ASSESSMENT OF THE EFFECTIVENESS OF THE MEASURE M10 "AGRI-ENVIRONMENT AND CLIMATE" OF THE LITHUANIAN RURAL DEVELOPMENT PROGRAMME 2014-2020

SUMMARY OF THE FINAL REPORT

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SUMMARY

The aim of Lithuanian Agricultural Policy measures is to improve economic situation of farmers and pay considerable attention to environmental protection and climate change. For this purpose, activities of the measure M10 "Agri-environment and climate" (hereinafter – the Measure) of the Lithuanian Rural Development Programme 2014–2020 (hereinafter – the Programme) should contribute to the implementation of the planned environmental and climate change mitigation goals.

The study was prepared in accordance with the contract No 8P-22-71 signed on the 21st of April 2022 between the Ministry of Agriculture of the Republic of Lithuania and the Institute of Economics and Rural Development of the Lithuanian Centre for Social Sciences. The research was financed from the Programme funding allocated for the technical assistance.

The purpose of the study is to assess the appropriateness, effectiveness, and efficiency of implementation of the measure M10 "Agri-environment and climate" of the Lithuanian Rural Development Programme 2014–2020. The object of the research is the activities of the measure M10 "Agri-environment and climate" of the Lithuanian Rural Development Programme 2014–2020. The research period is 2015–2022.

Research tasks:

- To assess the appropriateness, effectiveness, and efficiency of the activities of the Programme's measure "Agri-environment and climate" achieving goals set in the Programme.
- To evaluate the effectiveness and efficiency of the Measure and its contribution to the achievement of goals.
- To present conclusions and recommendations for the improvement of the use of EU funds.

The following methods were used in the study:

1) Theoretical methods: analysis of scientific and practical literature, generalization, formulation of conclusions and recommendations.
2) Quantitative methods:
   - Mathematical methods: multi-criteria assessment methods (SAW, TOPSIS, EDAS) to arrange the activities of the Measure in respect to the selected indicators.
   - Statistical methods: data systematization and quantitative description (descriptive statistics) related to data grouping, calculation, and interpretation of their generalized statistical indicators.
3) Qualitative methods:

- Discussion in the focus groups is a specific method, in which a group of 7–10 people express their opinions on one or another issue, and experts look for interfaces between the opinions of the participants. This method is used in the study because the group discussion can reveal opinions or viewpoints that respondents would not express in an individual interview ("group effect"). This method supports and helps to understand the results of quantitative research.
  Five discussions were organized in the focus groups: 1) In Kazlų Rūda district, which is one of the most problematic in terms of participation in the activities of the Measure (June 8, 2022), 2) In Radviliškis district, the Institute of Animal Science of Lithuanian University of Health Sciences, a leader of the participation in the activity "Preservation of the endangered old Lithuanian breeds of animals and domestic birds" of the Measure (June 9, 2022), 3) In Molėtai district, where the intensity of farmers' participation in the activities of the Measure reflects the Lithuanian average (May 12, 2022); 4) online focus group discussion with control staff of the National Paying Agency (October 5, 2022), 5) online focus group discussion with administration staff of the National Paying Agency (October 6, 2022).

  Wide range of the participants were invited to discuss in the focus groups: farmers participating and not participating in the activities of the Measure, employees of municipal agricultural departments, specialists performing agricultural functions in the wards, representatives of the Chamber of Agriculture of the Republic of Lithuania, scientific institutions (Institute of Agriculture of the Lithuanian Research Centre for Agriculture and Forestry, Institute of Economics and Rural Development of the Lithuanian Centre for Social Sciences), and the Ministry of Agriculture of the Republic of Lithuania, and the Environmental Protection Agency.

- Experts' interviews in order to gather more information for the evaluation. Semi-structured experts' interviews were organized according to the prepared research plan and questions, during which there was possible to ask additional questions arising from the discussion. Interviews were conducted with the interested parties – institutions and individuals – the Ministry of Agriculture of the Republic of Lithuania, the National Paying Agency under the Ministry of Agriculture of the Republic of Lithuania, Municipal agricultural departments, Lithuanian Agricultural Advisory Service, and beneficiaries.
  The number of persons who participated in the interviews was 15. The persons interviewed were selected from the institutions listed above. They are directly related to the implementation of the activities of the Measure. Additional interviews were conducted with the experts, potential beneficiaries, and beneficiaries implementing such activities of the Measure as "Protection of

habitats of the endangered bird Aquatic Warbler in the natural and semi-natural grasslands", "Protection of habitats of the endangered bird Aquatic Warbler in the wetlands" and "Preservation of the endangered old Lithuanian breeds of animals and domestic birds".

- Questionnaire. The specialists supervising this study at the Ministry of Agriculture of the Republic of Lithuania organized the questionnaires' distribution to 2 455 beneficiaries through the National Paying Agency. 342 respondents answered questionnaires. The questionnaire is presented in the annexes of the study.

The research results were described in detail and illustrated in tables and graphs.

Following data sources were used for the research: European Union and national legislation regulating agricultural and rural development policy, strategic documents, official statistics (EUROSTAT, European Commission, Lithuanian Statistics Department, Agricultural Information and Rural Business Centre, Ministry of Agriculture of the Republic of Lithuania, National Paying Agency, Environmental Protection Agency) data, results of the studies and analyses prepared by Lithuanian and foreign scientists, recommendations of the European Commission, databases of the Institute of Economics and Rural Development of the Lithuanian Centre for Social Sciences.

The assessment of the appropriateness, effectiveness, and efficiency of the activities of the Programme's measure "Agri-environment and climate" in achieving goals set in the Programme

Support provided under the Measure's activity "Extensive management of meadows by animal grazing" was quite effective. Timely, useful, and understandable changes in the implementation rules of the Programme's measure "Agri-environment and climate" contributed to this. Higher level of the compensatory payment allows to expect higher participation in this activity of the Measure in the future. At the beginning of the programming period, the funding for this activity was sufficient and even higher than necessary. Performance was relatively good: in 2022 the area declared under the activity reached 58.0 percent of the planned to support area (45 000 ha).

The activity of the Measure "Extensive management of meadows by animal grazing" needs to be improved – haying should be allowed again after June 20, in order to prepare fodder for the winter. This activity was successful – it contributed significantly to the environmental goals, and the growing number of applicants was observed. In addition, it is proposed to abolish the requirement to mow the residues of grass by October 30. Such residues are of little value, not even suitable for litter. Refusing of this requirement would benefit both the beneficiary and the controlling authority. In both cases, it would save time and money on fuel and reduce air pollution. From an environmental point of view, this would not cause negative consequences.

The activity of the measure “Management of specific meadows” was only partially effective, because the achieved result was only satisfactory - the implementation of the main indicator - supported area - reached only 11.3 percent. Introduction of new requirements required additional financial costs, as the prices of material, energy and labour resources rose. All these economic and legal aspects made the activity less effective and efficient. In the future it is proposed not only to recalculate the amount of the payment, but also to compare payments of similar activities and the requirements for applicants, thus avoiding competition between activities.

Due to meteorological conditions beneficiaries often cannot fulfil the requirement to clean up the wetland on time by March 1st, so the activity “Extensive wetland management” suggests taking this into account and delaying the deadline until mid-April. Another problem, as pointed out during the focus group discussions, is the imprecise layer of wetlands. Due to meteorological and natural conditions and the improvement of agricultural activities and land as a resource, wetlands may have already disappeared in some places. According to the authors, the State Service of Protected Areas under the Ministry of Environment should comprehensively update this layer.

In the activities of the Measure related to the preservation of the habitats of the endangered bird – aquatic warbler, it is proposed to revise the requirement “to remove the cut grass from the field”. In this case, there is a problem with its implementation. This should be provided for in the rules, supplementing the list of obligations and compensating costs accordingly. The results of the activities of the Measure are almost achieved and it contributed to the achievement of the results of the entire measure “Agricultural environment and climate” and the goals assigned to it: in 2022, compared to 2015, the area declared under the activity approached the maximum area that can be declared under it.

Activity “Strips or plots of melliferous plants or fields in arable land” in 2017 was supplemented with a new area of activity that better meets the needs of farmers, but this contributed only marginally to attracting farmers to participate in the activities of the Measure and to achieve the environmental goals provided in the Program. At the beginning of the programming period, funding was sufficient and even significantly higher than what was needed. Activity results was insufficient: realistic achievement in 2022 according to the data, it was only 5.1 percent of the planned goal for the activity (7 000 ha). In the activity of the Measure “Strips or plots of melliferous plants or fields in arable land”, the requirement to have at least 5 ha of arable land could be amended. The area of land managed by beekeepers is usually smaller, so they cannot participate in the activity. A smaller area size requirement or no requirement at all would better achieve environmental objectives. It must be recognized that determining the area controlled by beekeepers is quite difficult due to their diversified activities, and research is needed for this. During focus group discussions and expert interviews, it became clear that the requirements could be improved, as they do not meet farmers' expectations regarding mowing deadlines. They emphasized that the requirement to mow half of the flowering area through the honeybee itself does not meet the needs of beekeepers, and so they do not participate in the activity.

Funding for the activity “Protection of water bodies against pollution and soil erosion in arable land” of the Measure was sufficient and even significantly higher than it was needed. Activity results was insufficient: realistic achievement in 2022 was only 0.2 percent of the planned goal for the activity (10 thousand ha). In the activity of the measure “Protection of water bodies against pollution and soil erosion in arable land”, in order to attract more applicants, it is proposed to increase educational activities through training, consulting and research results.

The planned product indicator (area) of the measure activity “Maintenance of reclamation ditches” was implemented by 26.9 percent. This shows that the support was only partially effective. The support of the activity would be more effective if there were larger payments, because the activity required a relatively large amount of work and material costs, it is specific due to the fulfilment of complex requirements. According to the authors’ estimations, the average compensatory payments should be 589 and 536 Eur/ha depending on the way the grass is managed. In addition, it is proposed to revise the requirements, including the clearing of bushes and trees.

In the activity of the measure “Improving the status of water bodies at risk”, the compensatory payment was adequate to achieve the objectives. The largest supported area was in 2022 and this amounted to 7 504 ha, i.e., the declared area reached almost 93.8 percent planned support area. The support would be more effective if the deadlines were revised, as a lot is determined by meteorological conditions and when it is the working timer, the farmer does not manage to fulfil all the requirements in time. It is proposed to remove the deadline “to cut and remove the grass before August 1”, as it would not cause environmental damage.

The declared area of the activity “System for cultivation of environmentally friendly fruits and vegetables” reached almost 79.2 percent planned support area (9 500 ha). In the Activity of the Measure, it is proposed, that unified requirements related to the use of plant protection products for individual types of vegetables could not be applied. During the interviews with experts, problems related to vegetable types that yield more than one harvest per year (e.g., lettuce, dill, radishes, etc.) were identified. Such vegetables should be allowed to be sprayed with herbicides more times due to many yields. In practice, the requirements in this aspect could also be reviewed for potatoes due to diseases that attack them.

In the activity of the measure “Soil protection”, support would be more effective if the activity was adapted to those using non-tillage technologies. Farmers using these environmentally friendly technologies cannot land after harvest crops because they do not use ploughing. In addition, it can be stated that the effectiveness of the support provision was sufficient, except for the too small amount of compensatory payment, which, according to the authors, should have been adjusted during the year. The changes to the requirements for the implementation of the Measure were in time, useful and understandable to the applicants. At the beginning of the programming period, the funding for activities was sufficient and even significantly higher than what was needed. In 2018, when the maximum area of legumes or perennial grasses was declared under this activity, the achievement of the indicator was still low, i.e. 2.1 percent.

Support for the activity "Preservation of the endangered old Lithuanian breeds of animals and domestic birds" was provided effectively, but at the end of the period, as the profitability gap with traditional farmers increased, the attractiveness of the activity for potential applicants and the achievement of the intended goals decreased. This was influenced by indicators such as profit and profitability different animals. An increase of compensation payments would ensure a greater number of indigenous old-breed livestock and poultry needed to conserve the gene pool, which has declined significantly during this program period, with a widening gap between income and cost differences between traditional and gene pool breeding. The estimation of compensatory payments for the activity "Preservation of the endangered old Lithuanian breeds of animals and domestic birds" for new programming period show higher values.

The support of the activity "Cultivation of catch crops on arable land" of the Measure was provided effectively. According to this activity, the area declared (in 2022) exceeded the planned one by 7 times, so it can be said that it contributed significantly to the achievement of the goals assigned to it. We suggest that a deadline should be set for the requirement "Catch crops or their residues should be inserted before sowing the main crops" because National Paying Agency cannot plan inspections and submit reports and start disbursement of support. We suggest setting a deadline of May 1.

In 2022, the area supported by the activity "Stubble fields during the winter" reached 42 354 ha and the goal (50 000 ha) was achieved by 85 percent. In the future, it would be more effective to replace this activity with analogous activity, which promotes the use of non-tillage technologies, which would increase the area and, at the same time, the benefits to the environment. For the proposed activity, the main requirement would be "Use the method of tillage without a ploughing (without turning the soil) in the cultivated fields".

Evaluation of the results, efficiency and effectiveness of the Measure and its contribution to the achievement of the set goals

After carrying out a multi-criteria evaluation, the highest place among all the activities of the Measure was occupied by the activity "Cultivation of catch crops on arable land". This place was determined by the good results (number of applicants, supported area, its share to UAA and the amount of support) of the implementation this activity compared to other activities. The second and third places were occupied by the activities "Stubble fields during the winter" and "Extensive management of wetlands", respectively. The activities "Protection of water bodies against pollution and soil erosion in arable land", "Strips or plots of melliferous plants or field in arable land" and "Management of slopes of reclamation ditches" occupied the lowest places, respectively. The most important reasons for this result are the relatively lower key indicators compared to other activities. It is important to mention that the results coincide with the expert assessments of all

focus groups. It is suggested to pay attention to the activities that occupied the last places. For a better achievement of the environmental goals, these activities should be reviewed in the future, their requirements, and the amounts of payments. This would have a positive impact on potential beneficiaries and the National Paying Agency.

The Measure "Agricultural environment and climate" of the Lithuanian Rural Development Programme 2014–2020 foreseen one common product indicator for all its activities "Area (ha)". During 2015–2021 period, the target value of this indicator changed slightly and in the latest version of (2022) of Lithuanian Rural Development Programme 2014–2020, the value of this indicator reached 233 150 ha. Out of them - an area of 147 150 ha - it was planned to support all three target areas (4A, 4B and 4C) of the fourth priority "Restoring, preserving and enhancing ecosystems related to agriculture and forestry". According to the fifth priority "Promoting climate change adaptation, risk prevention and management" the 5D target area "Reducing green house gas and ammonia emissions from agriculture" was intended to support 70 000 ha, and according to the 5E target area "Fostering carbon conservation and sequestration in agriculture and forestry" – 16 000 ha.

After evaluating the 2022 data, during 2015–2022 the total product indicator "Area (ha) related to agri-environment and climate measures" in agriculture was 60.8 percent of the measure "Agricultural environment and climate" of the planned size – 233 150 ha. The implementation of the objectives of the fourth priority: "Restoring, preserving and enhancing ecosystems related to agriculture and forestry" was not as successful as expected at the planning stage of the Programme. During 2015–2022 according to the fourth priority "Restoring, preserving and enhancing ecosystems related to agriculture and forestry", all three target areas (4A, 4B and 4C) had a total product indicator 33.7 percent. of the size provided for it – 147 150 ha. The implementation of the objectives of the fifth priority was better: the product indicator of the 5D target area was achieved by 63.7 percent its intended values – 70 000 ha, the product indicator of the 5E target area exceeded the default value (16 000 ha) by 3 times. The implementation of these goals directly depended on the success or failure of the activities contributing to the implementation of the target areas.

Table. Indicators planned for the activities of the measure "Agrarian environmental protection and climate" and their achievement during 2015-2022

Activity		Number of beneficiaries, units	Supported area in 2022 , ha	Planned to support area, ha	Share of the supported area from the planned to support area, %
Code	**Name**				
10.1.01	Extensive management of meadows by animal grazing	1 825	26 112	45 000	58.0
10.1.02	Management of specific meadows	329** (2021)	2 266** (2021)	20 000	11.3
10.1.03	Extensive management of wetland	897	8 114	10 000	81.1
10.1.04	Preservation of habitats of the endangered bird – aquatic warbler in natural and semi-natural meadows	184	3 480	4 500	77.3
10.1.05	Preservation of habitats of the endangered bird – aquatic warbler in wetlands	14	674	350	192.6
10.1.06	Strips or plots of melliferous plants or field in arable land	56	357	7 000	5.1
10.1.07	Protection of water bodies against pollution and soil erosion in arable land	11** (2021)	21** (2021)	10 000	0.2
10.1.08	Management of slopes of reclamation ditches	253** (2019)	2 825** (2019)	10 500	26.9** (2019)
10.1.09	Improving the status of water bodies at risk	603	7 504	8 000	93.8
10.1.10	System for cultivation of environmentally friendly fruits and vegetables growing	290	7 527	9 500	79.2
10.1.11	Soil protection	27** (2018)	1 077** (2018)	52 300	2.1** (2018)
10.1.12	Preservation of the endangered old Lithuanian breeds of animals and domestic birds	X	X	X	X
10.1.13	Cultivation of catch crops on arable land	1 345	39 408	6 000	656.8
10.1.14	Stubble fields during the winter	2 967	42 354	50 000	84.7
Total:		**8 801****	**141 719****	**233 150***	**X**

** from 06.12.2018;*

*** Maximum number of beneficiaries and supported area during 2015-2022, if not in 2022.*

Conclusions and recommendations for more effective use of EU support

For the effective use of EU support and better achievement of environmental goals proposals measures are presented below.

To strengthen information activities about support in general and about the conditions for receiving it at the level of municipalities. The lack of information about suitable activities, and the procedure of fulfilling the obligations was observed. According to the authors' opinions, it is necessary to spread more information through the media and television programs dedicated to the farmers because not everyone uses the Internet.

To compensatory payments could be revised taking into account the increase of the prices of technical, energy and labour resources. The payments should include additional transportation and labour costs compensating expenses for reaching fields located far from each other, as well as the income foregone due to harvest losses, when accessing the part of the field where environmental obligations are implemented with agricultural machinery. Additionally, when changing the requirements and conditions related to additional costs and/or income foregone, the amounts of compensatory payments should be recalculated in the future.

To expand the possibilities of remote submission of information to the National Paying Agency system, as technical problems occurred in the practice. More options for declaring a field and recording changes to it should be pursued than the current conditions allow.

To aim for a more stable legal base (implementation rules) that would allow farmers to plan their activities several years ahead. Shorter terms of commitment would positively affect farmers' participation in the Measure for the first time. Later having the skills and seeing the benefits it is likely to continue to participate more contributing to the implementation of environmental objectives.

To apply more flexible sanctioning. Currently, it is more focused on punishing beneficiaries than achieving environmental goals. Additionally, sanctions are applied not only to the activity, but to the entire support for the farm. For this reason, farmers decide not to participate in the activities of the Measure.

To aim for shorter terms for receiving compensatory payments, as beneficiaries have for them to wait almost a year due to circumstances beyond their control. Payment terms for advance could be brought forward.

To give priority to receive investment support for those participating in the Measure.

Although the changes in the rules for individual activities were timely, helping applicants to better understand the conditions, important aspects (mowing deadlines, AWU/ha) are still not harmonized with income support and Rural Development Programme measures. Activities of the Measure that require livestock should be expanded to include, for example, bison and fallow deer.

Inspection of the implementation of the activities of the Measure is time-consuming and expensive due to the different deadlines set for individual committed works. This often requires going to the same fields 3–4 times, as inspections cannot be done remotely. It is proposed to reduce the number of inspections by refusing insignificant requirements and inspections. Additionally,

inspections are problematic because some committed works do not have a specific deadline and may depend on natural conditions, and support can be paid to all beneficiaries only after all inspections have been completed.

After analysing the implementation of activities, it can be seen that the activities of the Measure are least implemented in central Lithuania, where intensive farming prevails. The implementation of activities in this part of the country, could bring the greatest benefits. However, the farms of central Lithuania often have high productivity indicators, so it is not economically beneficial for them to participate in the activities of the Measure. This is another reason to pay attention to it. It is suggested that the list should include such activities that would attract intensive farms to implement environment friendly activities. For example, apply precise tillage technologies, greater crop rotation after harvesting the main crops, grow catch crops that cover the soil surface with their green mass.

After the implementation of these proposals, it is likely that the agricultural areas supported under the Measure would increase and, at the same time, would have a greater positive environmental effect.