

2.6 THE FINDINGS OF THE STRATEGIC ENVIRONMENTAL ASSESSMENT

NON-TECHNICAL SUMMARY OF THE STRATEGIC ENVIRONMENTAL IMPACT STUDY

General comments

The OP Competitiveness and Entrepreneurship gives specific definition to the strategy for strengthening the competitiveness and extrovert entrepreneurship of the Greek economy in the context of the more general national development strategy for the new period 2007-2013.

It is anticipated that the strategy adopted and the modes of intervention defined in the Programme will have a positive impact on competitiveness, extroversion and entrepreneurship in Greece and will ensure positive development results for the entire Greek economy.

The strategy covers the areas of processing, services, trade, consumer protection, research-technology, energy, tourism and culture – thereby covering the areas of competence of the Ministry of Development, Ministry of Tourism and Ministry of Culture.

Area of Study

The Operational Programme Competitiveness and Entrepreneurship covers – on the strategic and funding level – a geographical area corresponding to the eight pure Objective 1 «Convergence» Regions namely E. Macedonia & Thrace, Ionian Islands, Epirus, Thessaly, W. Greece, Peloponnese, N. Aegean and Crete. The broader region of study is defined as the entire country.

The present Strategic Environmental Impact Study takes the whole country as its area of study, which involves the necessary expansion of the geographical field of implementation of the Programme (eight Pure Objective 1 «Convergence» Regions), in which it is expected that there may be environmental effects, whether direct or indirect, from implementation of the planned objectives and actions of the Programme.

Competitiveness in Greece

The level of competitiveness of the Greek economy remains comparatively low, a situation which undermines attempts to ensure self-generating development. The rate of growth for 2005 was 3.7%, while for 2006 and 2007 it is expected to rise to 3.8%, reaching 4% in 2008. In the first half of 2006 the growth rate rose to 4.1%, with favourable indications and prospects for the second half of the year, a fact which indicates that the growth of the economy could exceed the forecasts of the Stability and Growth Programme.

Strategic Environmental Assessment (SEA) procedure - Directive

The Strategic Environmental Assessment (SEA) is a procedure for evaluating the environmental impact of certain projects and programmes, introduced to Greece by Joint Ministerial Decision 107017/28.8.2006 (Gov. Gazette 1225/B/5-9-2006), one of the measures aligning Greek legislation with Directive 2001/42/EC. The purpose of Directive 2001/42/EC is to promote Viable or Sustainable Development, with high levels of environmental protection and incorporating environmental issues into preparation and legislation for projects and programmes. The preparation of the Strategic Environmental Impact Study (SEIS) forms the core of the SEA procedure.

Other related programmes

The Operational Programme Competitiveness and Entrepreneurship is directly correlated with the National Reform Programme, the National Strategic Reference Framework and the Revised Lisbon Agenda, as well as the following programmes: Operational Programme Environment and Sustainable Development, Operational Programme Human Resources, Operational Programme Improved Accessibility, National Plan for Solid Waste, National Programme to Reduce Emission of Greenhouse Gases, National Physical Planning, National Strategy for Sustainable Growth, Regional Operational Programmes and Regional Land Use Plans.

Environmental Situation

Air

On the national level emissions of the main pollutants tend to follow the rate of increase in GDP. However, in the case of nitrogen oxides (NO_x) and sulphur dioxide (SO₂), there has been a significant trend towards divergence since 1998. The European Union's new Directive 2001/81/EC frames its basic strategy and objectives for reducing emissions over the period 2000-2003. This strategy lays down objectives for reducing emissions by 2030 in comparison with the 2000 levels as follows: NO_x by 47%, NMVOCs by 45%, SO₂ by 67%, NH₃ by 6%, PM₁₀ and PM_{2,5} by 38% and 46% respectively.

Climate

Greece is committed to limiting the increase in emissions of greenhouse gases over the period 2008 – 2012 to 25% of levels in the relevant baseline year. Total greenhouse gas emissions in Greece in 2002 increased by 21.1% over the baseline levels.

Noise

According to Ministry of the Environment figures almost all urban regions of the country suffer from serious degradation of the acoustic environment. Of course the problem is worse in the major cities like Athens (where 40% of the country's population and 50% of its industrial and manufacturing activity are to be found, as well as 55 % of all vehicles and 70% of services), Thessaloniki, etc.

Water Environment

The total water capacity of the country is estimated at about 57,100 hm³/year. Consumption of water is calculated at 8,243 hm³/year, of which 83% is used for irrigation, 1% for livestock farming, 13% for domestic water supply and 3% for industry and energy. In the eight pure convergence regions demand for water amounts to 4,753,2 hm³/year of which 4,377 hm³/year is used for irrigation, 61.3 hm³/year for livestock farming, 276.9 hm³/year for domestic water supply and 31 hm³/year for industry and energy. In general terms the quality of Greece's water resources is deemed acceptable.

Soil

The main problem in soil resources in Greece takes the form of desertification (including erosion and salination) which results in a reduction in productivity and degradation of quantity and quality of water resources.

Biodiversity

Greece has nominated 239 areas as 'Sites of Community Importance' under Directive 92/43/EEC and has declared 151 Special Protection Zones for birds, pursuant to Directive 79/409/EEC.

10 National Forests and 6 National Parks have also been declared, while 19 sites have been designated as forests of exceptional beauty, 51 areas have been listed as protected natural monuments, 7 controlled hunting areas have been named, and 21 state-controlled game breeding areas and 10 wetlands of international importance have been established.

Of the total surface area of 78,746 km² of the pure convergence regions, 21,080.5 km² comprise areas proposed for inclusion in the Natura 2000 network, i.e. some 27% of the total area of these regions.

Population

At the beginning of 2004 the population of Greece amounted to 11,040,650. 37% of the population live in the two main cities, while 60% live in cities of more than 10,000 inhabitants. The age distribution is showing a shift towards the older groups, with the ageing indicator rising sharply over the period 1992-2003. Life expectancy at birth increased for men to 76.6 years in 2004 and for women to 81.5 in the same period.

Socio-economic Environment

In the second quarter of 2004 the number of those in part-time employment in the pure convergence regions was 81,294, with 1,482,472 in full-time employment. The total labour force amounted to 1,563,766. The percentage of those in part-time employment in the pure convergence regions was 5.2%.

The level of employment in Greece over the period 1994-2005 rose from 54.2% to 60.1%. The indicator of overall entrepreneurship places Greece just above the EU average (5.8% compared with 5.5%). The overall indicator of processing output has been largely unchanged since 2000, following several years of increase (1995-2000). In national terms there has been a trend towards de-industrialization, with a fall in factory numbers and employment levels.

Tourism is the fastest-growing economic sector, contributing 17% to total GDP.

Although general levels of health are good in Greece, they are not improving at the same rate as in other Mediterranean countries, but still lag behind in prevention, organization of public health and primary care, as well as staffing with suitable personnel.

Although Greece is endowed with a wealth of natural resources, it still produces little energy from RES, specifically 9.6% for 2003 (compared with an EU-25 average of 12.7%). Directive 2001/77/EC envisages an indicative target of RES use, including major hydroelectric projects, of 20.1% of gross energy consumption by 2010, an objective consistent with Greece's Kyoto obligations.

Cultural Heritage

The country's cultural heritage consists of the cultural goods located within its borders, including its territorial waters and other marine areas where Greece has jurisdiction under international law. The cultural heritage also includes intangible cultural assets and is protected under Law 3028/2002.

Alternatives and Evaluation

In drawing up the programme the zero solution was examined, as well as three additional alternative solutions, as follows:

The first solution focuses on rapid growth in pursuit of immediate results for the programme.

The second solution also sets rapid growth as its main objective, but investing only 55% of resources in strengthening entrepreneurship in the classic sectors of the economy.

The third solution seeks a more balanced growth over time. About 15% of resources are channelled into actions supporting transition to the knowledge economy, more than 25% go to the energy sector, while improvement of the business environment and upgrading of human resources attract more than 20%. Finally, strengthening entrepreneurship absorbs about 30% of resources, with the emphasis on innovative actions in high added value areas.

The third of these options is to be preferred in environmental terms. Selection of this solution does not rest only on environmental criteria, but also on the fact that it seeks a balanced and viable growth over time, emphasizing not only direct productive investments and energy, but also the structural changes which will make the economy more competitive.

Operational Programme Competitiveness and Entrepreneurship

The productive, entrepreneurial, extrovert and innovative orientation of the national development strategy sets the following development priorities:

Strengthening of Research, Technology and Innovation in all sectors as a basic factor in the restructuring of the Greek economy and the transition to the knowledge economy.

Strengthening entrepreneurship and extroversion – Upgrading the country's productive fabric – Increasing productive investment and inflows of Foreign Direct Investment and general qualitative upgrading of products and services in all sectors and industries of the Greek economy covered by the Programme

Improving the statutory environment and support structures, infrastructures, mechanisms and tools for the development of entrepreneurship – strengthening competition – consumer protection

Integration of country's energy system and strengthening of sustainability

Environmental Impact

The anticipated impact on the environment in respect of the Priority Axes (PA) of the OP Competitiveness and Entrepreneurship is estimated as follows:

AP1 mostly neutral to positive, mainly indirect, appearing in the medium to long term and of permanent character

AP2 neutral, negative or positive and without the taking of measures may prove particularly negative; indirect and direct, appearing in the short to medium term and of mixed character in terms of duration

AP3 mostly neutral to positive, direct and indirect, appearing in the medium to long term and of permanent character

AP4 neutral, negative or positive, some impact may prove particularly negative if measures are not taken, mainly direct, appearing in the short term and of mixed character in terms of duration

The effects of the OP Competitiveness and Entrepreneurship in the main environmental reference areas, and the measures proposed to counter them, are presented in the table below.

Environmental/Social sector	The programme will:	Degree	Comments
Biodiversity	Protect habitats and species? Promote biodiversity as a national resource?	-	<p>The impact of the OP is expected to be negative, owing to increased production and building activity, especially activities which may affect natural sites and species of flora and fauna.</p> <p>It is possible that through the OP actions may be undertaken to improve the situation by construction of 'green' infrastructures, while actions to promote the natural environment have been provided for in the Tourism sector.</p> <p>Full impact studies need to be conducted and structural measures taken in all cases where there is a chance of impact on natural sites and species.</p> <p>There can only be improvement if the prospect is accepted of development with parallel taking of measures to protect biodiversity. If the usual practices are continued, the impact will remain negative.</p>
Population	Increase the population?	0	No particular impact is expected on overall population, although there may be local effects from movement of jobs and workers
Human Health	Improve basic characteristics of health by: Reducing poverty and unemployment? Reducing accidents?	+	<p>Higher incomes will allow more people to access satisfactory health services, while increased participation in economic activity by disadvantaged groups and individuals will also allow them access to health services.</p> <p>A positive impact will be had by improved working conditions, reduced accidents and improved conditions of public health. Healthy life and leisure/work balance programmes will be positive steps towards improving conditions of health</p> <p>Small deterioration in conditions of health may result from increased air pollutants.</p>
Flora and fauna	-	-	See biodiversity
Soil	Reduce loss or degradation of soil? Reduce generation of solid waste?	-	<p>The OP is not expected to have a serious impact on degradation of soil quality, which is mainly due to intensive farming and certain productive and mining activities.</p> <p>Soil is expected to be lost, however, from the construction of workplaces and infrastructures, as well as the disposal of increased amounts of solid waste</p>
Water	Reduce generation of liquid waste? Protect water resources?	-	Increased production will result in increased pressure on water resources, in terms of quantity and quality. Even with better management, saving and recycling, it will be difficult to reverse current trends, at least during the implementation period of the OP.

Environmental/Social sector	The programme will:	Degree	Comments
Air	<p>Reduce emissions?</p> <p>Reduce polluting sectors and replace them with other, less polluting, activities?</p>	+/-	<p>The impact is expected to be mixed. Increased production and mobility, with parallel growth in transport volumes, will tend to increase air pollution, while positive results are expected from increased use of renewables and natural gas.</p> <p>It is difficult to estimate the precise effect of the OP, since no highly polluting facilities are expected to be built, while existing facilities may be reduced.</p>
Climate factors	<p>Improve energy-saving levels?</p> <p>Reduce energy consumed for each unit of GDP?</p> <p>Promote use of RES?</p> <p>Reduce greenhouse gas emissions?</p>	+/-	<p>Emissions of greenhouse gases are expected to rise, despite increased use of renewables, owing to production activities and increase in transport volumes.</p> <p>Only an increased use of RES beyond official targets, successful attempts to save energy and a change in transport philosophy and the way private individuals travel can reverse current trends.</p>
Assets	<p>Increase the value of assets</p>	+/?	<p>It is evident that increased disposable income will create further increase in assets through greater investment and surplus value. It is also likely that certain forms of production will have an adverse impact on isolated assets which, at the moment, cannot be defined in terms of space and time. Protection of these assets will be a matter for adequate policing and judicial efforts.</p>
Cultural heritage	<p>Achieve protection of buildings, monuments and sites of cultural interest?</p> <p>Protect local diversity and natural ways of life?</p>	+/-	<p>A mixed impact is expected, since while increased activity may have adverse effects, actions involving promotion and restoration as part of the upgrading of the tourist product may have a positive impact.</p>
Landscape	<p>Protect and improve the urban and rural landscape?</p> <p>Reduce the number of neglected areas?</p>	-	<p>The OP is expected to have a negative impact because of the probable establishment of new facilities and the increased housing pressure generated by higher incomes.</p> <p>Serious changes are required in attitudes and legislation if increased economic opportunities are to serve to fund actions to improve the landscape.</p>
Natural resources	<p>Reduce the ecological footprint?</p> <p>Reduce demand for raw materials?</p> <p>Strengthen use of recycled materials?</p> <p>Promote sustainable construction?</p> <p>Reduce use of natural</p>	+/-	<p>A mixed impact is expected, since increased production will lead to a rise in demand for raw materials, whereas certain actions in the OP promote sustainable management of natural resources.</p>

Environmental/Social sector	The programme will:	Degree	Comments
	resources?		
Viable accessibility	Ensure easy access to workplace by public transport? Improve access to markets? Reduce number of journeys?	-/+	A negative impact is expected because of the increase in journeys entailed by higher production, in part compensated for by improvement in the statutory framework governing entrepreneurship, networking and improved planning of activities.
Economic growth	Improve the quality of the country's productive fabric? Improve quality of the labour force? Contribute to increased wealth and better distribution of that wealth? Increase opportunities for access to employment?	++	The impact of the OP on economic growth is expected to be very positive The OP recognizes the existence of exclusions and seeks to end them The OP contains 4 priority axes relevant to the EU policies and Lisbon criteria
Tourism development	Promote sustainable tourism which preserves and promotes the environment? Extend the length of the tourist season? Improve accessibility and recognizability of cultural events?	+	The overall impact of the OP on the promotion of sustainable tourism is expected to be positive. Tourism is a key sector of the OP, with clear reference to sustainable tourism. The need to promote the tourism sector and improve the quality of services is clearly stated in the OP.
Energy	Improve the system of energy distribution? Improve network security? Promote energy-saving? Promote use of RES?	++	The overall impact of the OP on the energy sector is expected to be very positive The OP recognizes the need for integration and security of energy networks, the importance of energy saving and increased use of RES, and envisages actions to promote these specific targets

Tackling impact

There are two main components to the task of tackling the impact of the OP Competitiveness and Entrepreneurship. One depends on the programme itself and can be achieved through the use of tools such as environmental impact studies of the individual proposals, the use of options offered by individual actions in the programme, the introduction of criteria for selection and implementation of proposals and the provision of advice to interested parties. The second depends on the broader state machinery and can be achieved through statutory measures, national strategies, national physical planning, suitable specifications and, above all, an increase in the work of inspection and audit by the authorities.

Monitoring

The methodology used has allowed identification of indicators to monitor the impact of implementation of the OP; appropriate indicators are proposed for each individual environmental sector. It is evident that the need to organize the monitoring mechanism will make special demands on the infrastructures of the state in order to ensure continuity of recording. It will be necessary to rank the objectives and indicators in such a way that the monitoring mechanism can operate directly, allowing recording of impact and its evaluation to occur on a correct, objective basis. This will allow attainment of the objective of the Directive, namely the need for possible adjustment of the OP during implementation in order to meet the goal of sustainability.

The sets of indicators are listed below in summary form. This is not an exhaustive list.

Environmental sector	Indicators
Biodiversity, flora and fauna	How many significant habitats are in satisfactory condition Number and/or surface area of protected sites Level of biodiversity, comparison with EU (number of endemic and rare species)
Population and health	Anticipated years of healthy life Industrial accidents
Soil	Quantities of solid waste disposed of at controlled sites Growth in generation of waste, both total figure and per capita Recycling % (paper, glass, biodegradable waste, aluminium)
Water	Quality of surface waters Quality of underground waters
Air	Days on which quality limits are exceeded
Climatic factors and energy *	Emissions of greenhouse gases Growth in energy demand Percentage of energy from RES Percentage of savings in energy use
Management of natural resources Ecological planning and environmental management	Ecological footprint
Landscape and cultural heritage	Number of visitors Urban green space per inhabitant

* Of the above indicators, those associated with climatic factors and energy are closest to the OP.

Conclusions

The OP Competitiveness and Entrepreneurship not only promotes green entrepreneurship, which is one of its main components, but also has an enhanced

environmental dimension through its separate individual actions; however, this dimension is not sufficiently highlighted. Very small corrective interventions would suffice to emphasize this environmental dimension in both formal and substantive terms, strengthening the positive result of the various actions and weakening negative impact.

ENVIRONMENTAL APPROVAL DECISION

The Joint Ministerial Decision represents the formal environmental approval of the Operational Programme.

MONITORING MEASURES

Monitoring of the significant environmental effects is used to identify possible negative impact which may not have been anticipated, allowing corrective action to be taken. Monitoring is conducted by means of reports at the implementation stage, allowing corrective measures to be introduced where necessary. Indicators are recorded which are linked to the Programme actions and represent possible environmental changes. These indicators will be drawn from the Strategic Environmental Impact Study or defined by written agreement with the competent department of the Ministry of the Environment.

CONSULTATION WITH PUBLIC AUTHORITIES AND THE PUBLIC

By virtue of decision 125976/5.2.2007 of the Special Environmental Service of the Ministry of the Environment, in the context of article 7 of Joint Ministerial Decision ΠΕΧΩΔΕ/ΕΥΠΕ/οικ.107017/5.9.2006 (Gov. Gaz.1225B) a copy of the Strategic Environmental Impact Study was forwarded to

The Ministries of

- Economy and Finance
- Development
- Rural Development and Foods
- Culture
- Tourism
- Merchant Marine

- The Directorate of Planning, the Directorate of Air and Noise Pollution Control and the Departments of Natural Environment Management and General Environmental Issues of the Directorate of Environmental Planning, and the General Secretariat for Public Works of the Ministry of the Environment, Planning and Public Works.

- The Planning and Environmental Protection Agencies of Athens and Thessaloniki
- The Regional Councils of the thirteen Regions of the country
- The Planning Authority, responsible for publication of the Strategic Environmental Impact Study

The text of the Study has been posted on the website of the OP Competitiveness to allow the public to read and comment on the document.

During consultation with the public authorities, Regional Councils and interested members of the public, no objections to the Study were raised.

Given that there will be no significant impact on the environment of any other member state, no transnational consultations were required.

INCORPORATION OF ENVIRONMENTAL DIMENSION

Directive 2001/42/EC on Strategic Environmental Assessment and Joint Ministerial Decision 107017/5.9.2006 require assessment of the environmental impact of Operational Programmes co-financed by the ERDF. Strategic Environmental Assessment involves specific stages defined in the above Directive and Decision. The Strategic Environmental Impact Study of the OP Competitiveness and Entrepreneurship for the programme period 2007-2013 was prepared on the basis of

the specifications given in the above Joint Ministerial Decision, as defined more specifically in the circular issued by the Special Environmental Service and the Special Service for Strategic Planning and Evaluation of Development Programmes (July 2006) and the Manual of Strategic Environmental Assessment for Cohesion Policies 2007-2013» (GRDP Partnership, February 2006, Handbook on SEA for Cohesion Policy 2007-2013; Greening Regional Development Programmes Network).

The environmental dimension has been fully incorporated in the Programme: during its preparation there was cooperation between the drafting advisor and the author of the Strategic Environmental Impact Study. The proposals of the ex-ante evaluator for improving the environmental quality of the OP were also incorporated. In overall terms, and on the basis of the findings of the Strategic Environmental Impact Study, the Programme has achieved a high level of compatibility with the environmental dimension, so that no modifications of strategy or objectives are required. Isolated modifications were required for specific targets of the Programme, and at the level of indicative interventions. Some of these changes are covered in the final draft of the Programme. The observations of the Strategic Environmental Impact Study in respect of the introduction of criteria for environmental protection and energy-saving in the proposed investment projects, and the introduction of criteria for strengthening entrepreneurship in neglected areas have been included in the Joint Ministerial Decision and are incorporated in the implementation issues of the individual Priority Axes. Pursuant to the proposals of the Joint Ministerial Decision on approval of the Strategic Environmental Impact Study, the second Strategic Objective of the Programme and the Specific Objective involving strengthening of excellence were both reformulated to include a clearer commitment to the environmental dimension.

At all events, the environmental dimension and priorities of Göteborg are adequately incorporated in the Programme, as is confirmed by the Strategic Environmental Impact Study. The objectives and strategy of the Programme, for which the Strategic Environmental Impact Study does not recommend any amendment, are consistent with the general framework for environmental policies which has been laid down on the European level, and especially with article 6 of the European Union Treaty, on the inter-sectoral dimension of the environment, with the Göteborg conclusions on the EU Strategy for Sustainable Growth, and with the 6th Action Programme for the Environment and the thematic strategies.