is a chance that the environmentally-friendly local strategy will refer to the sustainable development issues - *inter alia* the rational consumption needs (*inter alia* through indicating the benefits of use of the immaterial goods), decrease of transport needs and

support for public transport (which is important inasmuch as transport is often a main source of exceeding acceptable air quality standards not only within the urbanised areas). The lack of cooperation with specialists in the field of environmental protection may however lead to the situation when the issues will not be taken into account, thus resulting in the increase of resources consumption and environment pollution.

The Local Development Strategies may pose threat to the environment, too. Their aim is to increase the quality of living of the local communities. If this aim is considered very narrowly, only as the increase of material well-being, it will translate into the increase of resources consumption, including space. This in turn may result in negative impact on the environment.

On account of the large country area to be covered, the issues of appropriate space management gain their significance. The programmes and strategies drawn up should consider it as the resource subject to protection against devastation and appropriation, as is the case with other natural resources. With such understanding of space, the impact on its management through supporting LEADER projects will be great, yet it cannot be assumed how positive or negative it will be. Recognising space as a resource, the problem of its depletion as regards certain functions (e.g. shrinking of the tourist space, recreation space around towns and space for agricultural crops taken by urbanisation) are still difficult to realise. RDP fails to aim at such approach to space management under LEADER.

LEADER has a great potential for supporting local cultural resources – both of material and spiritual culture – as a key element of local development strategies. It may have extremely positive impact on the awareness of the local residents – sensitivity to tradition and history of the place of residence and direct relationship with material objects and various aspects of contemporary culture, they favour due care of the cultural issues in planning documents. However the actual reference to the cultural values of the region should be required within the development strategies supported by RDP, and not only its selected elements and aesthetic values of the region, indicated usually for promotional purposes, which in view of modern marketing is an oversimplification. It seems however that the document assessed fails to meet the above mentioned expectations to a sufficient extent, which poses threat of treating cultural values within the general objectives of the development strategies like an object.

MEASURE: COOPERATION (INTER-REGIONAL AND INTERNATIONAL)

Assessment criteria for which dependencies between the proposed measure and the criterion have been identified:

No.	Criterion	Impact	Type of impact
1	Impact on the development of other economic activity, also environmentally-friendly in the context of improving effectiveness of resource use,	positive with negative elements	direct, immediate, but also indirect, long-term
2	Impact on the protection and optimum use of the existing cultural values	positive with negative elements	
3	Impact on the "environmental awareness" of the society	mixed	indirect, long-term

Comments:

As already mentioned in the general assessment of the measure, its impact on the environment and sustainable development will depend on the significance of these issues in the Local Development Strategies. Because RDP assumes that the beneficiaries of the measure will be obliged to physically apply the lessons learned as a result of inter-regional and international cooperation, it is possible to achieve positive impact on cooperation on the actual improvement of effectiveness of resources use. It will however be possible only if Local Action Groups carry out activities in this respect.

Similar comments relate to impact on cultural resources. Reference to these values will mainly consist in the exchange of lessons learned (e.g. with respect to the manner of use of local cultural resources in the local development) and not in actual transfer of resources from one region to another (even though to a limited extent such measures are possible, e.g. delivery of integration events, cultural festivals, etc.).

The impact of the measure on environmental awareness will also depend on the significance of these issues for the activity of local groups. If the measure is aimed only at assurance of fast economic growth (apart from environmental determinants of this process), the outcome of its implementation may be negative for the level of environmental awareness of the local communities (belief that development without considering the environmental protection needs is possible).

Negative impact on the environment will be present only, if economic activity is extended within borderland, while the environmental requirements are not standardised (e.g. for administrative, legal or other reasons) for the cooperating areas, or if large outdoor venues are delivered, while the environmental protection requirements are not considered.

MEASURE: ACQUISITION OF SKILLS, ACTIVATION AND RUNNING COSTS OF LOCAL ACTION GROUPS

Evaluation criteria for which dependencies between the proposed measure and the criterion have been identified:

No.	Criterion	Impact	Type of impact
1	Impact on sustainable development of rural areas with account taken of its friendly forms	positive with negative elements	indirect, long-term
2	Impact on the "environmental awareness" of the society	mixed	indirect, long-term

Comments:

Similarly to other measures under this axis, the actual impact will depend on the scope within which the local strategies will consider the principles of sustainable development. If they are considered, the measures will be implemented cohesively with these principles and

will contribute to generating environmental benefits – first of all on the local scale, but possibly also on the regional scale. If the issues are not considered, the implemented measures may generate negative effect for the natural environment.

The measure should contribute to the increase of the level of knowledge of the rural population, which should have indirect positive impact on their environmental awareness (on the condition that it is assumed that persons with higher level of knowledge represent the higher level of environmental awareness). However the actual level of impact of this measure on awareness (also, to some, extent the direction of this impact) – as already indicated – will depend on the level and manner of considering the environmental protection issues in the local strategies implemented. If the issues are not covered by the Strategy, the implementation of the measure may have possible negative effect (when it is assumed that the economic and social growth is possible while not considering the environmental obstacles to such growth).

Recommendations concerning Axis 4:

As indicated in the assessment above, the impact of the planned measure "Local Development Strategies" on the environment will first of all depend on the level of considering the environmental issued by the Local Development Strategies and works of the local groups. If these issues are taken into account, the possible impact will be strong and positive. Therefore, it is recommended to introduce the following changes to the description of RDP:

1. As regards the measure description: Local Development Strategies, in point *1. The LAGs will have to fulfil the following requirements* (p. 103) in the first indent, (b) at the end of the paragraph after words of *the LAG members*, the following should be added *It is also recommended to include the representatives of local environmental organisations and specialists in environmental protection and spatial planning in he make-up of LAGs.*
2. In the description of this measure, point 2 *Local Action Groups selection* (p. 104), line 4 of the second paragraph, after the words *were not in accordance with the LDS*, a comma should be added, followed by *which would result in negative impact on the local, regional or global natural environment*, and the rest as is.
3. As regards the measure description: Inter-regional and international cooperation (p. 107), in point Principles, time and criteria of inter-regional and international cooperation projects selection, after the words *based on local resources*, the following sentence is recommended: *The measured should be implemented in accordance with the sustainable development principles and as a minimum it should be ensured that they will not generate negative impact on the natural environment*, and the rest as is.
4. As regards the measure description: *Acquisition of skills* in point Objective of measure (p. 108), in the last line, after the words *to involve local community in,* the word *sustainable* should be added, and the rest as is.
5. Paragraph under the title Objective of measure (p. 108), the following shall be separated: sentence starting with the phrase *under the measure* should be moved to a new point below, entitled *Measure description.*

II.2.5. NATIONAL NETWORK OF RURAL AREAS

Assessment: The main idea behind the network is to exchange information and lessons learned between all partners carrying out activities for the benefit of rural development and establishment of active and integrated society within the rural areas. Multilateral partnership is to be established around innovative solutions contributing to sustainable development and providing solutions to social problems. It is to lead to synergy effect resulting in sharing lessons learned and taking joint measures on the basis on joint use of the resources held, i.e. more effective use. The idea behind the establishment of the network seems desired and justified from the point of view of sustainable development and environmental protection on the condition that the resources will be used mainly to support active, resourceful and eco-innovative organisations in the field of rural areas, and not only to support the administrative activities of the offices.

Comments: The establishment of the National Rural Network is a member state initiative and its establishment may be financed by the resources allocated to technical assistance of the rural development programme. The National Network will be a part of the European Network, i.e. considerably significant institutional integration under EAFRD is strived for. Polish programmes provide for appropriate measures for the creation of this Network. From the perspective of the environmental protection and sustainable development requirements, the establishment of such network in the expected institutional form is not a problematic measure. The proposed institutions to be covered by the NRN do not induce to express unambiguous opinion in view of the expectations of monitoring the transformation within these areas from the point of view of programming environmentally-friendly attitudes of the population and taking local decisions in this spirit.

Recommendation:

p. 37, after line 5 the following should be added: *The network should only involve in projects with high level of integration and balance of economic, social and environmental aspects. Simultaneously, its functioning should be based on environmentally-friendly principles, consisting in the application of environmental criteria to purchases, orders and tenders.*

II.2.6. CROSS-BORDER IMPACT ON THE ENVIRONMENT

Practically all measures carried out will, on account of their nature, concern only the area of our country, and the impact of respective projects will first of all be of local nature. Simultaneously, negative impact, which may mainly, though not necessarily, relate to the loss of biodiversity or local water relations will not be of cross-border nature. Only in the case of implementation of projects in close proximity to the country border and only those projects, with respect to which environmental impact assessment will have to be carried out, such threat may be identified. Thus, cross-border impact which would require launching the

procedure provided for in the Espoo Convention and confirmed by the Environment Protection Law was not found in the reference to RDP.

II.2.7. CORRELATIONS BETWEEN ENVIRONMENTAL IMPACT ASSESSMENT AND OTHER STRATEGIC DOCUMENTS (IN THE SCOPE OF SIMILAR ISSUES)

The comparison covered environmental impact assessment of draft national documents[39] and draft regional operational programmes.

The overview of assessments concerning draft strategic national documents enables drawing the following conclusions:

- they confirm that the measures contributing to the improvement of environmental protection infrastructure will result in the improvement of the quality of the environment and health environmental conditions;
- they identify serious conflicts between the development of transport infrastructure and the objectives of environmental protection and biodiversity, hence the need to considerably enhance the protected areas issues in the specific projects – especially those which are covered by the Natura 2000 network;
- they are considered a chance for sustainable rural development through supporting economic non-agricultural activity activation, especially if based on environmentally-friendly solutions, e.g.: renewable sources of energy, organic farming, environmental and agri-tourism;
- they suggest that preventing local conflicts within the rural areas between intensification of agricultural production, agri-food industry development, services within rural areas putting pressure on the environment, e.g. mass tourism require the application of clearly defined criteria and project selection procedures, which will relate to the sustainable development principles, including environmental impact assessment for the Natura 2000 areas.

The overview of assessments carried out with respect to draft regional development projects for 2007-2013 enables the conclusion that in majority they do not relate directly to rural areas, which is an obvious result of the structure of regional operational programmes, which failed to cover this issue. Identified environmental impact of the priorities to be implemented and detailed objectives fail to analyse the environmental effect from the point of view of impact on the quality of the environment and of living within the rural areas. The fact that the majority of assessments relates to the environmental impact of programmes on the protected areas, which in majority are located within open areas, should be considered favourable.

The programmes – which is underlined by the assessments – will improve the environment and health condition of the voivodship residents, i.e. also improve the relations within the

[39] Draft documents: Operational Programme „Infrastructure and environment", National Cohesion Strategy for 2007-2013, National Development Strategy by 2015, Tourism Development Strategy for 2007-2013, National Regional Development Strategy for 2007-2013.

rural areas. As can be seen in the limited issues, RDP assessment coincides with regional assessments.

In general, it should be concluded that the assessment of the NSP does not differ from the assessment of strategic documents for national and regional operational programmes in terms of scope, evaluation and recommendations, and relates directly or indirectly to rural areas.

II.3. SUMMARY – FINAL CONCLUSION

Positive impact of RDP on the environment is far greater than the negative one, but (also in relation to other plans, programmes and planned measures) is insufficient to achieve the strategic environmental objectives within the agricultural area of Poland for an appropriate period (including the Water Framework Directive objective, the 2010 objective, or the appropriate condition of the protection of species and habitats of the Natura 2000 network). It will especially not allow for hindering negative tendencies for the loss of biodiversity, but only decreasing the pace of loss. On the other hand, however, the analysis showed that the environmental, social and economic effects of the "0" variant, assuming that the planned measures are not implemented, would be far more unfavourable.

In general, as far as the proposed **Axis 1** instruments are concerned, it should be concluded that they should favour sustainable rural development. Nevertheless, the scope of intensification, the sensitive areas will lead to, may be a significant problem within some of them. These may lead to the occurrence of hazards to the nature values, in particular to biodiversity. The phenomenon will however be in general of local nature, and the following requirements for granting support should prevent it: environmental, sanitary and regarding good agricultural and forestry practice, followed by the recommendations of this Assessment.

The general objective of Axis 2 is to contribute to the improvement of the environment and to promote sustainable rural development – from the environmental point of view, it is the most important axis of the Programme, and the greatest positive impact should be expected as a result of Measure 2 and 3 implementation, i.e. Payments for Natura 2000 areas and those associated with implementation of the Water Framework Directive" and "Agri-environmental programme". However, certain measures of this axis may pose a threat if badly or improperly implemented. Therefore, they must be subject to necessary restriction by creating access criteria or eligibility criteria for applications submitted by beneficiaries and by suitable arrangement of requirements regarding the applied agricultural and forestry practices. This first of all relates to the following measures: "Afforestation of agricultural and non-agricultural land" and "Restoring forestry potential and introducing prevention actions".

Axis 3, due to the broad nature of the possible measures covering economic, social and environmental aspects, will be of benefit to the sustainable rural development. It is important that apart from supporting environmental protection infrastructure, business activity should base upon environmentally-friendly solutions. It may however be expected that negative effect of measures implemented may occur at times. Their concentration in areas of high

environmental and tourist value may pose a serious problem and result, though not necessarily, in local deterioration of the natural environment or the loss of its values.

Axis 4 measures should contribute to the sustainable development of rural areas and the increase of social activity. Lessons learned from the present scope of implementation of the LEADER Programme indicate that its impact will be mostly positive. It cannot be stated that there will be no negative impacts too, though because it will depend on the significance attached to environmental aspects when drawing up local strategies and during their implementation.

In order to obtain more favourable effect of RDP implementation, one should first of all:

- allocate larger financial resources to measures contributing to biodiversity and water resources protection within rural areas, i.e. measures under Axis 2, and transfer them to measures 2 and 3;
- implement certain instruments under RDP, provided for in Council Regulation (EC) No 1698/2005, which were not intended for use in Poland. Particularly, these should be:
  - Natura 2000 forest payments.
  - forest-environment payments.
  - non-productive investments (both in rural and forest areas).
  - encouragement of tourism activities.
  - village renewal should be implemented in a broader context.
- complement the provisions of the Programme with accessibility criteria relating to the environmental impact – this first of all concern such measures, as: "Afforestation of agricultural and non-agricultural land", "Restoring forestry potential and introducing prevention actions" and "Improvement and development of infrastructure related to the development and adjustment of agriculture and forestry";

In addition, RDP should be complemented with a chapter concerning the environment, and by the results of SWOT analysis presented in more detail than in NSP and based on the recommendations of this Assessment as regards the modification of attitude to its drawing up.

As a result of environmental impact assessment of RDP no cross-border impact was determined, which would require launching the procedure provided for in the Espoo Convention and confirmed by Article 48 of the Environment Protection Law.

III. METHODOLOGY OF ASSESSMENT

III.1. METHODOLOGY

When performing this Assessment, the authors were building on the experiences and methodology of assessment of potential environmental outcomes of possible implementation of the plans provided for in strategic documents. In Poland, it was developed the first time in 2002 during work on *Framework strategic environmental assessment of National Development Plan 2004-2006*[40]*,* performed as a pilot project initiated by the Regional Environmental Center for Central and Eastern Europe. This methodology was improved by the team of the Institute for Sustainable Development during work on the *Forecast Environmental Impact Assessment for Tourism Development Strategy 2007-2013* and its update[41], ordered by the Ministry of Economy and Labour, and on the *Forecast Environmental Impact Assessment of the National Strategy for Rural Development 2007-2013*[42]. For the needs of this Assessment, the method was modified and adjusted to the specific character of the draft *Rural Development Programme 2007-2013*.

Although the team working on this Assessment had a very short period of time for preparing it (only two months), the work may be divided into several stages – the following activities were undertaken in subsequent stages:

Stage 1 – Making up a list of criteria for assessment of RDP priorities

The criteria have been selected in accordance with the list of criteria developed while preparing earlier assessments, basing on the list of 52 synthesised criteria developed during work on the above mentioned *Framework Strategic Assessment*. It was formulated on the basis of the analysis of over 100 strategic documents, i.e. the Polish and European Union, ecological international conventions, and major documents having the nature of policies and strategies addressing environment protection and sustainable growth. Work on development of the first list of criteria made use also of the criteria aimed at evaluation of sectoral policies' integration with ecological policy developed by the European Environment Agency,

40 „Ramowa strategiczna ocena oddziaływania na środowisko Narodowego Planu Rozwoju na lata 2004 – 2006". Team of authors: Krzysztof Kacprzyk, Zbigniew Karaczun, Andrzej Kassenberg (team leader), Urszula Rzeszot and Bożenna Wójcik. REC consultant – Jiři Dušik, REC coordinator– Małgorzata Koziarek. REC. Branch in Poland. Warsaw, November 2002.

41 „Prognoza oddziaływania na środowisko projektu Strategii Rozwoju Turystyki na lata 2007-2013". Team of authors: Jolanta Kamieniecka, Krzysztof Kamieniecki, Zbigniew Karaczun, Andrzej Kassenberg (team leader), Aleksander Kędra, Bożenna Wójcik. Cooperation: Marta Zadurska. Institute for sustainable development, Warsaw, April 2005. Updated in 2006.

42 Prognoza „Oddziaływania na środowisko projektu Narodowej strategii rozwoju regionalnego na lata 2007-2013". Commissioned by the Regional Policy Department of the Ministry of Economy and Labour. Team of authors: Jolanta Kamieniecka, Krzysztof Kamieniecki, Zbigniew Karaczun, Andrzej Kassenberg (team leader), Aleksander Kędra, Mariusz Kistowski, Jan Polski, Bożenna Wójcik and Marta Zadurska. Warsaw, October 2005.

European Environmental Bureau, and the Institute for Sustainable Development[43]. The basis for criteria establishment were verified by updating the list of strategic legal documents having the nature of policies so as to take into account the obligations stemming from new or updated documents. At the same time the recommendations of the European Commission[44] were used, and experiences following from a similar assessment performed for Wales were built on.[45] Having analysed the thematic scope of NSP and the level of its generality, the list of criteria was verified and their number was to a certain extent reduced – finally 28 criteria, divided into 3 groups[46], were adopted.

- Formal criteria (6) for assessment of the NSP document, as a whole,
- General criteria (17) for assessment of the extent of sustainable development implementation first of all and how far the Axes and measures proposed in NSP are environment friendly;
- Detailed criteria (5) for assessment of the direct impact of planned Axes and measures on the condition of various environment elements.

Stage 2 – Identification of the relationship level between criteria, priorities and measures provided for in individual RDP axes

An impact matrix covering the above mentioned 22 general and detailed criteria as well as 22 measures under four axis was elaborated. Using the matrix, the relationship degree, if any, between the criteria and measures was assessed, qualifying whether they are positive or negative from the point of view of preparing the assessment, i.e. impact on the environment, its quality and efficiency of resource management. The level of this relation was rated on a three-point scale. In total, 484 boxes of the matrix were analysed. The assessment was carried out separately by seven members of the team performing the Assessment for all boxes of the matrix. Having gathered together the findings of the assessment, a collective matrix was prepared. The boxes characterised with large dependence power were highlighted (the boxes selected had an average of experts' grades of more than 2). Another type of boxes highlighted was boxes with large discrepancies between dependence grades given by different experts. As a result of brainstorming with some additionally invited consultants (specialising in fields such as: water management, forest management and biodiversity), the second half of boxes was verified and selected boxes were added to boxes with big dependence power. In total, nearly 40% of boxes were considered to have large dependence. This allowed for focusing during assessment performance only on these dependencies between criteria and measures which are significant from the point of view of RDP's impact on the environment, as well as the possibility of implementation of sustainable development principles.

43 „Ekoinnowacyjność dokumentów strategicznych. Próba oceny." Collective work edited by: Krzysztof Kamieniecki. Report 1/2001. Institute for Sustainable Development. Warsaw, 2001.

44 "Handbook on Common Monitoring and Evaluation Framework. Rural Development 2007 – 2013. Draft guidance document. Directorate General of Agriculture and Rural Development. May 2006.

45 "Strategic Environmental Assessment of the Draft Rural Development Plan 2007 – 2013. Report for National Assembly for Wales submitted by Agra CEAS Consulting Colligwood Environmental Planning. May 2006.

46 The list of criteria is presented in an annex to this report.

Stage 3 – Assessment and description of environmental impacts and possibilities of implementation of sustainable development principles, together with recommendations concerning the RDP document

Only those dependencies were evaluated which were considered important, which allowed for formulation of the most important part of the Assessment containing the following:

17) General evaluation of the axis - concise and general information about the expected impacts.
18) Detailed evaluation of the axis and individual measures, their positive or negative character, types of impact: direct or indirect, short-term or long-term, accumulated or not;
19) Comments – explanations and justification of the formulation of the above evaluation;
20) Recommendations for the whole axis – proposed amendments and complements, alternative solutions for the RDP document – recommendations formulated on the basis of findings of evaluations of both general and detailed criteria.

Moreover, evaluation was performed and comments and recommendations were formulated for RDP according to formal criteria.

In total, 72 recommendations were formulated, and the findings of the evaluation were included in the second part of this study.

Stage 4 – Preparation of the final Assessment and related consultations

Having gathered together all grades of priorities and courses of action, as well as findings of evaluation of the document according to formal criteria, and having prepared the remaining parts of the report containing inter alia description of the condition of the environment (the present condition, after RDP implementation and without RDP implementation, the so-called "0" option) with particular attention paid to rural areas, the draft version of the Assessment report was prepared. As part of work on the Assessment, the team of authors held four working meetings where they discusses the results of subsequent stages of work.

Before the preparation of the final version of the Assessment report, a verification meeting was organised with participation of external experts specialising in particular in environmental aspects of rural development, as well as in social and economic aspects.

III.2. AREAS OF UNCERTAINTY

In the Polish legal system, environmental impact assessment of strategic documents at the level of the country or region have been in place for less than six years. Therefore, no full practice has been developed as to the necessary content of information in strategic documents (which would allow for more correct performance of assessments), and neither was a unambiguous method for drawing up such assessments; the methodology of assessment performance in the initial phase of development. This results in certain difficulties in

performing an environmental impact assessment. Despite these difficulties, this report has been prepared with due care, in compliance with legislation and good practice in force in the respect concerned. Nevertheless, some areas of uncertainty could not be clarified and all the necessary information could not be obtained. This could have affected the way of evaluating the identified impacts. Therefore, this information will be described in this part of the Assessment.

Rural Development Programme is a document which specifies in more detail the scope of intervention in rural areas carried out as part of the so-called 2nd pillar of the EU Common Agricultural Policy, described in a general way in the National Strategic Plan for Rural Development 2007 – 2013. It covers a wide range of planned measures, whose implementation may be supported from public funds - both Community and domestic funds. At the same time, descriptions of the planned target measures are not crystallised – they specify only example activities that will be undertaken under these measures, but do not provide more specific information about neither the size of the project nor location of individual investments. When performing the environmental impact assessment, one should take into consideration the specific character of indicators which are used for identification of significant impacts and evaluation of their strength and importance. Due to the very short period of time devoted to work on this Assessment[47] such attitude was not fully possible, there was not enough time to develop a set of assessment criteria from the scratch, subject them to consultations (except for consulting the Employer) and to modify them if necessary in accordance with consultation results.

Therefore, the Assessment makes use of indicators created within considerably longer period of development of the Strategic Assessment of "National Development Plan 2004-2006", adapting them properly, through the analysis of new strategic documents and normative acts which entered into force and/or were published following the latter Assessment. The criteria address issues covered in around 100 national and Community documents regarding environmental protection and sustainable development (including normative acts and "soft documents" – strategies, policies, Plans, etc.). The actual environmental influence of the measures planned under RDP will depend *inter alia* on the number of individual projects to be implemented under particular measures, their scope, the way they address the principles of environmental protection or their location. These issues cannot be determined by RDP, especially as their implementation will largely depend on particular decisions taken by farmers, producer groups, NGOs, business entities or local government bodies who apply for support (and thus deciding whether it is sufficiently ensured that the support will be granted if the application has been prepared and all the necessary procedures carried out) and on the financial resources available for their implementation, including collateralisation of own resources needed or the possibility to cover the necessary expenses until these are reimbursed under RDP. From this point of view, the Programme lacks detailed information on the planned payment rates for a number of investments planned under individual axes and measures; such information would enable more detailed and complete identification of the planned impacts and it could be stated whether the problems noted so far are to deepen or to decrease. What is more, the initial allocation of financial

[47]The studies on the impact assessment of the Rural Development Programme were initiated in the first week of September, and the draft report was submitted to the Employer on 30 October 2006.

resources to the particular measures does not indicate the amount of resources to be allocated for the support of works under individual measures. As regards some of the measures (e.g. *Diversification into non-agricultural activities*, *Establishment and development of micro-enterprises* or *Basic services for the rural economy and population*) the amount of support for particular directions of works will determine their environmental influence.

Furthermore, RDP does not determine the method and conditions of support accessibility, in particular as regards the possible environmental criteria to be met by potential beneficiaries. It is important in so far as a possibility of mixed impacts has been identified for a number of measures, and whether these are classified as positive or negative is to be determined by the criteria. In most cases, the team has made an *a priori* assumption that the implemented measures cannot infringe the provisions of environmental protection law and that at the time of their implementation, all the relevant procedures are complied with, e.g. regarding the obligation to perform an environmental assessment of selected types of investments). It is however not determined in RDP that this will take place in practice.

The identification of impacts to result from the measures of Axis 4 - LEADER is considerably uncertain. On the one hand, RDP lacks requirements regarding the participation of environmental protection experts in the Local Action Groups (or an obligation to co-operate with such experts); there is no recommendation as to the extent to which local strategies should cover the sustainable development issues. On the other hand though, analysis of the LEADER programmes which are being implemented at present (both in Poland and in other Member States) shows that they usually broadly address the environmental issues. However, as it has been noted above, the issues are not determined in the Programme explicitly, it should be stressed that there is an area of uncertainty in the Assessment in this regard.

A set of indicators in relation to which the assessed document is evaluated and monitored should always be among the bases for environmental impact assessment. The analysis of environmental indicators used for the assessment of a strategic document and of changes in their values, both at the time of implementation of the planned measures and after their completion, enables on the one hand the assessment, if environmental protection and sustainable development issues have been properly considered at the stage of assessment preparation and, on the other hand, clear assessment of the influence of the planned works on the environment. Unfortunately RDP failed to present the environmental policy indicators, and as regards the proposed criteria of implementation of this document objectives, neither their base nor target value was provided. This hinders the complete analysis of possible effect of Programme[48] implementation.

This involves another problem, namely RDP lacked a scenario analysis of the changes to take place in the Polish economy depending on whether the measures provided for in the document are fully or partly implemented or abandoned. It was a considerable obstacle to the

[48] In accordance with information provided by the Employer, the data will be complemented at the next stage of works of RDP.

analysis of environmental changes to take place in the case of failure to implement the Programme ("0 option"). Authors of the assessment could not base it on the macroeconomic data set by the Employer and had to perform their own analysis of potential changes and use it as a basis for the assessment of probable environmental impact of this option.

As shown by the previous experiences of EU Common Agricultural Policy implementation in Poland, if certain instruments necessary for the implementation of particular measures are to be implemented, they need to be regulated by corresponding law (first of all by implementing ordinances). Unfortunately, such issues are not covered in this RDP. This limits the possibility to assess whether the scheme for implementation of the measures planned under RDP consider to a sufficient extent the environmental protection and sustainable development requirements.

An important information lacking at the time of preparing the present assessment was uncertainty as to the possibilities of using the agri-environmental payments and those related to the attainment of Natura 2000 and Water Framework Directive objectives after 2009, i.e. following entry into force of the *cross compliance* instrument in Poland. This instrument will turn some of the practices (for which they obtain payments) previously voluntarily implemented by farmers into obligatory practices. As a result, retaining subsidies for the implementation of such programmes will no longer be possible in the light of the Common Agricultural Policy schemes. Unfortunately the Programme lacks reference to these issues, which hinders the assessment of environmental impact in this respect.

Like any environmental assessment, the present Assessment was performed in accordance with the principle of cautious environmental policy, and therefore it considers in particular all the identifiable potential hazards to the natural environment in order to formulate a great number of recommendations enabling RDP improvement, including avoiding or at least minimising its potential negative impacts. Therefore, the Assessment focuses mainly on threats, and the benefits expected to result from the implementation of measures provided for under the RDP have been indicated to a lesser extent. It does not however mean that these have been ignored or underestimated.

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ANNEXES

Annex 1

LIST OF THE ASSESSMENT CRITERIA USED FOR THE NSP AND RDP ENVIRONMENTAL ASSESSMENT

FORMAL CRITERIA:

Does the analysis of the economic, social and environmental situation (including SWOT) take sufficient account of the issues relating to sustainable development and environmental protection?

Does strategy, both overall and broken down into individual axes, address the sustainable development and environmental protection?

Is the content of the document integrated, including the general strategy and that broken down into axes, with the environmental protection and sustainable development requirements?

Can the suggested legal and institutional solutions, as well as the financial instruments, ensure implementation of environmentally-friendly objectives and measures?

Does the suggested system of monitoring and evaluation of the document implementation include elements regarding sustainable development and environmental protection (first of all, are appropriate indicators proposed)?

Is the draft document consistent with the strategic international (including EU) and Polish documents relating to sustainable development and environmental protection, including halting the loss of biodiversity (the 2010 objective) and the protection of landscape?

GENERAL CRITERIA:

1) Will implementation of the suggested measures and solutions contribute to harmonisation of environmental protection objectives with measures in other sectors, in particular in the agricultural and forestry sector?

Will implementation of the suggested measures and solutions lead to proenvironmental changes to the structure of the economy?

Will implementation of the suggested measures and solutions lead to the promotion of proenvironmental technologies and any forms of environmental management?

Will implementation of the suggested measures and solutions contribute to the promotion of the sustainable consumption model, including space consumption?

Will implementation of the suggested measures and solutions contribute to sustainable development of transport and to promotion of its environmentally-friendly forms?

Will implementation of the suggested measures and solutions contribute to promotion of energy-efficiency and to development in the use of renewable sources of energy?

Will implementation of the suggested measures and solutions facilitate sustainable management of resources in agriculture and sustainable development of rural areas, and will it contribute to development of environmentally-friendly forms of agriculture and multifunctional development of rural areas?

Will implementation of the suggested measures and solutions ensure sustainable management of natural resources and protection of natural and landscape values?

Will implementation of the suggested measures and solutions facilitate sustainable management of resources in forestry?

Will implementation of the suggested measures and solutions facilitate sustainable management of water resources and water and water-dependant ecosystems?

Will implementation of the suggested measures and solutions regarding development of various fields of economy within rural areas contribute to the development of environmentally-friendly forms of economic activity and will they facilitate improvement in the effectiveness of the use of resources by companies?

Will implementation of the suggested measures and solutions contribute to sustainable development of urbanised areas?

Will implementation of the suggested measures and solutions contribute to sustainable area management?

Will implementation of the suggested measures and solutions facilitate protection and optimum use of the existing cultural values?

Will implementation of the suggested measures and solutions contribute to enhancement and development of environmental awareness among the society?

Will implementation of the suggested measures and solutions contribute to promotion/assurance of environmental health?

Will implementation of the suggested measures and solutions have negative environmental impact outside the country’s borders?

DETAILED CRITERIA

2) Will implementation of the suggested measures and solutions result in a change of the condition of the environment as regards air?

Will implementation of the suggested measures and solutions result ion a change of the condition of the environment as regards noise and radiation?

Will implementation of the suggested measures and solutions result in a change of the condition of the environment as regards soils and land surface?

Will implementation of the suggested measures and solutions result in a change of the condition of the environment as regards the surface and groundwater?

Will implementation of the suggested measures and solutions result in a change of the condition of the environment as regards fauna and flora and landscape?

ANNEX 2 MATRIX OF SIGNIFICANT CORRELATIONS BETWEEN THE RDP CRITERIA AND

Element of the assessed document		R		
		Axis 1	Axis 1	Axis 1
				Soft m
		Vocational training for persons employed in agriculture and forestry	**Early retirement**	**Participation farmers in fo quality syste**
No	**Issues to be discussed**			
1	**Influence on the attainment of environmental protection aims, proenvironmental changes in the structure of economy proenvironmental changes in applied technologies, and application of environmental management**	■		■
2	**Impact on the promotion of sustainable consumption model, including space consumption**			■
3	**Impact on development of sustainable and proenvironmental forms in the power industry**	■		
4	**Impact on sustainable rural development with account taken of its friendly forms, as well as extension of other business activity, including the proenvironmental one, in the context of improvement in the effectiveness of resource use.**	■	■	■
5	**Impact on sustainable management of natural resources – biodiversity, landscape**	■	■	■
6	**Impact on sustainable management in forestry**	■		
7	**Impact on sustainable management of water resources**	■		
8	**Impact on land development**	■	■	
9	**Impact on the protection and optimum use of the existing cultural values**			■
10	**Impact on environmental awareness among the society**	■		■
11	**Impact on the promotion/assurance of environmental health**	■		■
12	**Impact on the changes of atmospheric air quality**			
13	**Impact on the changes in the level of noise and radiation**			
14	**Impact on the changes in the condition of waters and water-dependant ecosystems**	■		
15	**Impact on the changes in the condition of land surface, soil, waters and water dependant ecosystems, and of fauna and flora**	■		

MEASURES

Element of the assessed document		**RDP**		
		Axis 1	Axis 1	Axis 1 Axis
				Hard measure
		Setting-up of young farmers	**Modernisation of agricultural holdings**	**Increasing the ad value to basic agricu and forestry produ**
No	**Issues to be discussed**			
1	Influence on the attainment of environmental protection aims, proenvironmental changes in the structure of economy, proenvironmental changes in applied technologies, and application of environmental management		■	■
2	Impact on the promotion of sustainable consumption model, including space consumption			
3	Impact on development of sustainable and proenvironmental forms in the power industry			■
4	Impact on sustainable rural development with account taken of its friendly forms, as well as extension of other business activity, including the proenvironmental one, in the context of improvement in	■	■	■

	the effectiveness of resource use.			
5	Impact on sustainable management of natural resources – biodiversity, landscape			
6	Impact on sustainable management in forestry			
7	Impact on sustainable management of water resources			
8	Impact on land development			
9	Impact on the protection and optimum use of the existing cultural values			
10	Impact on environmental awareness among the society			
11	Impact on the promotion/assurance of environmental health			
12	Impact on the changes in the condition of atmospheric air			
13	Impact on the changes in the level of noise and radiation			
14	Impact on the changes in the condition of waters and water-dependant ecosystems			
15	Impact on the changes in the condition of land surface, soil, waters and water dependant ecosystems, and of fauna and flora			

Element of the assessed document		**RDP**		
		Axis 2		
		Support for farming in mountain areas and other less favoured areas	**Payments for NATURA 2000 areas and areas associated with the implementation of Water Framework Directive**	**Agri-environmental program (Agri-environment payments)**
No	**Issues to be discussed**			
1	Influence on the attainment of environmental protection aims			
2	Influence on proenvironmental changes in the structure of economy			
3	Influence on proenvironmental changes regarding the applied technologies and application of environmental management			
4	Impact on sustainable rural development with account taken of its friendly forms.			
5	Influence on the extension of other business activity, including the proenvironmental one, in the context of improvement in the effectiveness of resource use.			
6	Impact on sustainable management of natural resources – biodiversity, landscape			
7	Impact on sustainable management in forestry			
8	Impact on sustainable management of water resources			
9	Impact on land development			
10	>Impact on the protection and optimum use of the existing cultural values			
11	Impact on environmental awareness among the society			
12	Impact on the promotion/assurance of environmental health			
13	Impact on the changes in the condition of atmospheric air			
14	Impact on the changes in the condition of land surface, soil, waters and water dependant ecosystems, and of fauna and flora			

Element of the assessed document		RD	
		Axis	
		Diversification into non-agricultural activities	**Basic services for the r economy and populat**
No	**Issues to be discussed**		
1	Influence on the attainment of environmental protection aims		
2	Influence proenvironmental changes in the structure of economy, proenvironmental changes regarding the applied technologies and application of environmental management		
3	Influence on sustainable consumption		
4	Impact on development of sustainable and proenvironmental forms in transportation		
5	Impact on development of sustainable and proenvironmental forms in the power industry		
6	Influence on sustainable rural development with account taken of its friendly forms, as well as on extension of other business activity, including the proenvironmental one, in the context of improvement in the effectiveness of resource use		
7	Impact on sustainable management of natural resources – biodiversity, landscape		
8	Impact on sustainable management in forestry		
9	Impact on sustainable management of water resources		
10	Impact on land development		
11	Impact on the protection and optimum use of the existing cultural values		
12	Impact on environmental awareness among the society		
13	Impact on the promotion/assurance of environmental health		
14	Impact on the changes in the condition of atmospheric air, level of noise and radiation, condition waters and water dependant ecosystems, and of fauna and flora and landscape		
15	Impact on the changes in the condition of land surface, soil, waters and water dependant ecosystems		

Elements of the assessed document		**RDP**		
		Axis 4		
		Local development strategies – Improvement of the quality of life, diversification of activities in rural areas	**Cooperation (inter-regional and international)**	
No	**Issues to be discussed**			
1	Influence on the attainment of environmental protection aims			
2	Influence on sustainable consumption			
3	Impact on development of sustainable and proenvironmental forms in transportation			
4	Influence on sustainable rural development with account taken of its friendly forms			
5	Influence on extension of other business activity, including the proenvironmental one, in the context of improvement in the effectiveness of resource use			
6	Impact on land development			
7	Impact on the protection and optimum use of the existing cultural values			
8	Impact on environmental awareness among the			

	society			