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**ENVIRONMENTAL SUSTAINABILITY IN THE EU REGIONAL
POLICY– IMPLEMENTATION EXPERIENCES OF THE HUNGARIAN
ECONOMIC DEVELOPMENT PROGRAMMES**

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1. Research Objectives

As defined by the World Commission on Environment and Development in 1987 ‘sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs’¹. The essence of the model of sustainable development is that it combines the economical, environmental and social aspects. All these three elements must be jointly taken into account considering their interactions especially when designing and elaborating developmental strategies and programs as well as implementing particular measures and actions.

During recent decades, at both political and quasi-constitutional level, the European Union has, to some extent, acknowledged the philosophy of sustainable development. Member states realised that environmental sustainability objectives play a key role in community-level national and regional strategies and policies within the single market. Thanks to the Treaty of Amsterdam, sustainable development appears as a horizontal principle in regional policy regulations and all programmes and projects supported by the Funds must be in harmony with sustainable development requirements. The European Union explicitly expresses its dedication to sustainable development in its regulations governing those programmes that are implemented with the assistance of Structural Funds, and it targets the proper implementation of sustainable development principles as an objective for the member states. However, the success of programmes implemented with the co-financing of Structural Funds is largely dependent upon implementation practices. The degree of member-state commitment dictates how, and to what extent, environmental aspects are enforced during project selection and project implementation.

In compliance with EU regional policy regulations, the Hungarian institutional system of implementation also sets as an objective the proper use of sustainable development principles and guidelines in relation to Structural Funds resources. At the planning level, the Strategic Environmental Assessment ensures that programmes and measures comply with sustainable development principles. During implementation, project selection and evaluation, meeting environmental sustainability expectations is a fundamental criterion. However, the question

¹ World Commission on Environment and Development: Our Common Future, Oxford, 1987

remains as to whether environmental aspects are properly emphasized during the implementation phase.

The objective of the research is to provide an introduction and an in-depth examination of the practical implementation of environmental sustainability features in those Hungarian economic development programmes which are implemented under the auspices of the Structural Funds. The author wishes to uncover whether the implementing institutional system has the ability to enforce environmental sustainability principles throughout the entire process (embracing fundamental EU pillars, EU and national regulations governing Structural Funds implementation, Operational Programmes and implemented projects), or whether sustainability criteria have become lost or diminished by the time operations reach the actual development stage. This document unearths major progress indicators identified since the 2004-2006 programme period, and highlights major tools for enforcing sustainability features in the 2007-2013 Economic Development Operational Programmes. The author attempts to examine whether current methods of sustainability monitoring and enforcement are adequate for reaching sustainability objectives and unveils some suggestions concerning the further development of sustainability criteria systems.

2. Content, method and reasoning of research

The research provides insight into the most important international literature on sustainable development theory and highlights the relationships between globalisation and environmental sustainability and outlines the institutionalisation process of sustainable development in the European Union, with special emphasis on regional policy regulations. In order to outline the practical implementation of environmental sustainability, this study provides an overview of experience gained during the Economic Competitiveness Operational Programme, and provides an environmental-protection-focused analysis of the relevant documents of the New Hungary Development Plan (NHDP) and Economic Development Operational Programme (EDOP). Following this, using data from the application data administration system, the author arrives at some conclusions concerning the effectiveness of current environmental sustainability enforcement and, finally, makes some proposals on how to make the Hungarian use of Structural Funds more sustainable.

To enforce environmental sustainability at project level, an evaluation criteria system was applied to NHDP Operational Programmes. On the Application Form, a table lists sustainability criteria that outline the applicant's opportunities to contribute to sustainable development. Applicants must select which of these environmental-performance-improvement criteria they will undertake. All of the projects supported by the Funds have to meet certain basic criteria; however, there may be some additional environmental-protection-related undertakings, for which the project evaluation process may grant extra scores.

The author examined the environmental performance of applications submitted to the economic development schemes of the Economic Development Operational Programme and the Central Hungary Operational Programme (CHOP). Examination was based on data registered in the Single Monitoring Information System (EMIR): the database query date was 21st November, 2008. From the total number of applications received (7,300) for EDOP Priorities 1-3 and Priority 1 of CHOP, and following the exclusion of automatic-evaluation applications, some 3,460 applications remained which were available for environmental-sustainability evaluation. From these applications, up to the query date, some 2,417 had been given a decision. The author examined these 2,417 applications, placing special emphasis on scores awarded for environmental sustainability and on some specific features such as company-size, sectoral-status and geographical-location.

The significance and relevance of the research are justified by the fact that at the national economy level the third biggest volume development resource - behind direct foreign capital investments and credits for foreign private investments - is state development schemes, particularly, since 2004, those developments co-financed by the European Union. During the 2007-2013 period, from its resources available for cohesion policies, the European Union is providing EUR 22.4 billion for Hungary. These resources, in line with the principle of additionality, are complemented by a 15% national contribution as well as from the resources of implementing organizations; therefore, development of significant volume may be implemented through the co-financing of Structural Funds. For the 2007-2013 programme period, resources available for the development of the Hungarian economy are governed by the Economic Development Programme (EDOP) for the six convergence regions, and by Priority 1 of the

Central Hungary Operational Programme (CHOP) for Pest county and the capital city, Budapest. During the 2007-2013 programme period, nearly EUR 3 billion is available for the Economic Development Operational Programme and nearly EUR 478 million is available for the economic development priority of the Central Hungary Operational Programme. This development resource, given proper control, can be successfully channelled into investments which favour environmental aspects.

3. Achievements - main findings of the research

Definitions of sustainable development range from "weak" to "strong". Weak sustainability interprets sustainability exclusively for the limited economic sector. According to this view, at least equal consumption shall be guaranteed for present and future generations, while "strong" sustainability, assumes preservation of ecosystems, as well. The author uses the "strong" definition of sustainable development, because she believes that the concept of sustainable development basically encompasses global ecological motivation. From the three pillars of sustainable development, environmental issues and aspects must be given priority over social and economic aspects.

Prevailing neoclassical economic theory does not consider the economy to be a subsystem of the natural system; in fact, it states exactly the opposite - it maintains that nature is both an exploitation and a waste-dumping sector of the economy, irrespective of the fact that the "allowable" size of the economy depends on the earth's tolerance level and other capacity limitations. From this perspective, economic growth lacks any limits. Conventional national economic indicators based on neoclassical principles fail to provide a full picture on social welfare, and, consequently, such indicators are unable to provide reliable indications of whether economic growth does contribute to sustainable development. Social welfare encompasses several factors; besides the financial situation measured by conventional indicator systems, based on GDP figures, social welfare is also influenced by environment quality, public safety, health status, free time, happiness and freedom. There are several approaches which attempt to integrate methods of measuring environment status and social characteristics into the system of classical indicators. Of these, the most significant are: systems for calculating defence-system costs; for administering natural heritage; for administering the value-decrease of natural resources; the

SEEA method; the Human Development Index; an Index of Sustainable Economic Welfare; an indicator of Net Economic Welfare; finally, the Genuine Progress Indicator. The application of new kinds of national economic indicators suggests major problems concerning information-gathering due to necessary data often being missing, not to mention difficulties in expressing environmental damage in terms of cash. Despite their difficulty and inadequacies, these systems provide a much more accurate view of the welfare of a state than do conventional indicators - using them takes us much closer to measuring “actual” welfare.

Globalisation has become ubiquitous. Unfortunately, the rapid growth of international markets is accompanied by unprecedented levels of environmental pollution and abuse of natural resources. This highly undesirable situation has led to a global ecological crisis. Therefore, countries and states which aim to implement sustainable growth, or only a segment of this goal (e.g. to accomplish a particular environment policy objective), cannot possibly avoid participating in an international network of environment-related issues. Battling global environmental issues requires international co-operation; however, this is a hard battle to win due to, on the one hand, differing state interests, and, on the other, the lobbying of large multi-national companies.

Global environmental goods are public goods, the safeguarding of which should be contributed to by every international player; however, the necessary motivation is either missing or, if not, fails to ensure the sustainable use of goods. Green market solutions quoted by representatives of neoclassical ecology fail to work, at both corporate and national level. The external force of international environmental protection agreements should motivate international actors in the economy to behave in a more environmentally-friendly manner. However, the signing of such agreements is, undoubtedly, a result of the prevailing dominance of some powerful states; therefore, it fails to sufficiently ensure the enforcement of environmental interests.

The drive for constant growth is an inherent part of those global market economies which are based on neoliberal economic policies. Economists who specialise in ecology consider this drive for constant growth to be the most dangerous consequence of economic globalisation. The growth of the world's economy necessitates the increased use of raw materials and energy, a process which causes more intense pollution and a greater environmental load. Globalisation is accompanied by the increased mobility of production activities. Companies can easily relocate

their production to countries where social and environmental regulations are less strict. Global competition pushes countries to offer ever-more-favourable conditions, in order to lure working capital, and, in doing so, giving less room for manoeuvre to national environmental policies. The manoeuvrability of environmental policies used by individual countries is further weakened by commercial and investment interests being given preference over environmental issues. Expansion in world trade-volumes creates environmental issues, primarily due to the increases in power-consumption and pollution caused by intensified transportation demands and due to dangers associated with the homogenisation of agriculture.

The Treaty of Rome did not outline environmental policies for the European Community. In the wake of the nature- and environmental-protection movements of the 1960s a shift in approach took place and several environmental-protection issues called out for joint protection measures implemented by the European Economic Community. At the 1972 summit held in Paris, an agreement was reached on the first environmental-protection strategy of the Community as well as on the preparation of the first environmental-protection action-programme. In 1986, the Treaty of Rome was amended by the Single European Act, and the Community Environmental Policy was upgraded to a constitutional level. The idea of integrating environmental objectives into other policies was already present during the formation of the environmental protection policy; however, it was only the Treaty of Amsterdam which placed the necessary emphasis on these issues. The Treaty stipulates the integration of environmental protection aspects into areas which such initiatives have not yet affected.

When the European Economic Community was first established, no regional policies existed: member states considered the destruction of commercial barriers and the establishment of a single internal market to be of primary importance. However, from the 1960s it gradually became obvious that economic integration might further aggravate the situation of originally disadvantaged and peripheral regions, and that massive, regional, economic differences would result in less-sustainable economic development and a less-than-optimal market utilisation. In 1968, the Commission, having realised that significant differences in economic development levels are unacceptable in a community which major goals list integration, established a Directorate General responsible for regional policies, which task is to ensure community-level

control of regional policies. The main objective of EU regional policy is to alleviate regional differences in order to strengthen economic and social cohesion. To harmonise regional opportunities, financial funds have been established. The objectives of the Structural Funds are infrastructure development in underprivileged regions, diversification of local economies, workforce training-level increase and sectoral productivity development.

The Treaty of Amsterdam stipulates that sustainable development appears as a horizontal principle in Structural Funds regulation and the European Union explicitly expresses its dedication to sustainable development; furthermore, it sets as an objective for the member states the use of Fund resources in compliance with sustainable development principles. Every project and programme supported by the Funds must comply with sustainable development requirements.

In order for a member state, or its regions, to receive Structural Funds assistance, the member state must prepare a National Strategic and Reference Framework (NSRF), and submit this document to the European Commission. The document, among key implementation elements, defines the main policy priorities of the programme period. Preparation of the NSRF encompasses discussions between member states and the Commission. The Commission evaluates the NSRF and decides upon the list of Operational Programmes indicated in the framework, as well as on the contribution of particular Funds to the programmes. Following the Commission's decision, the member state prepares and submits sectoral and/or regional Operational Programmes (OP). These tools are used to implement the objectives set forth in the National Strategic Reference Framework. The Commission then evaluates the suggested Operational Programme and decides whether the Programme contributes to the objectives of those strategic Community guidelines which are relevant to NSRF and cohesion.

The Commission evaluation of NSRF and Operational Programmes, alongside economic growth and creation of jobs, primarily gives preference to confirmation of a dedication to handle development-related environmental issues and to enhance social balance. In order to ensure that the NSRF and the Operational Programmes intend to realise their objectives through the most effective (least harmful) environmental effects, drafts, which can be characterised by indicators and evaluated numerically, are prepared. Such drafts not only cover the investment-profit

relationship, but deal with the environmental and social effects of plans, as well. The Strategic Environmental Assessment provides a solid framework for such activities.

The Strategic Environmental Assessment is a systematic, transparent procedure, which goal is the mapping of environmental impacts during the decision-making process. Its main feature is that it does not provoke any confrontation, since it is prepared in parallel with the programme, and, consequently, the environmental aspects are enforced as the planning progresses; therefore, in each case, the result is a document which contains compromises acceptable from an environmental-protection point of view. Each SEA starts with a survey of environmental status, followed by a status-description of natural resources and ecosystems, which, in turn, is followed by a definition of potential dangers and threats, weaknesses and strengths. The SEA outlines the major requirements of those environmental-regulation-governing areas affected by NSRF, the Operational Programme or the Action Plan; it then summarises evaluations of earlier planning-periods relevant to environmental effects; finally, it defines connections between the development priorities of the programme-document and particular environmentally-related elements. Furthermore, it defines the environmental and sustainability objectives to be achieved by the programme or plan, as well as defining initial and performance indicators. The SEA suggestions and results are implemented into the examined programme document. The SEA findings assist in the composition of project-selection criteria; furthermore, they provide assistance in the environmentally-friendly management of project implementation.

The dedication of the European Union to sustainable development is clearly visible in general provisions related to Structural Funds, and, also, justified by the fact that execution of the Strategic Environmental Assessment is compulsory. However, the success of those programmes which are implemented with the assistance of Structural Funds is hugely dependent on implementation practices. The level of member-state dedication dictates how, and to what extent, environmental aspects are enforced during project selection and implementation.

One of the five Operational Programmes which implemented the comprehensive development objectives and strategies of the Community Support Framework for the 2004-2006 programme

period, was the Economic Competitiveness Operational Programme (ECOP). The objectives of this programme, implemented with the co-financing of the European Regional and Development Fund, were, through supporting the production sector and improving enterprise competitiveness, to facilitate the maintenance of a long-term, high, growth-rate for the Hungarian economy and to assist in the establishment of a competitive economy which would perform well in the single market. No programme-level Strategic Environmental Assessment occurred during the planning of the Operational Programme, in 2003. Examination of the Operational Programme and Programme Complement reveals that these documents treat environmental-sustainability issues properly, albeit not extensively enough, because, in several cases, the insertion of additional environmental criteria would have been possible. Neither were the definitions of environmental sustainability indicators optimal.

It was in order to promote initiatives which placed more emphasis on protection of the environment that environmental sustainability, already in ECOP, was listed as a project selection criterion. Applicants were to provide a text-description of how their project would contribute to environmental sustainability. Answers were given a 5% "weighting", among other evaluation criteria. Examination of ECOP projects revealed that the scores received for environmental protection were failing to adequately influence the final success of the application. An average score for environmental protection aspects was only 1.15. Sample checks, taken from the text of applications, confirmed that environmental-protection aspects were not being emphasized enough. Only a small number of data were available which were relevant to the examination of project implementation from an environmental-sustainability point of view. The Assistance Contract only stipulates the applicant's project-implementation obligations: it fails to detail any environmental-sustainability aspects. In practice, these environmental-protection-related undertakings which were indicated by the applicant on the Application Form - criteria for which extra points were awarded during the evaluation stage - were not listed among contractual obligations. No objective feedback could be found, in quarterly and half-yearly project-progress and maintenance reports, which could help us to decide which environmental-protection-related undertakings had been accomplished, and which had not. The Economic Competitiveness Operational Programme and schemes implemented under its auspices incorporated compulsory measures concerning achieving sustainability as a horizontal objective, as set forth in EU

regulations; however, in practice, environmental sustainability was not emphasised strongly enough.

In May, 2007, the European Commission approved the Hungarian National Strategic Reference Framework, covering the 2007-2013 programme period, called the New Hungary Development Plan (NHDP). The document outlines two comprehensive objectives for the country: improving the employment situation and establishing proper conditions for sustainable growth. The objectives indicated above are to be accomplished through seven sectoral-operational-programmes and seven regional-operational-programmes.

In compliance with relevant EU regulations, Strategic Environmental Assessments were completed for both the NHDP and the Operational Programmes. When compared to the 2004-2006 programme period, it must be considered a significant step forward that the New Hungary Development Plan guarantees that environmental-sustainability appears as compulsory acceptance criterion in all projects proposals and the NHDP attempts to ensure that the implementation body will enforce sustainability aspects throughout the whole implementation process; furthermore, the NHDP ensures that monitoring activities will also cover environmental-sustainability issues, as well. The biggest flaw of the New Hungary Development Plan, from the sustainability point of view, is that it places extraordinary emphasis on sustained growth and considers almost all other priorities inferior to that of achieving economic growth objectives. Clearly-defined, relevant indicators are indispensable tools when measuring the implementation level of a strategy or plan. A major weakness of the NHDP is that the indicators used are incidental, ill-considered and, very often, not quantified. Environmental-sustainability indicators omit those related to ecological-potential, land-use and environmental-health, and those indicators actually listed in the document are not necessarily related to protection of the environment. The SEA suggested the enhancement of environmental indicators by the addition of numerous other indicators; among macro-level indicators, besides the GDP and HDI, the SEA initiates the inclusion of a genuine-progress indicator (GPI). Regrettably, these have not been incorporated into the plan. Compulsory elements required by the EU are, therefore, present in the plan; however, behind this seemingly proper compliance, economic-growth objectives prevail and ecological issues are given less preference.

The Economic Development Operational Programme (EDOP) is a sector-based operational programme, covering six convergence regions, and contributing most directly to the fulfilment of the growth-objectives set forth in the NHDP. Its main objective is to promote the growth of the Hungarian economy, and, in order to implement these objectives, the Programme highlights four major priorities. These priorities are: Research&Development and Innovation; a special focus on developing the capacities of small- and medium-sized enterprises; the development of the business environment; and the promotion of financial instruments which help SMEs to access financing resources. Projects implemented in Pest County and in the capital, Budapest, are supported by a separate programme - the Central Hungary Operational Programme (CHOP). Priority-axis-1 of the CHOP, the development of an innovation- and enterprise-oriented, knowledge-based economy, contains resources to be allocated for economic development in the Central Hungarian region. Schemes within this Priority are "mirror schemes" of EDOP Schemes. During the 2007-2013 programme period, nearly EUR 3 billion is available for the Economic Operational Programme and nearly EUR 478 million is available for the economic development priority of the Central Hungary Operational Programme.

Strategic Environmental Assessment of the EDOP has already taken place. Thorough examination of OP text has revealed that environmental issues and environmental-sustainability are taken seriously, and are listed among objectives; however, the detailing of measures fails to define exact problem solutions. From an environmental point of view, it is definitely positive that through facilitating Research&Development as well as high-value-added activities, the EDOP can contribute to the development of the less materials- and energy-intensive sectors. Supporting technological modernisation through improvements in productivity can also stimulate more moderate consumption of materials and energy as well as a GDP-proportionate decrease in environmental load. The question is whether environmental advantages generated through improved efficiency can counterbalance the negative effects stemming from volume-increase and intensified transportation-demands. From a sustainability point of view, SME-sector development can be justified, especially when such development is based on local resources, labour-force and knowledge. It is definitely to the EDOP's advantage that contribution to sustainable development appears not only among selection criteria, but in some other places in the programme, as well. In

the case of EDOP-2.1.4., environment-centred technology-development for SMEs is a standalone objective and allocated resources are available for this purpose. It is important to note that economic development through improving productivity and enhanced competitiveness may help to enforce sustainability aspects; however, sustained economic growth can only be a temporary objective, because, in the long run, such sustained growth cannot be maintained due to ecological constraints.

3.1. New research achievements

In the case of the Economic Development Operational Programme, the evaluation-criteria system serves as a tool used to enforce project-level environmental-sustainability. Applicants select from which of the environmental-sustainability criteria listed on the Application Form they will undertake environmental performance improvement. Each project supported by the Funds must meet certain basic criteria; however, there might also be some additional environmental-protection-related issues being undertaken by the applicant for which the project evaluation process may grant extra points.

The author examined the environmental performance of applications submitted to the economic development schemes of both the Economic Development Operational Programme and the Central Hungary Operational Programme. This scrutiny was based upon data which were registered in the Single Monitoring Information System (EMIR) database: the query date was 21st November, 2008. The author examined the 2,417 applications and placed special emphasis on scores awarded for environmental sustainability and on some other specific features such as company-size, sectoral-status and geographical-location.

1. One of the main issues covered by this paper is the determination of how environmental sustainability, as an evaluation criterion, can motivate projects towards better environmental performance. On the basis of the experiences gained of the ECOP, the author's hypothesis suggests that the 5% weighting of environmental- sustainability aspects fails to significantly influence the success of a project.

One application can receive a maximum of 100 points, from which a maximum 5 points can be awarded for environmental-sustainability aspects. The average environmental-sustainability score of the 2,417 evaluated applications was 3.39, whilst the highest score (5 points) was reached by 26% of applicants. This is an obvious step forward, when compared to ECOP applications where the average environmental-sustainability score was 1.15 and a mere 12.5% of applicants were awarded the maximum available score. This positive shift can, evidently, be attributed to the fact that while, in the case of the ECOP, assistance could be given to applicants with 0 points, in the case of the EDOP, no assistance could be given to applicants who did not receive at least 1 point. Instead of using blank text-boxes on the Application Form, the provision of a list of explicitly-defined environmental performance items definitely had a positive effect on environmental undertakings: applicants only had to "select" from the parameters indicated. Earlier research had revealed that applicants know only a little about environmental sustainability and the environmental aspects of their activities. It is probable that the applicants could more easily choose criteria (from among the pool of "guided" criteria) which they would not have selected proactively due to their poor knowledge of environmental-sustainability. This listing of environmental-sustainability aspects greatly increases the likelihood of the selection of environmental tasks, even if the project implementers are not environmental experts.

In order to determine how scores awarded for environmental-sustainability influence whether a particular application is supported or not, the author used two different methods. The indicator that measures the relationship intensity between the scores (as a quantitative variable) and successful/unsuccessful status (as a quality feature) is the deviation quotient. This ratio, in relation to all evaluated applications, is 0.12, which indicates a very weak connection between these two definitions. The author estimated the likelihood of being supported with the probit analyses, which can connect binary and continuous variables. Having carried out the probit analysis for the entire sample, the author obtained for an applicant with average score for sustainability and other aspects, a unit increase in the score for sustainability raises the probability of being supported by only 3%, which can be regarded as considerably low.

Both methods confirm the hypothesis that scores awarded for sustainability do not significantly influence whether or not a particular application is supported. Consequently a 5% weighting of

environmental-sustainability aspects in the evaluation criteria is insufficient to ensure that those applications which promise better environmental performance are actually intensively supported.

2. Examination of the environmental-sustainability aspects selected by individual applicants has a dual-layered relevance. On the one hand, important conclusions can be drawn concerning both the attitudes of applicant-enterprises towards environmental protection, and in relation to project environmental performance. On the other hand, a detailed examination of those criteria selected by the applicants can help us to determine whether the environmental-sustainability criteria of the current system are relevant, at all, to decide whether such criteria properly characterise a particular project (from the sustainability point of view), and to define whether undertaking their completion will have any real effect on the wider environment or whether applicants merely opted for these criteria since such aspects are difficult to monitor. Based on our experience of the current sustainability-evaluation-system, an in-depth, detailed analysis facilitates the compilation of potential modification proposals.

Surveys among Hungarian companies show that the majority of the enterprises takes environmental measures merely to reduce cost and to fulfil legal requirements, the influence of other motivating factors is minor. Factors obstructing the introduction of environmental measures the most are the high cost of environmental investments, the long rate of return and the scarcity of financial resources.

Based on the experiences of former studies, the author's hypothesis was that the majority of applicants undertook sustainability criteria the completion of which would not require intensive efforts. Criteria which are easy and inexpensive to accomplish, or which completion cannot be objectively checked later, appear in more applications than those criteria for which accomplishment implies massive expenditure or serious measurement operations. Sustainability criteria that require expensive investments and sophisticated measurement are undertaken by only a small proportion of the applicants.

A detailed analysis of those sustainability-criteria undertaken by applicants confirmed the author's hypothesis. The most frequently selected environmental-sustainability criteria can be applied and interpreted for the majority of projects and where adherence to such criteria implied only a small outlay for the applicant, e.g. criteria such as *"Introduction and/or intensification of*

recycled-paper use in office- and printing-activities" (95%), *"Selected features of knowledge dissemination (trainings, conferences, etc.) reflecting environmental awareness"* (84%), and *"Purchase and application of combined energy- and material-saving office-equipment"* (84%). It must be noted, however, that adherence to these criteria is rather hard to monitor throughout the whole life-cycle of the application, i.e. there is no risk embedded in the system for an applicant who fails to accomplish such criteria.

Another segment of the selected criteria can be justified by the fact that they are easy to accomplish by administrative measures. Based on those answers given to: *"Has sustainability plan or programme"*, a paltry 10% of applicants have, at application submission, a sustainability plan or programme; however, by the time the project finishes, 82% of them have already undertaken to prepare/have prepared such a document. For similar reasons, the following criteria are also popular: *"Preparation of regular, environmental-health risk-analyses or improving their frequency"* (81%) and *"Appointment of an Environmental Sustainability Officer or Environment Training/Sustainability Training Officer or Work Group"* (89%).

Criteria which can mean future economic savings or direct economic advantages for applicants are also popular, *"Enforces environmental aspects when selecting materials, products and devices to be purchased"* (92%). Criteria undertaken by 88% and 83% of applicants, respectively, may require massive efforts from applicants. These criteria are the following: *"Decrease of specific energy consumption"* and *"Decrease of specific water consumption"*. Undoubtedly, potential future economic advantages made the following criterion popular with applicants, *"Analysis of expected environmental effects takes place during product and service development"*: this criterion was selected by 89% of applicants; however, the popularity of this item may also be explained by the fact that its completion is hard to check.

This confirms the author's hypothesis, i.e. that those aspects which require complex measurements and potentially expensive interventions are less popular: the criterion *"Decrease of pollution material in sewage"*, was selected by only 9% of applicants and *"Decrease of total generated waste amount"*, was selected by 22% of applicants. The least popular criterion was *"Decrease of road-transportation intensity"*: only 7% of applicants undertook this criterion.

Based on the survey of the sustainability criteria undertaken by the applicants, the author's hypothesis can be confirmed: the majority of applicants undertook sustainability criteria that are easy and inexpensive to complete, or of which completion cannot be objectively checked later on. Sustainability criteria that require expensive investments and sophisticated measurement operations are undertaken by a small proportion of the applicants.

3. Enterprises, especially small- and medium-sized enterprises, make up the target-group for the support provision offered by economic development schemes. Taking the results of earlier research into account, the author believes that the company-size determined the number of sustainability criteria undertaken: the bigger the company is, the more sustainability criteria it undertakes.

In general, analyses based on company-size reveal that, in line with our initial hypothesis, the bigger the company, the more sustainability-criteria undertaken by the applicants. It should be noted that the numbers of criteria being undertaken gradually increases, in parallel with company-size, from micro-enterprises up to large companies. This phenomenon may be partially attributed to the fact that larger companies generally implement more complex investments, often including construction-work, as well. In the case of more complex projects, there is a wider array of sustainability aspects than in the case of machinery-purchase operations of micro- and small enterprises. Increasing company-size implies that the applicant's legal background allows for a better understanding of environmental-protection issues and that they can take on extra expenditure (which comes attached to adherence to specific sustainability criteria) more easily than can micro- or small enterprises. In the case of large enterprises, improvements in environmental performance have a faster return, due to reasons attributed to the economies of scale. Typically, there were only a few criteria which were selected by a larger number of micro- and small enterprises. This may be explained by the fact that such enterprises are more rigidly embedded into the local environment.

4. Based on the results of earlier surveys, it is the author's hypothesis that the companies operating in the different industrial sectors perform better with respect to different sustainability criteria, it

is only the chemical industry enterprises with considerable environmental load that precede the other sectors concerning most of the sustainability criteria.

Examination focusing on the sectoral background of applicants revealed that no such sector exists in which actors consistently perform better than in other sectors. Owing to the diverse nature of the activities and the loads which they impose on the environment, applicants from the processing-industry and service-sector took on criteria from different areas. One definitely positive item of feedback is that more than 90% of enterprises in the production-sector undertook the completion of the following criterion: "*Decrease of specific material use*". However, in relation to criteria intended to relieve the environmental load in sectors where emissions are supposedly more intensive, production-sector applicants were less willing to undertake criteria-completion than service-sector applicants. The situation is similar for: "*Decrease of total generated waste amount*", "*Decrease of amount of dangerous materials used, and substitution with not dangerous or less dangerous materials*" and "*Decrease of pollution material in sewage*", where fewer processing-industry players undertook completion of these criteria than players in the service-sector.

Based on the analyses, the first assumption of the hypothesis can be accepted, namely that the companies operating in different industrial sectors perform better with respect to different sustainability criteria. Among the applicants under investigation, however, the chemical industry enterprises do not show consistently better performance in undertaking sustainability criteria, thus the second assumption of the hypothesis cannot be justified.

5. The geographical distribution of applications is comparatively homogenous. The majority of the sustainability criteria undertaken across the regions and counties are rather homogenous, except for some cases in the Central Hungarian region, especially in Budapest. The assumption that rate of undertaking of the applicants from Budapest is significantly lower than that of the applicants from other parts of the country is test by the author using a two sample text examining the equality of the mean values. According to the result of the test, it can be stated at a significance level of 5% that the applicants from Budapest received 0,3 point less for sustainability than the other applicants. Budapest falls behind the country side concerning the "1.

Operates in line with environment-centred certification" and "7. Products or services are certified by an approved environmental-sustainability-qualification system" criteria. Not surprisingly, in the case of the developments in the capital, criterion "21. More green areas are created during the project then minimally prescribed by relevant regulations" was selected by a significantly lower number of applicants in this region than in other regions.

6. Only a small number of data are available concerning the implementation of EDOP projects. Considering the relatively short time that has passed since EDOP commencement, the vast majority of supported projects have yet to reach an implementation-level which allows for the examination of environmental-performance. However, with regard to environmental-monitoring and compared with the previous period, it should be noted that it is a remarkable improvement that beneficiaries must regularly inform relevant parties about sustainability issues in project progress reports and maintenance reports, i.e. failure to accomplish environmental-sustainability undertakings can be sanctioned in the same way as penalties are imposed in the event of infringement of any other contractual obligations. Sharpening the monitoring system will definitely motivate beneficiaries to take environment-related-undertakings more seriously.

4. Conclusion and recommendations

The sustainability-criteria system of the New Hungary Development Plan managed to resolve major flaws in the previous evaluation-system. When compared with the ECOP, environmental aspects are easier to track and monitor in the EDOP and they constitute a comparatively objective system. Despite all the difficulties embedded in the system, the New Hungary Development Plan allows for applicants to better their environmental-performance in the most suitable areas. It is very promising that the structure of the new environmental-sustainability-criteria system, besides a narrow scope of environment-related project features, evaluates and gives recognition to efforts which are/were taken during the operation of the project in its handling of environmental effects, as well as evaluating the current, environmental activities of the applying organisation.

Our examination of all the evaluated applications confirmed that the current 5% weighting of environmental-sustainability criteria has proven insufficient to ensure that those projects which promise better environmental performance are given support in a higher proportion. In order to

improve the sustainability characteristics of the application system, and increase in the "5 points" bonus is suggested.

Examination of those sustainability criteria selected by the applicants confirmed the hypothesis that the majority of applicants tend to undertake completion of such criteria which are inexpensive to accomplish and which may create some future economic advantage for the applicant. The problem lies in those criteria where to check that a particular criterion has been completed is difficult, or even impossible, to execute. In the case of such criteria, there is a risk embedded in the system that applicants choose these criteria merely in order to easily receive higher scores. Considering the fact that, based on our analysis results, quite a large number of applicants selected criteria ensuring significant decrease of environment load and requiring serious efforts, which can relatively easily be monitored and checked, it is worthwhile to reconsider the criteria-system. Modification of the criteria system could be accomplished by making "soft" criteria compulsory, or by more effective differentiation between scores given for individual criteria.

Analyses based on company-size show that the environmental-performance expected from large companies can be "more serious" than that which is expected from micro- and small enterprises. If need be, for large companies, some compulsory criteria could be inserted into the system. Furthermore, whilst respecting the principle of sector-neutrality, it is worth determining in which sectors it would be possible to introduce compulsory criteria in order to motivate projects which impose a massive load on the environment to be implemented sustainably, perhaps exceeding compliance with other less-stringent legally-binding regulations.

The current system of economic development schemes, in the case of automatic-evaluation schemes of relatively small assistance-amount, fails to positively enforce sustainable development aspects. Applications for such schemes accounted for nearly one half of all applications during 2007-2008. In these cases, the total cost of an investment to be implemented is relatively lower; however, when taking into account the larger picture, the investment-amount, lacking proper motivation from the institutional system toward sustainability, is rather significant. Therefore, it is of the utmost importance to establish a criteria-system tailored for these applicants, as well. Such a system would better-suit special project characteristics; however, it

would be better-streamlined and simpler than those criteria-systems used for large projects. The literature confirms that micro- and small enterprises are the least aware of the effects which they impose on the environment through their activities. The introduction of an evaluation-system containing “guided” criteria into this circle of applicants would intensively facilitate the environmental-quality of implemented projects and would promote better environmental-performance by the applying enterprises.

Similarly to the exclusion of enterprises which were fined as a consequence of employment-related issues, ensuring the exclusion from assistance of those applicants who were fined during the past three years as a consequence of environmental issues and who are not willing to change their attitude would efficiently strengthen the environmental aspects of the application-system.

When selecting projects for on-site audit, it is useful to include environmental aspects among the risk-factors in the risk analysis. In the case of projects which operate in nature-protection areas or which use considerable amount of energy or materials or dangerous materials were more likely to be included in the sample check, then with a smaller number of on the spot checks, an environmental load representing a larger segment could be monitored. It is important, however, that officers conducting on-site audits should have proper environmental experience and education.

Earlier results warned us that applicants have a somewhat unsatisfactory knowledge of the environmental aspects of their activities and that, in general, their knowledge is rather poor concerning environmental-sustainability, as well. Their knowledge should be enriched, in order to minimise the load imposed on the environment by their activities and to enhance their environment awareness. It is important that project implementers understand their environmental tasks, even if they are not environmental experts themselves. Clear and plain information-structures and applicant-assistance, therefore, play a primary role throughout the entire application process.

To sum up answers given to research objectives, planners of the Economic Development Operational Programme, during the preparation of the Programme Document and the Action Plans, took all the steps and measures expected under EU regulations, in order to achieve

environmental sustainability. The sustainability-criteria-system currently available, and used to enforce project-level sustainability-criteria, is a remarkable step forward, when compared with attempts of the previous period, since environmental aspects have been rendered easier to track and monitor through the use of a comparatively objective system. However, in order to achieve a really efficient project-level-enforcement of environmental-sustainability, some minor adjustments are necessary. Taking the features of the current sustainability-criteria-system into consideration, a more streamlined Call for Application is needed for any particular Scheme; however, from the viewpoint of the entire application-system, a more differentiated system should be elaborated. In the case of mass schemes, with relatively small amounts of assistance, a list of comparatively small numbers of well-monitored and well-supervised, objective criteria should be applied. In the case of large, complex projects, the current criteria structure is appropriate, with one slight modification that, in the case of large projects, "soft" criteria cannot contribute to score definition. In such situations, project features allow for the selection of a sufficient number of "serious" criteria. Furthermore, it is worth considering that, in the case of large enterprises which can bear environmentally-related costs more easily, or in the case of sectors or project-types imposing larger loads on the environment, some criteria should be made compulsory. It is important to note, however, that only realistic, "doable" and checkable sustainability-objectives can be made compulsory. A sustainability-criteria-system, encompassing the entire application system, should be elaborated in such a way that future monitoring of criteria-completion ensures data-accumulation and that data should be structured in a manner that allows for the definition of component- and OP-level indicators. It should be highlighted that a proper sustainability-evaluation-system, on its own, is not sufficient. In order that a particular undertaking be realised, the introduction of a strict environmental-monitoring-system that requires realistic data-provision from beneficiaries is necessary.

The fact that environmental-sustainability appears in the economic-development-scheme system as an evaluation criterion triggered a positive shift in approach: it forced applicants to reconsider the environment-related aspects of their projects - indeed, of their whole scope of activities. A noteworthy result of the application system is that beside the applicants with environmental or quality assurance system, an additional 34% of the applicants undertook the criterion that by the end of the project they would introduce one of the EMAS or ISO systems. The introduction of

environmental management tools itself is a positive result of the systems as these tools mean the first step towards an environment-aware company management.

The application-system and the embedded self-regulation processes may be vital to improving the environmental performance of enterprises and to facilitating their environmental awareness. During the whole implementation process, applicants and representatives of implementing bodies play a major role in the promotion of this positive tendency throughout the application system, and they ensure that, in parallel with the development of the Hungarian economy, sustainability aspects can also be adequately enforced.

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6. Publications

A fenntartható fejlődés mint az EU horizontális politikája

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