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Improved Project Management via Advancement in Evaluation Methodology of Regional Cooperation Environmental Projects

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***Abstract*- The financial mechanism within the European Union that is accessible for environmental issues is a tool by which it is possible to maintain and improve the state of the environment in the Baltic Sea region countries. However, the accessibility and use of finances cannot be considered indicators which mark the success of a programme. There are various evaluation types which can be conducted, such as *ex ante* to assess the impact desirable to help gauge what projects best to support. *Ex post* evaluations can also be applied to pool lessons learned to make recommendations for further development. Evaluation is important for checking progress, to further support successful initiatives and to avoid financing activities which do not produce results. Evaluation of environmental projects can be particularly difficult due to their diversity in approaches and applied technologies, however currently there is a risk to limit the assessment of projects to the activity-level (what outputs have been produced, such as number of seminars and publications or campaigns, technologies installed), rather than on the primary goal – specific impacts made on the environment.**

The goal of this research is to develop a methodology and set of indicators for the evaluation of environmental projects to improve the evaluation of project efficiency, impact and sustainability. Regional Cooperation Environmental Projects are selected and an evaluation is conducted on these projects.

Keywords*- environmental projects, European Union Project, evaluation, *ex-ante*, *ex-post

I. Introduction

Financing of environmental activities through projects is a broadly applied mechanism in environmental governance targeted to improve environmental conditions. In order to make progress in the environmental field, many projects are implemented – both of a technical nature (associated with transferring from old to new technologies) and related to 'soft' assistance (projects that are designed to increase public environmental awareness and responsibility). During the period from 2007-2013, many different financial instruments were available in Latvia which supported various projects, including those on the environment. For the most part, these financial resources were available from funds of the European Union – through such financial instruments such as *European Regional Development Fund*, *European Social Fund* and the *Cohesion Fund*. Up until May 2010, the European Union funds had invested 553 million Latvian Lats in environmental projects, which constitutes 17.4% of the total financing of these three funds. Within the next planning period from 2014-2020, there are no plans to reduce this financing amount for the environmental field [1].

Currently, the responsible institutions have begun work on drafting a new programme and on improving and expanding upon the previous one. In order to improve the mechanism for alloting financial resources, and to see that the finances accessible are spent usefully and support the implementation of a project which facilitates reaching the strategic goals in the field of environment set within Latvian policies, it is essential to determine whether (and to what degree) the programmes support initiatives to reach goals set in environmental policy. In other words, the results of the project-level activities need to contribute to, and be in coherence with, the higher-level priorities and goals for improving the overall state of the environment. Similarly, it is necessary to evaluate whether and how these projects impact the environment and how sustainable this impact is.

The goal of the article is to develop a methodology and set of indicators for the evaluation of environmental projects to improve the evaluation of project efficiency, impact and sustainability. The article provides a review of evaluation types, and the standards of criteria and methods used for evaluation. The theoretical part is illustrated through examples provided from different financial instruments that support environmental projects not only in Latvia, but elsewhere in Europe and beyond. The article includes an evaluation of existing project applications and evaluation procedures, recommendations on improving projects outcomes of the next programme calls and a developed and tested methodology for evaluation of cross-border environmental infrastructure projects.

II. Project Evaluation Types

There are several evaluation types described in literature – evaluation in accordance with the subject of the evaluation (programme, project, policy, economic sector, etc.), the topic (human rights, gender equality, institutional capacity, etc.), the performer of the evaluation (internal, external, independent, self-assessment), the stage at which the evaluation is conducted (*ex-ante*, mid-term evaluation, final/terminal evaluation, interim evaluation) and the purpose (accumulative, perspective, formative, meta-evaluation, etc.). Regardless of the type of evaluation chosen or when it occurs, one can evaluate the components in accordance with different points of view – process-related, results-oriented, input-output based

(financial audit or review), impact and sustainability (as in the impact/products/processes produced). [2]

Methods commonly used in project and programme evaluation are based on: logic analysis, a logical framework, scientific and expert knowledge [3, 4, 5], systems thinking [6], multicriteria analysis [7, 8]. The indicator based method is commonly used as a part of the above mentioned methods, but it is also defined as a separate method [9, 10].

Project evaluations focus on a specific project that will be, is in the process of, or has already been, implemented in order to reach specific objectives with a fixed amount of finances, time, and within the confines of a specific financing programme. [11]

Project evaluation theory usually includes three stages for project evaluations:

- potential evaluation: includes the *ex-ante* valuation and evaluation of project applications,
- formative evaluation: associated with an assessment conducted during project implementation,
- cumulative evaluation: includes project final evaluations and *ex-post* evaluations.

To a large extent, the framework of a financing programme and the timing at which an evaluation is conducted, governs the goals of the evaluation, what is to be evaluated and which evaluation criteria are to be selected as the most critical. Table I illustrates the interaction which exists between the project life cycle and the different types of evaluation.

Project evaluation includes both the evaluation of the project in its entirety, as well as the evaluation of its individual or important components.

- Pre-project assessment: the potential financier attempts to determine to what extent the project proposal meets the goals of the programme and whether and how the project will contribute to reaching the higher goals set at the programme level.
- Mid-term evaluation provides information that makes it possible to determine whether the project is being implemented as planned, whether it follows the planned budget and work plan, and whether it meets the set goals. At mid-term it is possible to evaluate whether (and what kind of impact) the project will make and how sustainable its results will be. It can also provide information on how to improve the project indicators.
- The final or terminal project evaluation provides comprehensive, thorough information on what results have been achieved and what short- and medium-term impact has been produced. This is the moment at which the knowledge and lessons learned during the project lifecycle are collected. The *ex-post* evaluation concentrates on determining the impact generated by the project long-term [12, 13, 14, 15].

The method and procedure according to which projects are evaluated is determined by the project financier based on the goals and objectives of the financing programme, as well as by the legislation (rules and regulations) of the donor organization or country. If the project financing comes from various sources, then the evaluation must take into account the goals and contributions of all financiers of the project (unless otherwise agreed upon through a common approach of donors).

Each donor institution sets its own standards for project evaluation. The different requirements of several financing institutions of environmental projects are listed for comparison in Table II.

The observations made at each project evaluation phase provide information upon which the programme evaluation can be based.

III. Evaluation methodology of environmental projects

In accordance with the European Commission's recommendations to the regulation for the European Union Structural Fund and Cohesion Fund 2014-2020 planning period, emphasis is placed on orientating the cohesion policy on results [17].

Environmental projects are a measure through which it is possible to reach goals set by a country in the field of environment. Thus, it is important that environmental projects are results-oriented, effective, lead to the planned and necessary impact, and that these results are sustainable.

TABLE I

Interaction between the project life cycle and type(s) of evaluation [4, 5, 6, 7]

Criteria	**Type of evaluation**				
	Potential		**Formative**	**Summative**	
	Ex-ante evaluation	Project application evaluation	Mid-term evaluation	Final evaluation	*Ex-post* evaluation
Relevance	X	X	X	X	X
Efficiency	X	X	X	X	X
Effectiveness	X	X	X	X	X
Impact	X	X	can be estimated	X	X
Sustainability	X	X	can be estimated	can be estimated	X

TABLE II

PROJECT EVALUATION REQUIREMENTS OF DIFFERENT FINANCING INSTITUTIONS [11,14,15,16]

Funding institution	**Evaluation to be conducted**	**Project length**
Global Environmental Facility	Annual project implementation review Mid-term evaluation	Up to 24 months
	Annual project implementation review Mid-term evaluation Final evaluation upon completion of the project	24 months or more
European Community LIFE programme	Quarterly or bi-annual project reports	All projects
	Mid-term evaluation	Advised to be implemented for all projects
	Ex-post evaluation	3 – 5 years after project completion
Projects implemented in Latvia within the European Union Structural Fund and Cohesion Fund	Financial, risk, administrative and technical review during project implementation (external) Project progress review	All projects
	Post-implementation review	Individual project groups
Japan International Cooperation Agency and Bank for International Cooperation	Mid-term evaluation Final evaluation	3-year cooperation projects
	Ex-post evaluation	All projects 2 – 3 years after completion
Asian Development Bank	Annual project implementation review Final evaluation 6 months after project completion	All projects

The proposed methodology is based on the guidelines for result-based project monitoring and evaluation of the Organisation for Economic Co-operation and Development (OECD), widely applied for development projects and programmes, for project implemented by the World Bank, United Nations Development Programme (UNDP), European Union Intelligent Energy Europe and others [18,19,20]. The methodology is improved with indicator weighting and criteria calculation algorithms, as well as specific indicators are proposed to facilitate a more uniform approach in the use of the methodology. Such adaptations are introduced in order to improve opportunities for comparative review of the many diverse projects that are implemented under any given programme.

The methodology applied during this research includes the following evaluation phases: project application (selection) and final evaluation (project completion). During the 1st evaluation cycle, only project applications are assessed and results analysed, during the 2nd cycle - final reports evaluated. The evaluation algorithm is illustrated in Figure 1. The novelty of the proposed methodology and algorithm is focused on an approach that evaluation of performance outcomes needs to be always assessed not only at the programme level but should also be mandatory at the project level. Programme-level evaluations, typically (due to the volume of projects implemented within the programme and the limited scope of the evaluation re financial and human resources allocated for this purpose) require a selection of project groups or samples and thus the opportunity for targeted lessons learned with the specific and key implementation partners and stakeholders is minimal.

In order to assess whether a project is results-oriented (and thus capable of reaching results) and to determine how sustainable it is, five evaluation criteria – relevance, efficiency, effectiveness, impact, sustainability - were defined for the evaluation (see Figure 2). The criteria conform to the main evaluation criteria suggested for development projects [18,19,20].

Each criteria presented in the model has specific indictors which are given a numeric value from 0 to 3, depending on the degree to which the current project is evaluated to meet this indicator. The distribution of the values is as follows: 0 – does not conform to the indicator; 1 – partially conforms to the indicator, 2 – meets the indicator and 3 – beyond meeting requirements. In addition to the criteria and the indicators prescribed to the specific indicator, there is a factor of importance (degree) which is applied – and a weight factor, which is calculated as a percentage of the total level of importance (degree).

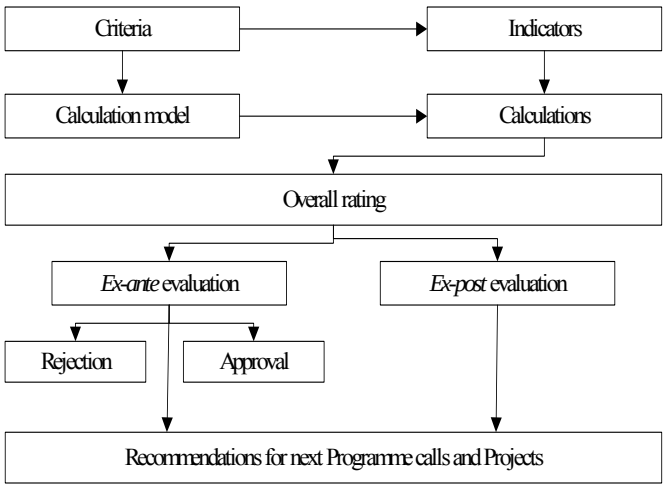


Fig. 1. Evaluation algorithm of the projects (the algorithm might be supplemented with mid-term evaluation module if it is requested in the project programme)

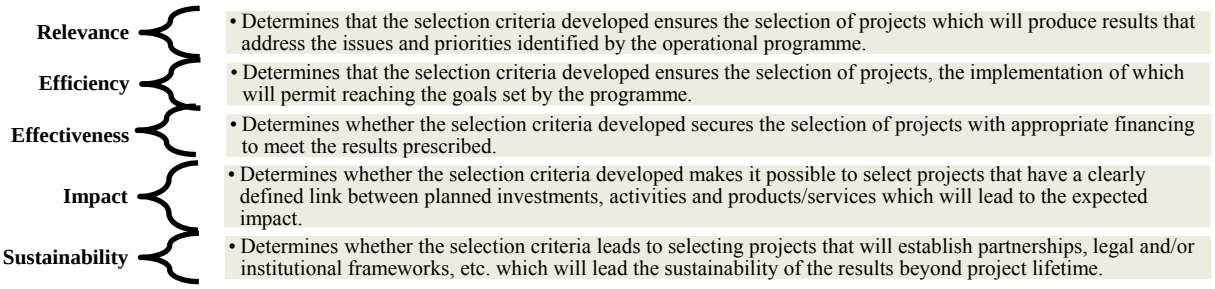


Fig. 2. Evaluation criteria and description

The methodology is tested on six projects from the European Territorial Cooperation programme: three projects from the Estonia-Latvia Transboundary Programme and three projects from the Baltic Sea Region INTERREG III B Neighbourhood programme INTERREG IIIA Priority North. These programmes supported transboundary, international and regional cooperation within the 2004-2006 planning period. Within the framework of both these programmes, environmental projects were supported on issues covering environmental management and policy, environmental education and communication, and environmental infrastructure projects.

According to the convergence objective, the EU Member States are obliged to perform an *ex-ante* evaluation for cross-border and transnational projects [21]. Thus the evaluations of such projects are performed only once during the project life cycle – at the project application stage when evaluations are limited to assessing general conformity and administrative criteria (predefined and normally publically available for the applicants in the form of check lists), and quality criteria (expert-based evaluation) [16, 22, 23, 24]. It can be seen that only within the quality criteria is it possible to evaluate the expected result-based outcome of the applied projects and the expert is free to select his/her own evaluation technique or evaluation indicators. At the programme level, the strategic outcomes are evaluated at both the ex-ante and ex-post levels.

A. Evaluation methodology for the evaluation criteria of project applications

The qualitative assessment of the evaluation of project applications is conducted in order to:

- assess the qualitative evaluation criteria of projects in the regional programme,
- analyse the project assessment procedure within the framework of the regional programme,
- draw conclusions and recommendations on improving the selection criteria of environmental projects,
- provide recommendations on improving the overall evaluation of individual projects within the programme.

The evaluation criteria, indicators, the values attributed to them, and the weight factors are summarized in Table III.

Since the first time a project is assessed is at the project application phase, then the authors assume that the criteria of relevance, efficiency, effectiveness and impact are equally important at this stage of assessment, because these elements determine the legitimacy of the project. Thus, these criteria are designated a weight coefficient between 20% – 25%. The criteria "sustainability", however, despite its importance in the general evaluation, is allotted an importance weight of 10% because it is very difficult to evaluate the aspect of sustainability at the application stage. Sustainability can only be objectively determined during project implementation or at the end of the project. Nonetheless, it is still important that the project applicants (and reviewers) have considered and demonstrate ways to secure the sustainability of the project results.

The following formula was used within the research to calculate the weighted average value of each indicator:

$$I_{Ni} = V \times \eta \tag{1}$$

where

I_{Ni} – average weighted value of each indicator, points;
V – indicator value, points;
η – indicator weight factor.

In turn, in order to obtain the weighted average of each criterion, the value of each indicator is summed up within each criterion and the value obtained is divided by the number of indicators within that criterion, the result of which is multiplied by the weight factor of the criterion:

$$I_N = \frac{\Sigma I_n}{n} \times \eta \tag{2}$$

where

I_N – average weighted value of the indicator, points;
I_n – indicator value, points;
n – number of indicators within the criteria;
η – criterion weight factor.

The maximum average weighted value that can be received upon evaluating the assessment of project applications is 3 points, which is equal to one hundred percent. Therefore, within this research, one can assume that the assessment of project applications is:

- Outstanding, if the total average weighted evaluation is equal or more than 2.5 points;
- Satisfactory, if the total average weighted evaluation falls within 1.6 – 2.4 points;
- Partially satisfactory, if the total average weighted value falls within 0.5 – 1.5 points;

Unsatisfactory, if the total average weighted value is lower than 0.5 points.

TABLE III

MATRIX OF THE EVALUATION OF PROJECT APPLICATIONS (AUTHORS' DEVELOPED FACTOR AND INDICATOR WEIGHTING)

Criteria (Total weight factor of the criteria)	**Indicator weight (%)**	**Indicator**	**Evaluation (points)**
Relevance (0.20)	0.07	1. Coherence of project goals with the priorities and areas of support targeted by the programme	0 – 3
	0.07	2. Coherence between the problems to be resolved in the area defined by the programme and the problems identified for resolution by the project.	0 – 3
	0.06	3. The extent to which the problem to be resolved by the project is of a transboundary nature and the extent to which its resolution involves activities in both programme countries	0 – 3
Efficiency (0.25)	0.09	1. Logic and realistic approach in the internal structure of the project application, logical coherence of the problem to be resolved with the anticipated result and the needs of the target groups	0 – 3
	0.09	2. Coherence of project results to the defined goals	0 – 3
	0.07	3. Indicators which attest to reaching goals prescribed by the project	0 – 3
Effectiveness (0.20)	0.10	1. Conformity of the extent of investments with the planned project goals to be reached and activities to be implemented by the project	0 – 3
	0.10	2. Assessment of the balance between project budget positions	0 – 3
Impact (0.20)	0.09	1. Impact of the project on the environment on the local and regional level	0 – 3
	0.08	2. Impact of the project on target groups	0 – 3
	0.08	3. Involvement of partners and target groups in project implementation	0 – 3
Sustainability (0.15)	0.10	1. Sustainability of project results and impact	0 – 3
	100	Maximum points to be obtained:	36

B. Methodology for the final evaluation of implemented projects

A final evaluation is conducted for projects implemented in order to:

- understand whether the set goals have been met, tasks have been fulfilled and whether results have been achieved;
- gain insight on the influence the project has made on the environment and on human behaviour;
- evaluate the extent to which the project impact and results are sustainable.

The final evaluation of projects is conducted by using the newly developed project evaluation matrix and is similar to the pre-implementation (application) project evaluation. The evaluation scale is from zero to four, where: (0) – not applicable, (1) – weak, (2) – average, (3) – good, (4) – excellent.

- Efficiency (0.30). At the end of a project it is possible to fully evaluate whether and how the goals set at the project initiation stage have been met and what the project results are. This is a very important aspect to evaluate which indicates the extent to which the goals have been reached.
- Effectiveness (0.20). By evaluating effectiveness, it is possible to assess how the finances allocated to the project have been used and how effectively this has been done. It is also possible to assess how effective the cooperation has been among partners and how their combined expertise has been utilized. In other words, it is possible to evaluate whether the products/services and the results are worth the money invested.
- Impact (0.20). The project can have a direct and immediate impact, and also a long-term impact. At the same time, during the project lifetime unplanned and unpredicted impact can occur as a result of the project – both positively and negatively. It is essential to evaluate such impact. In terms of long-term impact, it is important to determine whether the project will have such impact since it is possible that short-term impact does not even have the potential to lead to long-term impact. The criterion has a significant proportion of the total weight because, in principle, projects are implemented in order to reach results and create impact.
- Sustainability (0.15) – at the end of a project, it is realistic to evaluate who, when and how the products/services generated by the project will be used. The actual institutional and financial frameworks which exist for the continual management of the project results are known. The estimation, however, of the sustainability is approximate, since the actual sustainability can be better judged only 3 – 5 years after the project ends. Thus the weight for this criterion is the same as at the project application stage.

The share of the criteria is taken into account in determining the total evaluation of the project and this is calculated by the sum of all qualitative criteria.

$$TE = TE_R + TE_E + TE_{EF} + TE_1 + TE_s \quad (3)$$

where

TE – project total evaluation, percentage;
TE_R – total evaluation of the criteria "relevance", %;
TE_E – total evaluation of the criteria "efficiency", %;
TT_{EF} – total evaluation of the criteria "effectiveness", %;
TE_I – total evaluation of the criteria "impact", %;
TE_S – total evaluation of the criteria "sustainability", %.

In turn, the overall evaluation of each quality criterion receives a corresponding sum of indicator evaluations, divided by the maximum possible assessment and multiplied by the qualitative criteria value.

The proposed evaluation methodology (both for the project application and final project evaluation stages) is tested on six project applications under the new matrix: three project applications approved within the Estonian-Latvian-Russian transboundary programme and three project applications within the Estonian-Latvian transboundary programme. A short description of the evaluated projects is provided in Table V.

The authors' implemented projects evaluation is based on the project documentation (project applications, mid-term and final reports) and the strategic documents of the Estonia-Latvia and Estonia-Latvia-Russia transboundary programme [22, 23, 24].

TABLE IV

PROJECT FINAL EVALUATION MATRIX (AUTHORS' DEVELOPED FACTOR AND INDICATOR WEIGHTING)

Criteria (Total weight factor of the criteria)	**Indicators**	**Evaluation (points)**
Relevance (0.10)	Coherence of project goals with the priorities and areas of support targeted by the programme	0-4
	Coherence between the problems to be resolved in the area defined by the programme and the problems identified for resolution by the project	0-4
	Project results are significant for the target groups	0-4
	The issue to be resolved by the project is of a transboundary nature and activities need to be implemented on both countries involved in the project	0-4
	Activities are implemented to strengthen cooperation among the partners	0-4
	Investment made from transboundary partners in the strengthening of the capacities of the neighbouring country experts and in resolving the identified issues	0-4
	Extent to which the project supports the environmental goals of Latvia/the region/EU.	0-4
Efficiency (0.30)	Extent to which set goals are reached (whether the strategy implemented by the project has lead to the fulfilment of tasks and goals?). Interconnectivity among project activities, products/services delivered, results and project goals	0-4
	Clear evidence of improvements achieved by the project – capacity development, improvement in the state of the environment, increase in environmental awareness, etc.	0-4
	Results achieved are based on indicators selected at the start of the project	0-4
	Involvement of partners and target groups in project implementation and the application of the results generated	0-4
Effectiveness (0.20)	Existence of financial and progress reports	0-4
	Ratio between the planned and actual expenses for project implementation	0-4
	Changes made to the project implementation plan in order to improve its effectiveness	0-4
Impact (0.25)	Direct impact of the project on the environment on the local and regional level	0-4
	Direct impact of the project on the target groups (increase in awareness, level of education, capacity development, development of specific skills, improvement of the socio-economic situation)	0-4
	Direct impact on the project on partners (increase in awareness, level of education, capacity development, development of specific skills, improvement of the socio-economic situation)	0-4
	Potential of the project results to create long-term impact	0-4
Sustainability (0.15)	Evidence that there is an institutional infrastructure established to uphold project results (suitable institutions, action plans, strategies, and others)	0-4
	Evidence that the project results will form a basis for further development and improvements in the environmental sector	0-4
	Evidence that financial resources will be available to ensure the sustainability of project results beyond the project lifetime	0-4
	Extent to which the products/services established within the project are integrated into the activities of partners/target groups and other institutions	0-4
	Potential to replicate the project activities and results	0-4
	Mechanism that ensure the project experience and the dissemination of results to a wider range of interests	0-4

TABLE V

BRIEF DESCRIPTION OF THE EVALUATED PROJECTS (BASED ON PROJECT DOCUMENTS)

Project number	Programme	Objectives	Duration, months	Budget, Euro
EST-LAT-1	Estonia - Latvia Programme	Promote Latvia-Estonia cooperation in the field of nature protection by establishing a network of demonstration farms in both countries to improve opportunities for environmental education and to support environmentally-friendly businesses.	24	849657
EST-LAT-2	Estonia - Latvia Programme	Create a common approach for the management of sensitive nature territories which will be supported with materials (events) to promote environmental education and awareness and to create a functional cooperation network for the management of nature territories and the improvement of education.	24	652659
EST-LAT-3	Estonia - Latvia Programme	Identify and map cultural-historical heritage in forests to establish a publicly accessible data base and a common approach to the identification and management of heritage sites.	28	947494
EST-LAT-RUS-1	INTERREG IIIA	Promote regional development by improving cooperation among specially protected area administrations and municipalities neighbouring their territories and by including protected nature territories in economic activity.	24	632328
EST-LAT-RUS-2	INTERREG IIIA	Promote the protection and balanced use of natural resources, investments of nature centres in environmental education.	23	248419
EST-LAT-RUS-3	INTERREG IIIA	Improve transboundary cooperation in the North Livonian coastline region and neighbouring regions to create a common environment for economic and social activities.	29	604715

Based on the evaluation results, recommendations are made to facilitate the improvement of the evaluation of environmental projects within the framework of the Territorial cooperation programme in the next planning period.

IV. RESULTS

The project application assessment procedures of both programmes are considered satisfactory, because the evaluation of the project application assessment has received 1.92 points (Estonian–Latvian programme) and 2.15 points (Estonian–Latvian-Russian transboundary programme). As mentioned in the previous section, the evaluation can be considered satisfactory because the total average weighted evaluation is between 1.6 – 2.4 points.

The distribution of the points among the criteria is shown in Figure 3. As illustrated, the maximum average weighted number of points that could be reached in each category was: (i) relevance – 0.60 points; (ii) efficiency – 0.75 points; (iii) effectiveness – 0.60 points; (iv) impact – 0.75 points; and (v) sustainability – 0.20 points.

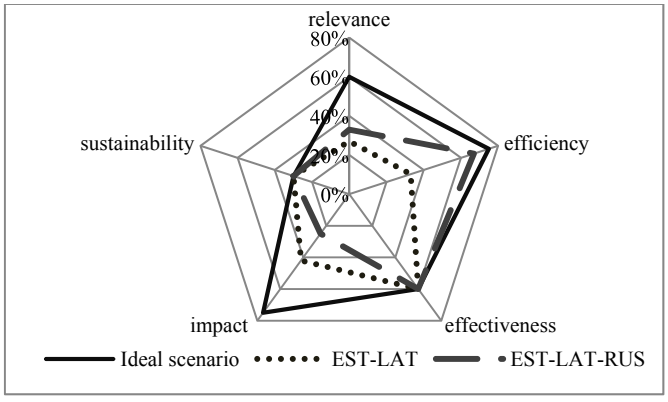


Fig. 3. Distribution of the project application evaluation among the criteria

By reviewing the qualitative evaluation surveys, one can see that the quality evaluation criteria of the Estonian-Latvian-Russian programme are more concentrated, and their valuation is supported by the project application form. The criteria are distributed among four evaluation categories and there are 20 indicators provided to assess them. The qualitative evaluation matrix of the Estonian-Latvian programme, however, includes 34 indicators. Some of these were difficult or even impossible to evaluate, for instance, the qualitative evaluation calls for 'assessing whether the project has taken into account sustainable development, social, integration, environmental, cultural and demographic aspects'. Within the project application, though, one is not asked how these aspects impact the project. The following questions included in the matrix provide a more subjective assessment.

- Is the project based on an actual need to cooperate in the given field?
- Are the planned coordination activities enough for successful project implementation?
- Do the planned management structures conform to the planned partnership?
- Are any of the obvious project partners left outside the scope of the project?

The desire to assess the necessity for cooperation is understandable. This is associated with the transboundary nature of the programme. Nonetheless, the programme guidelines do not provide an explanation on how the reality of this cooperation will be determined and according to what criteria the evaluator will be able to assess this cooperation. Since there is no explanation, then one can assume that it is up to the personal opinion/viewpoint of each evaluator and their own knowledge of the specific field to determine whether the project meets the criteria.

There is no explanation accessible which provides information according to which one shall determine if a project is "successful enough" or "meets the planned partnership". The project applicants provide information in several places in the application form on the choice of partners and the reasons for such. Thus, clearly the choice of partners is

considered seriously and follows some logical reasoning. The persons evaluating the project applications may be able to assess whether all the main stakeholders are included in the project, and perhaps also whether all those who can benefit from the project are included in order to secure the project's sustainability, however in this case, the result of such assessment would be a recommendation, rather than an evaluation in the form of allocating points.

There are some criteria included in the qualitative assessment which essentially do not pertain to the qualitative evaluation of the project, but pertain to the project conformity on the technical level. The following questions are included under the evaluation of the 'effectiveness' indicator:

- Are there enough public awareness measures planned for the broader audience on the project and its results during the course of the project?
- Are the publicity plans described in enough detail?

In reviewing the final evaluation results of the six projects (Table VI), it is clear that project relevance has remained at the same high level at the end of the project. Some projects even have an increase in relevance in comparison to the application stage. This increase in relevance has resulted from new planning documents and strategies approved in the country during project implementation, which raise the relevance of the project, such as the Latvian Sustainable Development Programme 2030. By evaluating the achievement of the goals of both programmes, in retrospect one can conclude that the contribution of these projects has been substantial. It is important to note, however, that the results of the projects do not reflect upon the achievements of the programmes, as the programmes are evaluated only in terms of the number of projects approved within the programme that conform to the resultative indicators set by the programmes (i.e. the success of the programme is measured by its ability to approve a specific number of projects and expediate the funds appropriated).

During the project application evaluation, it was noted that the efficiency of the submitted project applications was close to excellent. When reviewing the results of the project final evaluation, however, it became clear that this is not the case. There is one key reason for such deviation – during assessment at the project application stage, it is difficult to evaluate the financial efficiency of a project since the proposed budget forms are not transparent -- not all expenses are disclosed and it is not possible to completely determine whether the project budget really meets the expected activities. For some projects, the value at the final evaluation is lower than at the project application stage because the implementation time of the project occurred at the time of great economic growth, at a time when prices rose drastically.

The effectiveness of the projects is rated equally low at project evaluation both during the application and final stages. There is a simple explanation for this. Firstly, all the projects evaluated have set more than one goal. The number of goals set by the projects ranges from 2 to 7, they are very ambitious and it is practically impossible to reach them within 24 months time. Thus, the results are weak since, instead of trying to reach one or a maximum of two goals, the project teams have tried to achieve all goals, thereby achieving all of them only partially. This does not attest to effectiveness. Secondly, the projects do not provide results-based indicators based upon which one could evaluate whether these results are achieved. In case of the EST-LAT programme project, the Programme administration is to be held responsible for such a problem, since the project application forms do not require the project applicants to list indicators based upon which the project could be evaluated at its final stages.

The low results in the effectiveness and impact indicators can be attributed to one more factor – the main project products/services are generated very close to the end of the project and the project implementers do not have the opportunity to clarify whether these results are of good enough quality and whether, through their use, the environmental indicators targeted by the project will be improved. Since the project application contains no indicators based upon which the project impact can be assessed, then there is also no information on what the baseline has been in the particular area at the point of initiation of the project. Thus, it will not be possible to evaluate the project impact even if the Programme decides to conduct an ex-post evaluation. The information contained in the project reports is mostly of a declarative nature, whereby the project teams testify that everything was completed and that impact did occur. There are, however, no indicators to support these statements. This approach is accepted both at the first level of control and at the Programme management level, where the consolidated reports of the projects are approved.

The results of the final evaluation under the criterion "sustainability" are, for the most part, similar to the evaluation of the project under this criterion at the project application stage – those projects that had a high rating under this category at the application stage, maintain a high rating at the final evaluation stage.

None of the project teams have developed a plan on securing the sustainability of project results. Some of the project partners have successfully integrated their results in the activities of their institutions, other have drafted new projects that use the results gained from these previous projects. This is a positive trend which indicates that there is some succession from one project to the next and that the cumulative effect of the project evaluated will be larger than the specific results targeted. There is another less positive trend, however – some institutions get involved in projects the results of which are not connected to the direct functions of their institution. Thus, upon terminating the project, any further work or management of the results will inevitably cease, as the functions of these institutions do not conform to securing such results. In these cases, the results of the project are merely published on the institution's web page or, in the worst case; one cannot find any information on these results anywhere. The sustainability of project results can also be determined by the fact of whether the work or outcome resulting from the project can be replicated elsewhere. In order to do so, information on success stories or recommendations

of a project have to be accessible to interested parties so that this can be used to organize or conduct the work further. All the project managers and project employees surveyed felt that they would have wasted much less time and finances if they would have had an opportunity to learn from others. At the same time, no project team has captured the experienced gained (either positive or not so positive) during the project lifetime. The context under which the projects have worked and/or the socio-economic environment at the time of the project have also not been fixed on paper. Therefore, the knowledge which has been gained with public financed resources remains available only for on the individual (and thus private) level. In other words, knowledge on what and how to do things related to any given project and its results rests solely in the hands and minds of concrete individuals. Such knowledge is not even transferred to the institution that has implemented the project, let alone to the broader public. Thus, the project knowledge is a source of personal development for individuals, rather than a method for securing institutional learning.

V. Discussion and conclusions

Through the evaluation of projects and a comparative analysis of their intended vs actual performance, one can conclude that there is a disconnect between the goals at the programme-level and the actual results achieved within the individual projects. Considering the degree of stress on the environment and the accomplishments which we wish to achieve in this area, a more critical look at the way in which we distribute funds and monitor the quality by which these funds are expedited is important. The evaluations in this research show that improvements can be made through increase of efficiency and paying more attention to the potential impact and sustainability of projects.

The environmental projects approved and implemented provide a substantial contribution to reaching strategic goals in the field of environment. In order to ensure the transparent and objective assessment of project applications, their evaluation needs to be separated from the decision-making process and from the management or consultation of projects at the implementation stage. The technical evaluation of a project application can be entrusted upon the common technical secretariat of programmes, however a group comprising experts from various fields should be delegated the responsibility to conduct a qualitative evaluation in order to assess projects based on the evaluation criteria approved by the programme. These results from the expert group can then be submitted to the management committee, which can then make its decision based on the evaluation formulated by the expert group(s). The national sub-committees should be excluded from the evaluation process. In the event that the national sub-committees are included in the evaluation process, then there need to be clear guidelines on the circumstances under which its recommendations are binding to the upper management level of the programme.

Within the programme it is important to define the following:

- Goals -- what activities are to be supported, what the term 'transboundary component' means.
- issues, that are to be resolved by the transboundary programme. Similarly, it needs to be made clear what environmental problems are priorities in the transboundary programme.
- interconnectivity between the programme-level goals, programme priority goals and the project-level goals.
- how the programme will assess the evaluation of horizontal priorities during the project implementation period. If necessary, both the project application forms and the report forms need to be expanded upon. The project applicants need to have the opportunity to support/argue their statements.

The project application forms should request project applicants to provide indicators according to which the project can be assessed on whether the goals have been reached, activities fulfilled and impact created. In environmental projects, there also needs to be a description of the baseline scenario for each indicator.

The effectiveness of projects and the impact which they generate needs to be improved. The development of indicators and the requirement for partners to report on progress made to reach these indicators (in figures) in the progress reports is one way to improve project success at achieving effectiveness and impact. Another aspect that can assist in securing project effectiveness is the introduction of mid-term evaluations which may result in the development of recommendations on improving the results of the project, and on securing its sustainability, etc.

Changes need to be made in the project application matrix. It needs to be expanded to include indicators that would make it possible to evaluate the potential effectiveness of the project.

TABLE VI

Summary of project final evaluations

Project / ***Criteria***	**EST-LAT-1**	**EST-LAT-2**	**EST-LAT-3**	**EST-LAT-RUS-1**	**EST-LAT-RUS-2**	**EST-LAT-RUS-3**
Relevance (10%)	7%	7%	6%	9%	8%	9%
Efficiency (30%)	24%	21%	17%	17%	19%	19%
Effectiveness (20%)	15%	20%	17%	12%	20%	10%
Impact (25%)	19%	19%	16%	19%	17%	17%
Sustainability (15%)	12%	12%	6%	8%	4%	8%
TOTAL:	**77%**	**79%**	**62%**	**65%**	**68%**	**63%**

The project progress report forms may be improved by including information that would be useful for the common secretariat in following the project's progress and which could also benefit the project teams:

- progress on meeting project goals, based on indicators – information on the baseline situation, the planned level to reach, as well as the level that has been reached at the time of the progress report, risk assessment, review of any changes made in the project implementation strategy;
- report on any difficulties faced by the project team and how these difficulties were tackled, information on what the project team would do differently, if faced with a similar situation again.

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