

<b>Operational Programme Research and Development</b>
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**POSITION**

(No 11354/2006-3.5/tč)

issued by the Ministry of Environment of the Slovak Republic in accordance with section 17. 12 of Act No 24/2006 Coll. concerning the assessment of impacts onto the environment and amending certain laws

**I. BASIC DATA ON THE ORDERING PARTY**

**1. Name:**

Ministry of Education of the Slovak Republic (MoEdu SR)

**2. Identification Number:**

164 381

**3. Address:**

Stromová 1, 813 30 Bratislava

**4. First name, name, address, telephone number and other contact data of the responsible representative of the ordering party**

Mgr. Peter Mravec, Hanulova 5/b, 841 01 Bratislava (Postal address: Stromová 1, 813 30 Bratislava), telephone number: 00421 02 692 022 66, E-mail: peter.mravec@minedu.sk.

**II. BASIC DATA ON THE STRATEGIC DOCUMENT WITH NATIONWIDE IMPACT**

**1. Title:**

Operational programme Research and development

**2. Character:**

Operational programme Research and Development (OP R&D) is a medium-term strategic programme document of the Slovak Republic with nationwide scope of application, based on which assistance will be provided for the development of the knowledge economy in 2007-2013. The document defines the global objective, the priority axes and measures and activities that will be supported on the territories eligible for funding under the Convergence and Regional competitiveness and employment objectives in 2007 - 2013, using financial assistance from the European Regional Development Fund (ERDF). From geographical point of view, OP R&D covers the whole territory of Slovakia.

OP R&D follows on the objectives and priorities of the National Strategic Reference Framework for 2007—2013 (NSRF), which is the main strategic programming document of the Slovak Republic (SR). OP R&D implements and further elaborates the strategic priority of the NSRF "knowledge economy".

OP R&D covers two objectives - the Convergence objective, which applies to the whole territory of Slovakia except for the Bratislava region and the Regional competitiveness and employment objective, which applies exclusively to the Bratislava region. The document does not define any specific measures and activities for these two objectives due to the similarity of the problems faced by all regions of Slovakia in the area of research and development. The specific objectives and framework activities are therefore similar and the rationale behind the solution proposals is analogical to the reasoning applicable to priority axes. The reason for

integrating both objectives into a single programming document is the effort to unify and increase the transparency of activities producing synergies between programme activities carried out in the individual regions of Slovakia. As Bratislava and its surroundings concentrate about 50% of the research and development potential of Slovakia, it is not possible to ensure the attainment of the goals and vision of the Lisbon strategy without the same support to all regions, for the Bratislava region faces the same structural problems of research and development as the other regions of Slovakia, including the main structural problem, namely the insufficient instrumentation and technical infrastructure of research and development. Addressing this issue is absolutely necessary for carrying out research activities and linking them with the business sector. Adding to the complexity of the situation is the fact that about 50% of the research and development potential of Slovakia is concentrated in the Bratislava region. Based on the above arguments, the Slovak Republic was granted an exception to re-allocate a part of the financial resources from the Convergence objective to the Regional competitiveness and employment objective.

### **3. Main objectives**

The global objective of OP R&D is modernisation and increase of efficiency of the system of support to research and development and improvement of the quality of infrastructure of higher schools so that they contribute to the growth of competitiveness of the economy, redressing of the regional disparities, creation of new innovative (high-tech) small and medium-sized enterprises, jobs creation and improvement of the conditions of the education process on higher schools.

The proposed interventions will help to increase the credibility of research and this will stimulate the interest of young talents in research activity or professional career in this sphere. New creative ideas flexibly responding to the needs of small and medium enterprises and their closer cooperation will also be beneficial. The resulting effect will be higher competitiveness of scientific teams within the national research, higher interest of small and medium enterprises in research activities concentrating on innovation carried out by public research institutions, higher schools and other research centres. Slovak research teams will also be able to compete on international level and this will mean for the Slovak research sector that a closer cooperation with the international environment will develop and that applicants from Slovakia will be more successful in EU Framework Programme 7 and other EU initiatives.

### **4. Description of the content of the strategic document**

#### **Priority axes of OP R&D**

##### ***Priority axis 1 'Research and development'***

The specific objective of priority axis 1 is modernisation and improving the efficiency of the system of support of research and development so that it contributes to the growth of competitiveness, redressing of regional disparities, creation of new innovative (high tech) small and medium-sized enterprises and jobs creation. The following measures will be supported under priority axis 1: *Measure 1.1 "Renewal and building of technical infrastructure for research and development"; Measure 1.2 "Support to networks of centres of excellence in research and development as the pillars of the region's development and supra-regional cooperation" and measure 1.3 "Transfer of knowledge and technology from research and development into practice".*

##### ***Priority axis 'Research and development in the Bratislava region'***

The specific objective of priority axis 2 is modernisation and improving the efficiency of the system of support of research and development so that it contributes to the growth of competitiveness, redressing of regional disparities, creation of new innovative (high tech) small and medium-sized enterprises and jobs creation in the Bratislava region.

The following measures will be supported under priority axis 2: *Measure 2.1 "Renewal and building of technical infrastructure for research and development in the Bratislava region";*

*Measure 2.2 "Support to networks of centres of excellence in research and development as the pillars of the development of the Bratislava region "* and *Measure 2.3 "Transfer of knowledge and technology from research and development into practice in the Bratislava region".*

***Priority axis 3 "Infrastructure of higher schools"***

The objective of priority axis 3 is increasing the quality of education on higher schools through investments into physical infrastructure. This priority axis applies to the whole territory covered by the Convergence objective, i.e. the entire territory of Slovakia, except for the Bratislava region. Eligible NUTS 3 regions are the regions of Trnava, Trenčín, Nitra, Žilina, Banská Bystrica, Prešov and Košice. This priority axis is financed from ERDF.

Priority axis 3 will support *Measure 3.1 "Building of infrastructure of higher schools and modernization of their interior equipment, with a view to improve the conditions for the education process".*

***Priority axis 4 "Technical assistance"***

The specific objective of priority axis 4 is ensuring implementation of OP R&D in line with the requirements placed on the management, implementation, control, audit, monitoring and evaluation of operational programme and on administrative structures responsible for the implementation of the operational programme, provision of support to projects preparation, information and publicity measures and exchange of experience.

***Horizontal priorities***

The strategy of the NSRF defines four areas of horizontal activities, which are reflected in OP R&D: marginalised Roma communities, equality of opportunities, sustainable development and information society. The impact of the individual horizontal priorities will be visible at the level of projects, which will be evaluated by using evaluation procedures and evaluation criteria for this specific area.

*Marginalised Roma communities*

The proposed priority axes do not specify activities specifically designed for the Roma community. The framework activities are designed to encourage new opportunities for jobs in the education, research and development sectors, but do not specifically address the issue of social inclusion of marginalised Roma communities. The programme is neutral to this group and offers equal career opportunities to everybody. The principle of antidiscrimination and support to the employment of the Roma community is preserved with regard to jobs creation, as an indirect form of addressing this horizontal priority.

*Part concerning infrastructure of higher schools*

With regard to the specific focus of priority axis 3, the proposed measures do not specifically address this horizontal priority (do not provide for specific support to marginalised Roma communities). The Romas will, as the other target groups of students, benefit from modernised education infrastructure, depending on the needs of the individual schools and rules prescribed by programme documentation.

*Equality of opportunities*

The principle of equality of opportunities is present in all activities under the priority axes of OP R&D. The proposed priority axes are designed so as to combat discrimination and support gender equality (with a view to improve the status of women). Public institutions receiving funding from the ERDF will support gender equality in all areas. Evaluation procedures will take into account this horizontal priority. Men and women shall have equal opportunities in education, employment, cultural and professional growth. It is expected that the programme will create new jobs for inactive or unemployed women and support their integration into the research area. Projects will have to include activities combating discrimination not only based on gender, but also based on racial or ethnical origin, disability, age, religion or sexual orientation. Emphasis will be placed on young people who, after leaving school, become long-term unemployed. They will be given a chance to work on research and development projects.

*Part concerning infrastructure of higher schools*

The priority axes concentrating on higher schools infrastructure and their measures support equality of opportunities through activities, which will provide equal access to modernised physical infrastructure of education to all students of post-secondary schools. At the same time,

equality of opportunities is facilitated by the broad range of beneficiaries under the OP from both the private and public sector.

#### Sustainable development

With a view to ensure sustainable development through the implementation of priority axes of OP R&D, it is necessary to reform and strengthen state research and innovation systems. Strengthened public-private partnerships combined with improved regulatory environment will create optimum conditions for education, research and development, vocational training and successful professional career, which will help to attain this objective in the social, economic and environmental sphere. This will strengthen the competitiveness of Slovak teams at national and international level and jobs creation. The environmental aspect will be covered by the introduction of modern environmental technologies.

#### *Part concerning infrastructure of higher schools*

In this area, emphasis is also placed on compliance with the strategic documents of the Slovak Republic concerning sustainable growth. Out of the 28 strategic objectives formulated in the Slovak Republic's National Strategy for Sustainable Development, the following is relevant for infrastructure of higher schools: 8. "Building a modern, high quality school system; support of science and research" This objective shall be attained through the support of the development of education infrastructure (reconstructions of buildings and modernisation of interior equipment), which will help to build a modern and high-quality system of higher education. The Slovak Republic's National Strategy for Sustainable Development is being implemented through the Action Plan of Sustainable Development of the Slovak Republic for 2005-2010, defining concrete objectives, which will help to increase the competitiveness of Slovakia, while observing the principles of sustainable development. The following priority areas are related to infrastructure of higher schools: "Increasing quality and efficiency of higher education", "Life long learning at national, regional and local level" and "Informatisation of the school system".

#### Information society

The objective of this horizontal priority is, in line with the National Strategic Reference Framework, supporting higher efficiency, transparency and quality of implementation of NSRF priorities by introducing and using ICT equipment. This will also support the dynamic development of information society in all sectors, where ICT may increase efficiency of and benefits from the available resources. In the area of research and development, attention is paid to this priority in the general context (indirect forms of support of various framework activities). A specific area of assistance comprises framework activities under measure 1.1 "Renewal and building of technical infrastructure of research and development" and 2.1 "Renewal and building of technical infrastructure of research and development in the Bratislava region" defining, as one of their activities, investments from ERDF into the building and modernisation of supporting ICT infrastructure.

#### *Part concerning infrastructure of higher schools*

The main objective of the Strategy of Competitiveness of Slovakia till 2010 is to "ensure that Slovakia reaches the standard of living of the most developed EU countries as soon as possible". The means for attaining this objective should be "fast" and "long-term" economic growth supported by the creation of favourable conditions for the growth of competitiveness of the economy. This can be achieved by creating the conditions promoting the development of the so-called knowledge economy and informatisation of society.

Support to information society is present in measures concerning infrastructure of higher schools with planned activity "Modernisation of interior equipment of universities, in which the education process takes place, with a view to improve the conditions for new forms of learning (supported shall be in particular new technologies for classrooms for language, chemistry, biology and physics lessons, workshops, ICT rooms and provision of computers to academic libraries)".

## **5. Relationship to other strategic documents**

OP R&D is related to the following strategic documents:

### ***Strategic documents and policies at EU level***

- Community Strategic Guidelines;

- Lisbon and Gothenburg Strategy
- European Employment Strategy
- Financial Perspective 2007-2013;
- Commission Report "More Research for Europe: Towards the 3% of GDP".
- Commission Report "Investing into research: Action Plan for Europe".
- Wim Kok's assessment report;
- EC legislation applicable to protection of competition, public procurement, protection and improvement of the environment, equality of opportunities, gender equality and non-discrimination;
- Working programme of the European Commission "Education and Vocational Training 2010";
- Memorandum on Life-Long Learning;
- Bologna Declaration;
- EC Legislation Relating to Cohesion Policy

***Strategic documents and policies at national level***

- Integrated Plan of Regional Development
- National Plan of Regional Development;
- National Development Plan 2004-2006
- Single Programming Document NUTS II – Bratislava, objective 3 "OP Industry and Services"
- Community Support Framework 2004 – 2006 (CSF) for Slovakia;
- Updated Convergence Programme of Slovakia for 2004 – 2010;
- NSRF;
- Strategy of Competitiveness of Slovakia till 2010 and its Action Plans;
- National Strategy for Sustainable Development;
- Action Plan of Sustainable Development of Slovakia for 2005 – 2010;
- National Reform Programme of the Slovak Republic for 2006-2008;
- Slovak Spatial Development Perspective 2001;
- National Programme of Education of the Slovak Republic for Upcoming 15 to 20 Years (the Millennium Project);
- Concept of Further Development of Higher Schools in Slovakia for the 21<sup>st</sup> Century;
- Concept of Life-Long Learning in the Slovak Republic;
- Education Policy Report, National Report on the Attainment of Objectives of the European Commission's Working Programme Education and Vocational Training 2010;
- Implementation of the European Youth Pact in Slovak conditions and its incorporation into the Strategy of Competitiveness of the Slovak Republic till 2010;
- Operational Programme Basic Infrastructure;
- Accession of the Slovak Republic to the eEurope+ initiative;
- Strategy of Informatisation of Society of the Slovak Republic;
- other OPs;
- EC legislation applicable to protection of competition, public procurement, protection and improvement of the environment, equality of opportunities, gender equality and non-discrimination;

***Strategic documents and policies at regional level***

- spatial plans of large territorial units, towns, communities and zones;
- programmes of economic and social development of self-governing regions and towns;

### **III. DESCRIPTION OF THE PROCESS OF PREPARATION AND ASSESSMENT OF ENVIRONMENTAL IMPACTS OF THE STRATEGIC DOCUMENT**

The assessment of the impacts of OP R&D onto the environment was carried out by the MoEdu SR in cooperation with the Ministry of Environment. The assessment was carried out in line with Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of impacts of certain plans and programmes onto the environment ('SEA

Directive') and Act No. 24/2006 Coll. concerning the assessment of impacts onto the environment and amending certain laws (the 'Act').

# **1. Plan of activities and time schedule of preparation and assessment of environmental impacts of the strategic document with nationwide coverage**

## *Process of preparation of the draft OP R&D*

Contributors to the preparation of the contents of OP R&D were the representatives of the Ministry of Economy of the Slovak Republic, the Slovak Rectors Conference, the Universities Council, the Slovak Academy of Sciences, the Federation of Employers' Associations, the Republic Union of Employers, the Association of Industrial Research and Development Organisations, the Union of Industry Associations, higher territorial units and the Slovak Academic Information Agency, representing the non-profit sector. The partnership principle was applied in the form of working meetings, bilateral meetings, presentations by the Ministry of Education of the Slovak Republic and consultations concerning the contents of the operational programme by means of electronic communication. Presentations and follow-up discussions were used by the Ministry of Education in the meetings with the Slovak Rectors Conference - 2 meetings, the Council of Universities (represented by pro-rectors for research - the so-called Council for Science and Technology) - 1 meeting, the Club of Deans - 1 meeting and the Presidency of the Slovak Academy of Sciences - 2 meetings. In the first stage, the content of the priority axes was defined with the active involvement of the representatives of all research and development sectors (academic and private sector). On 30 June 2005, a meeting with the representatives of research and development institutions took place at the Ministry of Education, with the aim of drafting the first working version of the priority axes. On 9 November 2005, another meeting with the representatives of the Ministry of Economy of the Slovak Republic, universities, the Slovak Academy of Sciences, the Association of Industrial Research and Development Organisations and the Union of Industry Associations was held at the Ministry of Education in order to define more precisely the content of the programme. Another objective of the meeting was to define the borderlines between the support to research and development (provided by the Education Ministry) and the support to innovation (provided by the Economy Ministry). In addition to the above forms of partnership, the Ministry of Education organised a working seminar with the participation of more than 100 representatives of the relevant institutions, in which the Minister of Education presented the ideas of the Ministry concerning the content of the priority axis research and development. The meeting was also an opportunity for the representatives of the Slovak Rectors Conference and the Slovak Academy of Sciences to present their opinions. In the technical part, experts of the European Commission and the relevant institutions providing financial support to research and development from the Structural Funds in Finland, Portugal and Austria took the floor. A guest to the seminar was also the Commissionaire for Regional Policy. On 17 October 2005, a seminar entitled "Possibilities for Using the Structural Funds for the Support Research and Development in Slovakia considering the Experience of Other Member States" took place. In the process of further elaboration of OP R&D and also in the process of creating the project pipeline for this area, bilateral meetings with the representatives of the Ministry of Economy of the Slovak Republic, the higher territorial units, the Association of Towns and Communities, universities, the Slovak Academy of Sciences and the business sector took place at the Ministry of Education on 26 and 27 January 2006. The Ministry of Education also cooperated with the Ministry of Construction and Regional Development in the process of preparation of the National Reference Strategic Framework, by means of bilateral and multilateral meetings. In the next stage, the relevant parts of the future OP R&D were submitted to the Minister of Construction and Regional Development to be integrated into the National Strategic Reference Framework. On 23 May 2006, the content of the future OP R&D was discussed in a meeting of the working group of the VIII EU Meeting "Science, education and culture". Support to research and development in the programming period 2007-2013 was then one of the main topics of the international conference "Economic development of the regions in the context of the NSRF", which took place on 24 May 2006 in Trenčianske Teplice (organised by the Trenčín self-governing region). An important factor in the

finalisation of the text of the OP was the comments received from the members of the working group for the preparation of OP R&D between 24 and 30 October 2006.

*Process of environmental impact assessment:*

- Notification of the strategic document OP R&D (the "Notification") was prepared by Mgr. Peter Mravec, Mgr. Ivan Sklenka and Vladimír Majer from the European Integration Section of the MoEdu on 31 October 2006, in accordance with section 5. 5 of and Annex 2 to the Act.
- On 13 November 2006, MoEdu SR delivered the notification to the Ministry of Environment of the Slovak Republic (MoEnv SR) in accordance with section 17. 3 of the Act (letter No CD-2006-16675/39506-1:081, dated 8. 11. 2006).
- The notification was published, on 8 November 2006, on the web-site [www.minedu.sk](http://www.minedu.sk) and, on 14 November 2006, on [www.enviroportal.sk](http://www.enviroportal.sk), stating the deadline and place for submitting comments and objections to the notification in accordance with section 6. 4 of the Act.
- On 14 November 2006, in accordance with section 6.1, the information on the notification and the possibility of submitting comments was published in nationwide press (the daily SME).
- A meeting aimed at determining the scope and timing of assessment of the strategic document OP R&D ("scoping and timing") was convened by the MoEdu SR, European Integration Section to take place on 5 December 2006 in the building of the MoEnv SR.
- The scoping and timing meeting was attended by the representatives of MoEdu SR and MoEnv SR. The scoping and timing was determined in accordance with section 17.5 of the Act by the MinEdu SR in cooperation with MinEnv SR on 5 December 2006. The basis for determining the scope of assessment was Annex 4 to the Act and Annexes I and II of the SEA Directive. The scoping was carried out in line with section 17. 5 of the Act.
- In accordance with section 17. 5 of the Act, the scoping and timing were published in the full extent on the web-sites [www.minedu.sk](http://www.minedu.sk) (on 5 December 2006) and [www.enviroportal.sk](http://www.enviroportal.sk) (on 13 December 2006).
- The report on the assessment of the strategic document OP R&D (the "Assessment Report") was prepared in accordance with section 17. 5 and 6 of and Annex 4 to the Act by the company PROEKO - Environmentálne služby Poprad, responsible assessor RNDr. Helena Barošová.
- On 8 January 2007, the MoEdu SR, European Affairs Section delivered the draft OP R&D and the Assessment Report to the MoEnv SR in both printed and electronic form (letter CD-2007-370/621-1:282, dated 8. 1. 2007).
- On 8 January 2007, MoEdu SR and MoEnv SR published the draft OP R&D, the assessment report and the date of public consultation meeting on the web-sites [www.minedu.sk](http://www.minedu.sk) and [www.enviroportal.sk](http://www.enviroportal.sk) in accordance with section 17.7 of the Act, stating the deadline and place for submitting comments in accordance with section 11.2 and section 12.1 and 2 of the Act.
- On 19 January 2007, MoEnv SR received an invitation from MoEdu SR, European Affairs Section (letter No CD-2007-1277/2698-1:282, dated 19. 1. 2007) given in accordance with section 17. 8 of the Act, to the public consultation meeting to take place in the building of MoEdu SR in Hanulova street 5/b on 22 January 2007.
- On 10 January 2007, in accordance with section 17.10 of the Act, the date and the venue of the public consultation meeting concerning OP R&D and the Assessment Report and the information that the text of the OP and of the Assessment Report was available at the website [www.minedu.sk](http://www.minedu.sk) for comments, was published in nationwide press (the daily Pravda).
- In accordance with section 17.11 of the Act, MoEnv SR arranged for the preparation of an expert assessment in accordance with section 13 of the Act (letter No 11354/2006-3.5/tč, dated 23. 1. 2007).
- The expert assessment and the draft final position were prepared by RNDr. Zita Izakovičová in accordance with section 13 of the Act and, on 6 February 2007, delivered to the MoEnv SR (letter No CD-2007-2472/5042-1:282, dated 2. 2. 2007).

## **2. Body authorised to approve the strategic document**

The Government of the Slovak Republic and the European Commission.

## **3. Type of approval decision**

Approval by the Slovak Government and the Commission.

## **4. Preparation of the Assessment Report**

The Assessment Report was prepared by the company PROEKO - Environmentálne služby Poprad, responsible assessor RNDr. Helena Barošová, in January 2007, in accordance with section 17. 5 and 6 of and Annex 4 to the Act, and in accordance with the provisions of Article 5 of and Annex I to the SEA Directive.

## **5. Appraisal of the Assessment Report**

In accordance with section 17.11 of the Act, MoEnv SR arranged for the preparation of an expert assessment in accordance with section 13 of the Act. The task of preparing the expert assessment was given to RNDr. Zita Izakovičová, registered in the list of persons qualified to assess environmental impacts, reg. number 99/96-OPV.

As to the completeness of the submitted Assessment Report, the author of the expert assessment stated that the Assessment Report contained the main points of an assessment report according to Annex 4 to the Act, its contents and structure complied with the requirements expressly contained in the Act and was in line with the defined scoping and timing.

As to the completeness of identification of positive and negative impacts of the strategic document onto the environment, including their interrelation, the author of the expert assessment concluded that the Assessment Report contained the basic data on the objectives of the strategic document under review. Concerning the part relating to anticipated impacts of the strategic document, including impacts on public health, the author of the expert assessment stated that the report contained the evaluation of the anticipated impacts of the strategic document onto the environment and sustainability of development. The impacts of the strategic document OP R&D are assessed on component-by-component basis. It examines the impacts on population, soil and subsoil, ambient air, climatic conditions, water, fauna, flora and their biotopes, landscape, scenery, protective zones, territorial ecological stability systems, urban structures and cultural and historical monuments. As to the part relating to the proposed measures for the prevention, elimination, minimisation and compensation of environmental and health impacts, the author of the expert assessment stated that the text of this chapter was very brief and general. Even though there are no significant environmental impacts anticipated from the implementation of the document, it would be necessary to describe at least some general measures, which would eliminate any negative impacts, such as consistent application of legal regulations, etc. The expert assessment further contains a list of measures that should be carried out in the implementation of OP R&D.

Concerning the part relating to selection of options, including a description of their evaluation (including difficulties with obtaining the necessary information, such as technical gaps or uncertainties), the author of the expert assessment concluded that OP R&D described one option only. The chapter compares the proposal of OP implementation with the zero option (if the programme was not implemented). The method of comparative quantitative analysis was used for the evaluation. It compares and evaluates 10 criteria using a four-grade scale. This evaluation clearly reveals the benefits of the proposed OP. The document and the impact assessment were prepared on the basis of the partnership principle and the document submitted is the result of a consensus of the individual partnership members. As to the part relating to the monitoring of environmental impacts, including impacts on public health, the author of the expert assessment stated that the text of this chapter was insufficient. The authors claim, implementation of the programme does not require monitoring, which cannot be accepted. It is necessary to set up a monitoring committee and to define a set of measures to be carried out.

Monitoring criteria should also include environmental criteria, such as:

- number of projects dealing with environmental issues;



- number of projects dealing with public health issues;
- % of funding for implementation of environmental projects out of the total allocation;
- % of funding for implementation of projects covering public health issues out of the total allocation.

For the purposes of monitoring and evaluating impacts of implementation of OP R&D in the programming period of 2007-2013, the monitoring committee shall ensure:

- that projects selection criteria and criteria for the evaluation of progress and attainment of objectives of the projects carried out based on the strategic document so that long-term, synergic effects of projects and compliance with the principle of efficiency, including environmental impacts, are evaluated as a priority,
- regular monitoring of progress made in achieving concrete objectives of the OP as a whole and broken down into priority axes and specific objectives;
- monitoring of environmental impacts, broken down into priority axes, specific objectives and activities;
- monitoring of impacts on public health;
- preparation and publication of monitoring reports; monitoring reports include progress reports, annual reports and final reports and these reports are the main source of information for the monitoring committee, the Commission and the general public;
- monitoring at projects level on the basis of measurable indicators, which will be described in the manual for applicants for grants; beneficiaries shall provide indicator values from the start of project implementation in the form of monitoring reports; the time intervals, in which monitoring reports have to be presented to the managing authority shall be specified more precisely in the grant contract.

Concerning the part describing anticipated significant cross-border environmental impacts, including impacts on human health, the author of the expert assessment stated that, considering the nature of the document, it was possible to conclude that the implementation of the strategic document would have no significant negative cross-border environmental impacts, including impacts on human health. Opening of the European area for research and development will have important benefits for the development of international cooperation and will strengthen the competitiveness of the European Research Area.

As to the assessment of the proposed measures and conditions for excluding or mitigating negative impacts of the strategic document, the author of the expert assessment stated that, considering the nature of the document, only a broad definition of the measures was possible. Measures defined in the Assessment Report are further described in the draft of the final position.

In chapter "Information on economic cost" of the expert assessment, the author stated that the chapter contained a financial plan of programme implementation in 2007-2013. The financial plan was provided for the whole OP and for the individual strategic objectives, priority axes, priority themes, etc. Financial plans for the individual areas are prepared in table form.

In the conclusion, the author of the expert assessment stated that the presented Assessment Report fulfilled the main requirements of the Act and the defined scoping and timing and that the author fulfilled her task to prepare the Assessment Report of the strategic document in accordance with the Act and in line with the defined scoping and timing. The analytical part of the report was prepared very well (comprehensively, going even beyond the requirements). The analysis was prepared on the basis of information contained in the Environment Report of the Slovak Republic and ministerial databases. The synthetic part of the report was weaker, particularly the synthesis of assessments of cumulative impacts (the Environmental Regionalization of Slovakia from the above-mentioned report was used). It was necessary to define in more detail the measures for eliminating negative consequences and the proposal of monitoring.

Considering the nature of the document, information available from other sources (other than the presented Assessment Report) and information provided by the ordering party to the author of the expert assessment, it can be concluded that the implementation of the strategic document will have no significant ineliminable negative impacts onto the environment or the

human health. As it follows from the Assessment Report and additional information obtained, it can be concluded that the positive impacts of programme implementation clearly outweigh and are sustainable. Negative impacts can be minimised, eliminated or compensated, by using the proposed measures and conditions for their elimination or mitigation.

The author of the expert assessment recommends approving the document. Such approval should prescribe the conditions and measures for elimination or mitigation of negative impacts of implementation of the strategic document according to the attached proposal of the final position.

In the proposal of the final position, section "Conclusions", sub-section "Result of Assessment Process", the author of the expert assessment stated that the assessment process proved the potential of positive impacts of implementation of the strategic document, provided the proposed preventive measures are carried out. In this context, it is possible to recommend approving the strategic document with the addition of environmentally-oriented measures.

## **6. Comments received and their evaluation**

In the time period set in accordance with section 6.4 of the Act for submitting comments on the notification, no comments on the notification were received by MoEdu SR (European Integration Section) or MoEnv SR.

In the time period set in accordance with section 11.2 and section 12.1 and 2 of the Act for submitting comments on OP R&D and the Assessment Report, no comments on OP R&D or the Assessment Report were received by MoEdu SR (European Affairs Section) or MoEnv SR.

## **7. Public consultation and its conclusions**

Public consultation meeting of OP R&D and the Assessment Report took place at the MoEdu SR, in Hanulova street 5/b on 22 January 2007. The proceedings at the meeting were recorded in the minutes and an attendance list was prepared; both documents were sent to the MoEnv SR and are part of the document file. The public consultation meeting was attended by the representatives of the Ministry, the author of the Assessment Report, MoEnv SR and the Ministry of Culture of the Slovak Republic (see the attendance list).

In the beginning, department director of MoEdu SR Mgr. Peter Mravec welcomed the participants of the public consultation meeting on OP R&D and the Assessment Report and presented briefly the agenda of the meeting. He then presented the process, in which the draft OP R&D was prepared and approved, and described the individual priority axes, measures and objectives of the draft OP R&D.

The author of the Assessment Report, Helena Barošová, then presented the contents of the Assessment Report, described the sources of information used for preparing the Assessment Report and summarised the negative and positive impacts of the draft OP R&D.

Mgr. Peter Mravec then asked the participants to present their comments on the Assessment Report and the draft OP R&D concerning their environmental impacts. The participants did not present any comments on the draft OP R&D or the Assessment Report.

At the end, Mgr. Peter Mravec thanked the participants for their participation in the public consultation meeting.

Based on the course and results of the public consultation meeting on OP R&D and the Assessment Report, and considering the process of environmental impacts assessment of OP R&D, it can be concluded that the general public has no objections to the draft OP R&D and the Assessment Report in terms of their impacts onto the environment and public health.

## **IV. OVERALL ASSESSMENT OF IMPACTS OF THE STRATEGIC DOCUMENT**

The overall assessment of OP R&D and the Assessment Report is based on the content and the main objectives of OP R&D, the programme's relationship to other relevant plans or programmes, important aspects of the current condition of the environment and their likely development if OP R&D was not implemented, environmental characteristics of areas likely to be significantly affected by OP R&D, all existing environmental problems, which are relevant for OP R&D, including in particular those relating to areas of particular importance, such as areas

covered by Directives 79/409/EEC and 92/43/EEC, environment protection objectives set at EC, international or national level, which are relevant for OP R&D and the manner, in which these objectives and other considerations of environmental aspects were taken into account in the preparation of OP R&D, as well as the anticipated significant impacts onto the environment, including impacts on biodiversity, population, public health, fauna, flora, soil, water, ambient air, climatic factors, cultural heritage, intangible (including architectonic and archaeology) heritage, landscape and the mutual relationship of these factors, on measures for the prevention, mitigation and compensation of each material negative impact of OP R&D onto the environment, and, last but not least, on the description of reasons for the selection of options and of the manner, in which the options were evaluated, including any difficulties (such as technical gaps or lack of know-how) in obtaining the required information and on the description of measures for monitoring and non-technical summary of information.

Transfer of scientific knowledge into practice may positively influence almost all spheres of life of the society; transfer of new technology may help to reduce the burden on the individual components of the environment.

New knowledge in science and technology and particularly the development of new technologies limiting the production of substances causing global warming etc. will positively influence ambient air protection. Replacement of boilers with low efficiency and change of the fuel base (eliminating harmful fossil fuels) will eliminate the sources of ambient air pollution. Positive impacts onto ambient air are anticipated from the practical application of new scientific knowledge orientated on the reduction of emissions and improvement of the quality of ambient air.

Building of infrastructure will not only improve the quality and efficiency of the education and R&D processes, but, as an indirect effect, may help to protect and improve the environment, protect biodiversity, improve nature protection or build the NATURA network (increased capacities for performing inventory research, description of new species, etc.). New technologies will allow better monitoring of phenomena and processes going on in the country, which can be helpful in preventing natural risks and hazards.

New technologies and procedures may also have a positive impact on health care and health protection, thanks to strengthened and better health-related research including in particular development of new medicines, new treatment and relaxation methods and improvement of the working environment.

Positive impacts can also be anticipated in the area of food processing and agricultural research etc.

The coming together of research/science and the society will also have important economic benefits. An indirect positive impact will also be the linking of research and science and the business sector. Partnership building, more progressive use of new knowledge and introduction of innovative technologies should also improve the economic and social environment for small and medium enterprises. In summary, benefits may include improved working conditions, energy savings and increased standard of living. Implementation of the programme is likely to increase employment (by creating new jobs and by improving the quality of workforce, which will then have more chances to find employment). As another important positive impact of implementation of OP R&D, the most significant increase of employment is expected to occur in research and knowledge economy,

Implementation of the OP will also be beneficial under the cultural and historical aspect, as many higher schools (with long-lasting tradition) often reside in historical buildings, which form part of monuments protection zones or are themselves of historical value. The reconstruction of these buildings in accordance with the requirements of monuments preservation authorities will multiply the value of these buildings. Reconstruction of other buildings and improvement of their architecture will increase the esthetical value of the settlement and improve working conditions.

Negative impacts include impacts occurring during the reconstructions of buildings, replacement of boilers, replacement of instrumentation, etc. These are impacts normally occurring in case of developments or reconstructions. These impacts include noise, dust

emissions, waste production etc. These impacts, however, will be limited in time. It is possible to eliminate many of them by the use of proper technologies and work procedures.

A specific impact of the implementation of priority axis 'Infrastructure of higher schools' will be increased quantity of special and hazardous waste produced. Increased waste production will be caused by the replacement of old (frequently inoperable) instrumentation (WEEE) and reconstruction of chemical, biological, pharmaceutical and other laboratories. Most (reusable and non-reusable) waste will be produced in the course of reconstruction works on buildings (including special and hazardous waste). Hazardous waste will be produced for example when replacing old roofs containing asbestos; construction waste may also be contaminated by hazardous substances, old unused chemicals, etc. Performance of these activities will have to be assessed according to the Act.

No direct negative impacts on fauna, flora, biotopes, NATURA components and protected territories are expected during the implementation of the OP. None of the priority axes directly affects this area. Buildings of higher schools, which will be reconstructed, are located almost exclusively in towns (often town centres), far away from protected fauna and flora. The construction works will therefore have no negative impact on any protected territories.

It can be concluded that the intentions of OP R&D create the preconditions for improving the standard of living of both the current and future generations and for sustainable development. The reasons for this conclusion are as follows:

- the proposed priorities, objectives and pilot projects support development of new methods and innovative technologies contributing to the improvement of the environment and the standard of living in the individual regions;
- OP will increase the quality of the education process and subsequently contribute to the development and improvement in quality of the human capital;
- OP will increase the effectiveness of the research and development process and competitiveness of Slovak science in the international context;
- OP will, through the development and application of new methods and technologies, contribute to the protection and creation of individual components of the environment;
- transfer of scientific knowledge into practice will improve the social and economic conditions of entities operating in the production and non-production sectors;
- it will improve the quality of decision-making processes, which will be based on objective scientific information;
- new instrumentation will improve the quality of the research process in many areas;
- design and implementation of the monitoring process will ensure efficient control mechanisms, and promote ethical and moral principles;
- by defining the objectives and priorities, it motivates scientific and education institutions, businesses, the public sector and the general public to change their behaviour, attitudes and value orientations to accept the principles of sustainable development;
- OP proposes the priorities, objectives and supported activities in accordance with strategic objectives defined by European and national strategic documents and in accordance with the objective of optimising long-term influences on social, cultural, economic and environmental aspects;
- OP is based on an analysis of the situation of science, research and education in Slovakia and responds to the need for addressing the current problems in this area. Its implementation will therefore not limit future development of the society.
- OP indirectly contributes to the development of democratic institutional tools of management, guarantees, thanks to the transparency of management institutions and monitoring, access to information both by the media and the general public, provides all citizens the same rights to participate in the supported activities without regard to their nationality, social or other status, gender and orientation;
- the objectives and priority axes of the OP consistently apply the principle of solidarity between generations and within generations.

### ***Impacts of OP R&D on economy***

Implementation of OP R&D will have direct and indirect positive impacts on the economy, including modernisation and increased efficiency of the system of support of research and development, which will contribute to the growth of competitiveness of the economy, redress regional disparities, help to create new innovative (high-tech) small and medium enterprises and new jobs. This will foster economic growth of Slovakia and speed up the transformation process (approximation of macroeconomic and microeconomic indicators to the EU-15 average), structural changes within the economy (shift from the current structure with an important share of industries with relatively high energy and raw materials consumption and relatively low value added towards a developed society with a higher share of economic sectors orientated on the knowledge economy, which will lead to a growth of value added per unit of GDP) and the society (increase of the standard of living). OP R&D will bring about modernisation and improve the quality of technical infrastructure of research and development with the aim of improving the education process and increasing the ability of research and development institutions to efficiently cooperate with top research institutions in the EU and other countries and with entities from the economic and social sphere through the transfer of knowledge and technology. This will improve research and development infrastructure and instrumentation on higher schools, research institutions, research centres and other research and development organisations, support knowledge on technological advances and create the conditions for participation in international research and development of leading edge technologies, processes and patents in all sectors of the national economy (taking into account the needs of the key sectors of the Slovak economy). OP R&D will intensify cooperation of R&D institutions with social and economic partners through the transfer of knowledge and technology, thereby facilitating economic growth of the regions and of the whole Slovakia at all levels (small and medium enterprises and large and strategic investors). The individual priorities will improve the quality of internal management of the process of knowledge and technology transfer from the academic sector into practice, including activities aimed at eliminating the barriers between research and development on the one hand and the society and economy on the other.

### ***Impacts of OP R&D in social sphere***

OP R&D will have direct and indirect impact onto the social sphere, including in particular the growth of the standard of living through the introduction of new knowledge into practice and through increased level of education (building of infrastructure of higher schools and modernisation of their interior equipment with a view to improve the conditions for the education process - Investment activities focused on the reconstruction of higher schools (for example additional heat insulation, replacement of windows, roof replacement or repair, replacement of central heating system, repairs on building walls, static reinforcement of buildings, renewal of plaster on buildings, repairs on building exterior, adaptations in building interior, creating barrier-free access, increasing fire safety of buildings, reconstruction of sanitary rooms and WC, reconstruction of heating, water supply, sewage and electrical systems), constructing new university buildings, extension of university buildings (e.g. annexes or superstructures, academic libraries, additional services provided within the campus, improvement of campus surroundings), modernisation and reconstruction of accommodation facilities, gymnasiums, canteens and sporting grounds of universities, modernisation of interior equipment of universities, in which the education process takes place, with a view to improve the conditions for new forms of learning (supported shall be in particular new technologies for classrooms used for language, chemistry, biology and physics lessons, workshops, ICT rooms and provision of computers to academic libraries) and knowledge. These measures may bring about changes in the behaviour of individuals or groups within the society. As to the horizontal priorities, OP R&D will positively influence the social sphere by offering equal career opportunities to everybody, while observing the anti-discrimination principle.

In addition to these impacts, OP R&D will also have potential indirect negative impacts on public health (production of waste, particularly hazardous waste, during the construction or reconstruction works on buildings, and production of noise, ambient air pollution, etc.). It will be mostly indirect short-term and local impacts. It can be anticipated that OP R&D will stimulate the

procurement of new equipment and necessitate the replacement of old one. Should a part of waste electronic and electrical equipment be mixed with other waste and deposited in landfill sites, it might have potentially negative impacts on public health.

#### ***Impacts of OP R&D on the environment***

The framework activities of OP R&D will have direct, indirect, short, medium and long-term, positive and negative, cumulative and synergic impacts of different significance. OP R&D will impact waste management (increase of the quantity of waste, particularly in the short term), consumption of raw and other materials and individual components of the environment. As OP R&D aims to improve the basic conditions for research and development, this support will increase the quantity of new equipment and instrumentation in use and will require improvement of their technical parameters. This will lead to a faster replacement of physically and morally worn equipment and instrumentation, increasing the quantity of waste (mostly hazardous waste). There are many question marks related to research and development, as they deal with new procedures, equipment and products, the impact of which onto the environment is difficult to determine at this level. It is therefore important that all innovations take into account the protection of the environment in order to minimise, eliminate and compensate all potential environmental impacts (even in the case of accidents) already in the research and development phase so that the principle of sustainability is preserved.

#### ***Timing and territorial distribution of environmental impacts of OP R&D***

In the short term (up to two years), the overall impact of OP R&D onto the environment will be represented by a slight increase of negative impacts. In the medium and long term, the overall impact of OP R&D onto the environment will be positive and will improve its condition.

In terms of territorial distribution of environmental impacts of OP R&D, most of them will be concentrated in the Bratislava region, as it concentrates about 50% of the research and development potential of Slovakia and has the highest density of higher and secondary schools in Slovakia.

#### ***Impacts of OP R&D in relation to the principles of sustainable development***

The basis for assessing OP R&D from the viewpoint of sustainable development is the Slovak Republic's National Strategy for Sustainable Development. The strategy contains 16 basic principles aimed at ensuring sustainable development, which, using 40 criteria, are used for assessing the impacts of OP R&D implementation.

#### ***Principle of support to the development of human resources***

Criteria

- *ensuring protection of human health;*
- *optimum development of human resources (in all areas beneficial to life);*

Implementation of OP R&D will significantly support the principle of human resources development. It will give various groups of the population access to better education and the possibility to carry out research and development activities with an improved technical and knowledge base. This will significantly broaden the possibilities for obtaining specific information and knowledge. One of the framework activities is the support of the return of Slovak scientific workers (including graduates and post-graduates) working abroad to Slovakia. Research and development activities under OP R&D may also be orientated on the protection of public health; this principle is indirectly present in all potential research and development activities, as R&D aim to find new procedures, outputs and technologies, which should encompass, in addition to the environmental and economic aspects, also the social aspect (including protection of health).

#### ***Environmental principle***

Criteria

- *preservation and support of biodiversity, vitality and resistance of ecosystems;*
- *optimisation of spatial arrangement and functional use of landscape and ensuring that it forms a territorial system of ecologic stability;*
- *preservation and support of life-support systems;*
- *preserving high quality of components of the environment - minimisation of negative impacts onto the environment;*

- *minimisation of the use of non-renewable sources and preferred use of renewable sources (with their use limited by their reproduction ability);*

Implementation of OP R&D has no impacts on preservation and support of biodiversity, vitality and resistance of ecosystems, optimisation of spatial arrangement and functional use of the country and on ensuring that it forms a territorial system of ecological stability, as the majority of research and development potential and higher schools are located outside natural territories (mostly in territories heavily influenced by human activity). Research and development should in the future bring new technologies, which will help to preserve the quality of the individual components of the environment and minimise negative environmental impacts. Research and development carried out by different economic sectors has been concentrated on the use of renewable resources in recent years, as the use of non-renewable resources is limited by time (possibility of using up all available resources) and use of renewable resources supports the objective of a sustainable society.

### ***Principle of auto-regulating and self-supporting development***

Criteria:

- *revealing and using natural auto-regulating and self-supporting mechanisms and mechanisms stimulated by human activity;*
- *support of closed loops of production and consumption;*

Research and development should be guided by this principle.

### ***Efficiency principle***

Criteria:

- *preserving optimum mass-energy cycles;*
- *minimisation of raw materials and energy consumption;*
- *reduction of the number of outputs and minimisation of losses;*
- *introduction of and support to the use of environmental economy tools;*

Research and development should be guided by this principle.

### ***Principle of reasonable sufficiency***

Criteria:

- *reasonable and thoughtful use of resources and their protection;*
- *support of suitable forms of self-sufficiency;*

Research and development should be guided by this principle.

### ***Principle of preventive caution and anticipation***

Criteria:

- *giving preference to preventive measures over the elimination of undesirable consequences of activities;*
- *respecting possible risks (including unverified risks).*

Implementation of the measures under OP R&D may help to reveal risks and identify suitable preventive measures in many areas of human activity by creating the preconditions for better use of new technologies and procedures, which should respect the above principle.

### ***Principle of respecting the needs and the rights of future generations***

Criteria

- *preserving the possibility of using existing resources by future generations;*
- *preserving equal rights of future generations;*

Implementation of the measures of OP R&D will directly and indirectly support the above principle.

### ***Principle of intra-generation and inter-generation and global equality of rights of Earth inhabitants***

Criteria:

- *ensuring human rights in all directions and systems;*
- *ensuring national, racial and other equality;*
- *ensuring the rights of other living creatures.*

Implementation of the measures of OP R&D will create the preconditions for access to research and development without regard to any differences between people (for example discrimination on the grounds of nationality, race or other differentiation). A negative impact of OP R&D could be the application of research and development of certain products on living organisms in order to establish the reactions of these organisms to the product (for example animal testing).

**Principle of cultural and social integrity**

Criteria:

- *preferring development based on internal development potentials over mechanically imported development;*
- *preserving and renewal of positive values of the country, of social and cultural identity;*
- *support of the local ambience, folks culture and spiritual atmosphere;*
- *revival of traditional activities with sensitive use of modern technologies;*
- *support of spontaneous forms of help or self-help.*

Implementation of the measures under OP R&D will create the preconditions for preferring development based on internal development potentials over mechanically imported development. It is neutral to the other criteria of the above principle.

**Principle of non-violence**

Criteria

- *application of peaceful and consensual methods of management;*
- *avoiding the use of any forms of violence.*

Implementation of OP R&D may have both positive and negative impacts, as research and development may be carried out for peaceful or military purposes.

**Principle of emancipation and participation**

Criteria

- *promoting reasonable level of decentralisation and participation of members of the community;*
- *creation of jobs and providing access to public assets and services;*
- *participation of community members in decision-making processes and strengthening of public control.*

The implementation of OP R&D is more or less neutral to this principle. It should positively influence jobs creation.

**Solidarity principle**

Criteria

- *application of tolerance and understanding;;*
- *support to mutual help and shared responsibility.*

As the implementation of OP R&D is based on cooperation (both at national and international level), OP R&D will have a positive impact in light of this principle.

**Subsidiarity principle**

Criteria

- *delegation of responsibility and authority to the lowest hierarchical level possible (closest to citizens).*

The implementation of OP R&D is neutral to this principle.

**Principle of acceptable errors**

Criteria

- *giving preference to approaches allowing reinstatement to original condition - minimisation of irreversible changes with difficult-to-anticipate consequences;*
- *immediate publication of errors and failures and their removal, or mitigation.*

In research and development, errors and failures may reasonably be expected; implementation of the measures of OP R&D should therefore consistently apply this principle.

**Optimisation principle**

Criteria

- *targeted management and coordination of all activities towards finding a balanced condition, removal of undesirable consequences, sources of instability and risks;*



- search for and support of activities in the public interest with multidimensional positive influences.

Implementation of the measures of OP R&D will support targeted management and coordination of all activities towards finding a balanced condition, removal of undesirable consequences, sources of instability and risks.

**Principle of socially, ethically and environmentally sound economy, decision-making, management and behaviour**

Criteria

- application of all 15 above principles in synergy with political, economic, organisational, educational and other tools supporting value orientation, creation of culture and values and promoting building of the relevant institutions and their activities.

In line with the above sentence, the implementation of OP R&D will support this principle.

*Overview of the impacts of OP R&D in relation to the principles of sustainable development*

Principle	Criterion	Type of impact of OP R&D:								
		Primary	Secondary	Short-term	Medium-term	Long-term	Positive	Negative	Cumulative	Synergic
Principle of support to the development of human resources	Ensuring protection of human health	X X	X X	X	X		X X	X	X	X
	Ensuring optimum development of human resources (in all areas beneficial to life)	X X	X X	X	X X	X X	X		X	X X
Environmental principle	Preservation and support of biodiversity, vitality and resistance of ecosystems									
	Optimisation of spatial arrangement and functional use of the country and ensuring that it forms a territorial system of ecologic stability									
	Preservation and support of life-support systems;									
	Preserving high quality of components of the environment - minimisation of negative impacts onto the environment	X	X		X	X X	X	X	X	X
	Minimisation of the use of non-renewable sources and preferred use of renewable sources (such use shall be limited by their reproduction ability)		X			X	X			X
Principle of auto-regulating and self-supporting development	Revealing and using natural auto-regulating and self-supporting mechanisms and mechanisms stimulated by human activity	X				X	X			
	Support of closed loops of production and consumption	X	X			X		X		
Efficiency	Preserving optimum mass-energy	X	X		X	X	X			X

<b>principle</b>	<i>cycles</i>	X	X			X	X			
	<i>Minimisation of raw materials and energy consumption</i>	X	X		X	X	X	X	X	X
	<i>Reduction of the number of outputs and minimisation of losses;</i>	X	X		X	X	X	X	X	X
	<i>Introduction of and support to the use of environmental economy tools;</i>		X			X	X	X		X
<b>Principle of reasonable sufficiency</b>	<i>Reasonable and thoughtful use of resources and their protection;</i>		X			X	X	X		X
	<i>Support of suitable forms of self-sufficiency;</i>		X							
<b>Principle of preventive caution and anticipation</b>	<i>Giving preference to preventive measures over the elimination of undesirable consequences of activities;</i>	X	X	X	X	X	X	X		X
	<i>Respecting possible risks (including unverified risks).</i>	X	X	X	X	X	X	X		X
<b>Principle of respecting the needs and the rights of future generations</b>	<i>Preserving the possibility of using existing resources by future generations;</i>	X	X	X	X	X	X	X		X
	<i>Preserving equal rights of future generations;</i>		X			X	X			X
<b>Principle of intra-generation and inter-generation and global equality of rights of Earth inhabitants</b>	<i>Ensuring human rights in all directions and systems;</i>	X	X	X	X	X	X			
	<i>Ensuring national, racial and other equality;</i>	X	X	X	X	X	X			
	<i>Ensuring the rights of other living creatures.</i>							X		
<b>Principle of cultural and social integrity</b>	<i>Preferring development based on internal development potentials over mechanically imported development;</i>	X	X	X	X	X	X		X	X
	<i>Preserving and renewal of positive values of the country, of social and cultural identity;</i>									
	<i>Support of the local ambience, folks culture and spiritual atmosphere;</i>									
	<i>Revival of traditional activities with sensitive use of modern technologies;</i>									
	<i>Support of spontaneous forms of help or self-help.</i>									
<b>Principle of non-violence</b>	<i>Application of peaceful and consensual methods of management;</i>									
	<i>Avoiding the use of any forms of</i>					X	X	X		

	<i>violence.</i>									
<b>Principle of emancipation and participation</b>	<i>Promoting reasonable level of decentralisation and participation of members of the community</i>									
	<i>Creation of jobs and providing access to public assets and services;</i>	X		X	X	X				
	<i>Participation of community members in decision-making processes and strengthening of public control.</i>									
<b>Solidarity principle</b>	<i>Application of tolerance and understanding;</i>									
	<i>Support to mutual help and shared responsibility.</i>	X	X	X	X	X	X		X	X
<b>Subsidiarity principle</b>	<i>Delegation of responsibility and authority to the lowest hierarchical level possible (closest to citizens).</i>									
<b>Principle of acceptable errors</b>	<i>Giving preference to approaches allowing reinstatement of original condition - minimisation of irreversible changes with difficult-to-anticipate consequences</i>									
	<i>Immediate publication of errors and failures and their removal, or mitigation.</i>	X	X	X	X	X	X	X	X	X
<b>Optimisation principle</b>	<i>Targeted management and coordination of all activities towards finding a balanced condition, removal of undesirable consequences, sources of instability and risks</i>	X	X	X	X	X	X	X	X	X
	<i>Search for and support of activities in the public interest with multidimensional positive influences.</i>	X	X	X	X	X	X	X	X	X
<b>Principle of socially, ethically and environmentally sound economy, decision-making, management and behaviour</b>	<i>Application of all 15 above principles in synergy with political, economic, organisational, educational and other tools supporting value orientation, creation of culture and values and promoting building of the relevant institutions and their activities.</i>	X	X	X	X	X	X	X	X	X

#### **Impacts on environmental legislation**

Implementation of OP R&D will stimulate research and development in the Slovak Republic, which will produce new knowledge, technologies, products and procedures and have new impacts onto the environment. On the other hand, the requirements of both the Slovak and EU legislation are increasing. It is therefore reasonable to expect changes to environmental legislation based on new findings in research and development.

#### **Impacts on population**

Implementation of OP R&D will have both negative and positive impacts on population. Negative impacts (during modernisation of buildings, replacement of boilers, replacement of old instrumentation etc.) will be mostly local, short-term and less significant impacts and will not

cause any significant deterioration of the public health. These impacts include noise, dust emissions, waste production etc. A specific impact of the implementation of priority axis 'Infrastructure of higher schools' will be increased quantity of other and hazardous waste produced. Increased waste production will be caused by the replacement of old (frequently inoperable) instrumentation (WEEE) and reconstruction of chemical, biological, pharmaceutical and other laboratories. Most (reusable and non-reusable) waste will be produced in the reconstruction of buildings (including special and hazardous waste). Hazardous waste will be produced for example when replacing old roofs containing asbestos; construction waste may also be contaminated by hazardous substances, old unused chemicals, etc. Another positive impact of implementation of OP R&D will be the increase of employment in research and in the area of the knowledge economy. An indirect positive impact will be linking of science and research to the business sector with positive impacts on the latter. This will lead to more progressive use of new knowledge and introduction of new less energy demanding technologies, which should improve working conditions, produce energy savings and increase the standard of living. Implementation of the OP will have positive impacts on public health particularly thanks to the development of new drugs and new treatment and relaxation methods and improvement of the working environment and jobs creation. This is an aspect, which has an impact on mental health in particular.

#### ***Impacts on individual environment components***

Implementation of OP R&D will have no direct negative or positive impacts on soil or subsoil. An indirect positive impact will be the application of new scientific knowledge related to the use and protection of soil and subsoil. Negative impacts may include use of land for construction works and changes of subsoil (local impacts with minimum significance in the long term, as the land affected will mostly be land within towns and communities).

New knowledge in science and technology potentially acquired during the implementation of OP R&D, including in particular development of new technologies limiting the production of substances causing global warming etc., will positively influence ambient air protection and mitigate negative impacts on climate.

Building, reconstruction and modernisation of higher schools infrastructure will have short-term impacts onto ambient air. Infrastructure of higher schools is often in an unsatisfactory condition and will require performance of construction works, which can lead to moderate local pollution of ambient air (particularly with dust).

After the works are completed, the quality of ambient air will improve slightly in the entire territory of Slovakia and in larger cities in particular (as the seats of higher schools are located mostly in heavily used areas) due to replacement of old low-efficiency boilers and change of the fuel base. Positive impacts onto ambient air are anticipated from the practical application of new scientific knowledge orientated on the reduction of emissions and improvement of the quality of ambient air.

As in the case of the other components of the environment, both types of impacts can be expected on water. Negative impacts will last for limited period of time (reconstruction of individual infrastructure components). Positive impacts can be anticipated from improved links between R&D and the rest of the society and from the application of inventions and new knowledge concerning water protection and economical and efficient use of water.

No direct negative impacts on fauna, flora and biotopes are expected during the implementation of OP R&D. The priority focusing on higher schools may support greenery as part of the campus. Buildings of higher schools to be reconstructed are located prevailing in towns (often town centres), far away from protected fauna and flora, protected biotopes and territorial systems of ecological stability. The construction works will therefore have no significant negative impacts on biota as a whole.

Reconstruction of facades of old buildings (often in deplorable condition) will have smaller and insignificant positive impacts.

Similarly to impacts on landscape, impacts on urban areas will also be of no significance. Older higher schools (with long-lasting tradition) often reside in historical buildings, which are subject to monuments protection, form part of monuments protection zones or are themselves of

historical value. The reconstruction of these buildings shall therefore consider and prevent potential negative impacts. On the other hand, reconstruction will increase the value of such historical building.

Implementation of OP R&D is not expected to have any negative impacts on archaeological or palaeontology sites. Implementation of OP R&D will also have a positive impact on intangible values.

***Overall, it can be concluded that the adoption and implementation of OP R&D will have no significant negative impacts at cross-border, national, regional and local level, on subsoil, relief, mineral resources, geo-dynamic and geo-morphological phenomena, soil, local climate, ambient air, surface waters and groundwater, noise and other physical and biological characteristics (such as vibrations, radioactive and magnetic radiation, lighting conditions, heat and smell), gene pool, biodiversity, biota, ecological stability, protected trees, protected territories according to Act No. 543/2002 Coll. on nature and landscape protection, as amended, landscape and its structure and use, scenery, territorial systems of ecological stability, population and population health, waste management, health risks, social and economic consequences and relationships, quality of life and its vulnerability, urban areas and use of land, cultural and historical monuments, palaeontology and archaeological sites, structure of settlements, architecture, buildings, intangible cultural values, agricultural and industrial production, forestry, transport, buildings, activities, infrastructure, services, recreation and tourism.***

***The overall assessment of the impacts of the strategic document with nationwide coverage (OP R&D) onto the environment represents a synthesis of the analysed impacts of programme activities on the population, living and non-living nature, landscape and economical use of the environment. The individual impacts and their combinations are not expected to have any negative synergic or cumulative impacts, which would lead to a significant deterioration of the condition of the environment and public health on cross-border, national, regional and local basis, provided the conditions listed in section VI 'CONCLUSIONS' of this position are complied with.***

*Other possible impacts of OP R&D onto the environment are described in more detail in the notification, the assessment report, the expert assessment and, last but not least, in the document of OP R&D itself.*

## **V OVERALL ASSESSEMENT OF IMPACTS OF THE STRATEGIC DOCUMENT ON PROPOSED PROTECTED BIRD AREAS, AREAS OF EUROPEAN IMPORTANCE OR THE EUROPEAN NETWORK OF SPECIAL PROTECTED AREAS (NATURA 2000).**

Based on the results of the impacts assessment it can be concluded that the adoption and implementation of OP R&D (and the activities under the strategic document, either independently or in mutual relationship) will have no negative impacts on the proposed protected bird areas, areas of European importance or the European network of special protected areas. The description of impacts is possible at theoretical level only, as the locations, in which the activities will be carried out, are not known yet.

As assumed by OP R&D, most investments will be carried out in urban areas. As a result, the implementation of OP R&D should have no negative impacts on protected areas and sites of European importance. To the contrary, increased efficiency of research, strengthening of institutional capacities, linking of research and practice could have a positive impact on the protection of sites of European importance and creation of the NATURA network (for example application of new progressive methods).

## **VI CONCLUSIONS**

### **1. Result of the process of environmental impact assessment of the strategic document**

Based on the results of the process of environmental impact assessment of OP R&D carried out in accordance with the Act and taking into account the current use of the territory and

the capacity of the natural environment, the significance of the expected impacts of OP R&D onto the environment, protected territories and public health (in terms of their likelihood, extent and duration), with particular focus on compliance with other strategic documents at cross-border, national, regional and local level; further considering the contents of the notification, the scope and the timing of the assessment, the contents of the Assessment Report on draft OP R&D, the results of the public consultation process, the expert assessment and consultation and current level of knowledge,

**it is hereby recommended**

approving the strategic document **"Operational programme Research and development"** subject to the conditions contained in section VI. "Conclusions", point 3 "Recommendations for reworking, amending and modifying the draft strategic document" of this position document. If the individual projects supported under OP R&D fulfil the criteria for environmental impact assessment according to the Act, it will be necessary to carry out EIA according to the Act, prior to issuing any permits relating to such projects in accordance with specific legal regulations.

**2. Recommended option**

The draft **"Operational programme Research and development"** is recommended for approval in the version, whose environmental impacts were assessed according to the Act.

**3. Recommendations for reworking, amending and modifying the draft strategic document**

According to the results of the environmental impact assessment of OP R&D, it is not necessary to rework, amend or modify the draft strategic document. It is, however, necessary to include into the programme monitoring of environmental indicators and the following measures aimed at ensuring optimum environmental performance of implementation of this strategic document with nationwide coverage:

1. Ensure comprehensive environmental impact assessment at project level in line with the Act in order to optimise the selected solutions and their location, promote selection of environmental technologies, ensure linking of implementation steps in time and content and achieve a balance between environmental, social and economic aspects of the projects implemented.
2. When deciding on projects selection, coherently monitor the aspect of sustainability of the supported activity after the completion of the co-financed project and balance between short-term and long-term impacts.
3. When deciding on projects selection, consider the balance of local, regional and national impacts of projects.
4. Ensure transparency, including access to information, in the whole process of issuing calls for project submission, project selection and allocation of assistance, as well as monitoring and evaluation of projects, individual priority axes and the whole programme, while respecting the competition rules.
5. Incorporate environmental criteria into the overall system of projects evaluation and selection.
6. Incorporate into the system of projects evaluation and selection criteria respecting the protected territories and species according to Act No. 543/2002 Coll. on nature and landscape protection, as amended.
7. Monitor and evaluate the impacts of OP R&D onto the environment and public health.
8. Ensure that applicants are sufficiently aware of environmental aspects and of possible links between the projects submitted and the environment.

9. Increase the efficiency and simplify the preparation and implementation of projects so that they are accessible to a broader group of beneficiaries from various regions and municipalities without any special requirements concerning their financial, technical and personal capacities, while ensuring objectivity of selection and consistency of control.

#### **4. Substantiation of the position on environmental impact assessment of the strategic document with nationwide coverage**

This position document was prepared in accordance with section 17. 12 of the Act, based on the notification, the scoping and timing of EIA, the Assessment Report on draft OP R&D, the public consultation process, the expert assessment and other consultations.

Documents were evaluated and the position prepared in accordance with the provisions of the Act, Regulation of the MoEnv SR No 113/2006 Coll. setting out details on professional qualification for the purposes of environmental impact assessment and assessment of the requirements of SEA Directive.

When recommending the draft OP R&D for approval, the anticipated environmental, social and economic impacts on cross-border, national, regional and local level, the impacts on sub-soil, relief, mineral resources, geo-dynamic and geo-morphological phenomena, soil, local climate, ambient air, surface waters and groundwater, noise and other physical and biological characteristics (such as vibrations, radioactive and magnetic radiation, lighting conditions, heat and smell), gene pool, biodiversity, biota, ecological stability, protected trees, protected territories according to Act No. 543/2002 Coll. on nature and landscape protection, as amended, landscape and its structure and use, scenery, territorial systems of ecological stability, population and population health, waste management, health risks, social and economic consequences and relationships, quality of life and its vulnerability, urban areas and use of land, cultural and historical monuments, paleontology and archeological sites, structure of settlements, architecture, buildings, intangible cultural values, agricultural and industrial production, forestry, transport, buildings, activities, infrastructure, services, recreation and tourism were taken into account.

It follows from the results of the environmental impact assessment that the version of OP R&D, which was subject to environmental impact assessment, is acceptable in terms of the overall anticipated (positive and negative) environmental impacts.

Provided the recommendations contained in this position document are accepted and implemented and consistent monitoring is put into place, it is possible to minimise most anticipated and existing negative impacts of OP R&D implementation and ensure that positive impacts prevail.

The Assessment Report identifies, describes, evaluates and quantifies all significant impacts of OP R&D onto the environment and public health. The Assessment Report and the expert assessment prepared by a professionally qualified person have clearly demonstrated the potential of positive impacts of OP R&D onto the environment and development of human resources and the possibility to eliminate or minimise potential negative environmental impacts of OP R&D, provided the preventive measures are carried out and environmental performance and implementation of the individual projects are properly monitored.

In accordance with the strategy for sustainable development, the impacts of OP R&D on economic, social and environmental sphere were identified.

#### **5. Proposal of monitoring arrangements**

The Member State shall set up a monitoring committee (MC) for each operational programme within three months after its approval by the European Commission (EC). The primary role of MC is supervising the efficiency, effectiveness and quality of programme implementation. The tasks, the work and the composition of the monitoring committee shall be governed by the statute and by the rules of procedure, which shall be approved by the monitoring committee. The main tasks of the monitoring committee in accordance with Article 65 of the General Regulation are:

- it shall approve the criteria for selecting the operations financed within six months of the approval of the OP and approve any revisions of those criteria, if necessary;
- it shall consider and approve proposals to change or amend the content of the operational programme
- it shall periodically examine the results of implementation, particularly the achievement of targets of the operational programme and the evaluations;
- it shall consider and approve the annual and final reports on implementation prior to their submission to the Commission;
- it shall be informed of the annual control report, or of the part of the report referring to the operational programme concerned, and of any relevant comments, the Commission may make after examining the report;
- it may propose to the managing authority (MA) any revision or examination of the operational programme likely to make possible the attainment of the relevant Fund's objectives or to improve the management of the operational programme, including financial management.

In accordance with section 16 of the Act, the ordering party (departmental authority at the same time) shall ensure that the environmental impacts of the approved OP R&D are monitored and evaluated or that existing monitoring arrangements are used, in order to prevent duplicity in monitoring. Monitoring and evaluation of environmental impacts of OP R&D includes systematic monitoring and evaluation of impacts, evaluation of the programme's efficiency, comparison of the anticipated impacts stated in the Assessment Report and the impacts actually occurring.

Should the ordering party establish that the actual environmental impacts of implementation of OP R&D (which was subject to assessment according to the Act) are worse than those described in the Assessment Report; it shall take appropriate measures for their mitigation and arrange for a change, amendment or revision of OP R&D.

The monitoring committee shall, as part of its tasks relating to monitoring and evaluation of impacts of OP R&D, ensure:

- that criteria for projects selection and evaluation of progress and attainment of the objectives of projects carried out on the basis of the strategic document are designed and approved in such a way that long-term and synergic effects of projects and compliance with the principle of sustainable development, including environmental impacts, are evaluated as a priority,
- monitoring of environmental impacts, broken down into priority axes, specific objectives and activities;
- monitoring of impacts on public health;
- preparation and publication of monitoring reports and results, as well as continuous assessments of impacts of OP R&D implementation;
- that environmental indicators and indicators of public health are incorporated into the overall system of monitoring of impacts of OP R&D implementation;
- that the monitoring system is linked to the system of projects selection and evaluation, through the use of environmental criteria.

## **VII CONFIRMATION OF ACCURACY OF DATA**

### **1. Authors of the position document**

Ministry of Environment of the SR:  
department of environmental impact assessments;

### **2. Confirmation of accuracy of data**

Ing. Viera Husková  
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Ministry of Environment of the SR

### **3. Place and date of issuing the position document**

Bratislava, 8 February 2007