

AGRI-ENVIRONMENT AND CLIMATE ACTION AS AN INSTRUMENT TO PROTECT THE DIVERSITY OF POLAND'S LANDSCAPE

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Abstract

The purpose of this article is to analyze the use of EU funds by national beneficiaries as part of their participation in the "Agri-environmental-climate" action implemented in seven climate packages, ie Sustainable Agriculture, Soil and Water Conservation, Orchard Conservation of Traditional Fruit Trees, Valuable Habitats and Endangered Species Birds in NATURA 2000 areas, precious habitats outside the NATURA 2000 areas, preservation of endangered genetic resources of plants in agriculture and preservation of endangered genetic resources of animals in agriculture. The research material is data originating from The Agency for Restructuring and Modernisation of Agriculture (ARMA) concerning applications submitted by farms. Calls for proposals were held from March 15, 2014 till June 10, 2016. The object of the research was an analysis of the activity of Polish applicants. The article uses the descriptive and tabular method of statistical data analysis. In addition, the purpose of the analysis was to analyze the literature of the subject. Agri-environmental and climatic action as an instrument for the protection of landscape diversity is an important support instrument for Polish farmers. Since the beginning of Poland's accession to the EU in 2004, Polish farmers are aware that agricultural activity should be

conducted in accordance with sustainable development, and CAP agri-environment and climate programmes are an instrument whose aim is to preserve environmental and climate biodiversity. Such programmes should be supported as they bring benefits to farmers themselves in the form of subsidies (money) and the environment in the form of protection of natural ecosystems and sustainable development.

Keywords: *Agri-environmental-climate, the Common Agricultural Policy, European Union*

JEL classification: *Q10, Q14, Q19, Q18*

1. Introduction

Poland's membership in the European Union and the acquisition of Polish agriculture by the mechanisms of the Common Agricultural Policy and the specific nature of rural areas in Poland represent a major challenge for farmers for whom the proper use of aid is the most important issue in the drive for diversification of farm activities in this area and competition in the common European market in accordance with the principles of sustainable development (Kania, Bogusz 2011, Paluch, Płonka 2016, Wojcieszak 2016).

One of the key objectives of the Common Agricultural Policy is to promote environmentally friendly agricultural practices (Palsova 2015). Agri-environmental and climatic action in the financial perspective of 2014-2020 is an instrument to implement and promote agricultural practices that aim to protect waters, soils, precious natural habitats, endangered species of flora and fauna and protect landscape diversity (Dicks, Kleijn, Batary, Sutherland 2015). Activities undertaken by farmers within this measure have undoubtedly influence biodiversity diversity in the countryside. In addition, compliance with the agri-environmental requirements of the individual packages by the beneficiaries is conducive to the rational use of nature resources and the reduction of the negative impact of agriculture on the natural environment (Lefebvre, Espinosa, Paloma 2012). The essence of this action is the use of payments to compensate for costs and lost revenue, to farmers who voluntarily apply production methods to protect the environment.

2 Data and Methods

Poland's accession to the European Union has made farmers and rural residents the beneficiaries of the Common Agricultural Policy (CAP). As part of rural policy, activities from the Rural Development Program (RDP 2007-2013 and RDP 2014-2020), which are the basic instrument for supporting the structural,

economic and social transformations of rural areas, agriculture and processing of agricultural products, have been implemented in new periods since 2007 programming, inter alia through the implementation of various investment and agri-environmental projects (Bogusz, Paluch 2011; Prus, Wawrzyniak 2008, 2010, Kielbasa, Grzelak 2014, Kielbasa 2013, Wojcieszak 2016).

The purpose of this article is to analyze the use of EU funds by national beneficiaries as part of their participation in the "Agri-environmental-climate" action implemented in seven climate packages, ie *Sustainable Agriculture, Soil and Water Conservation, Orchard Conservation of Traditional Fruit Trees, Valuable Habitats and Endangered Species Birds in NATURA 2000 areas, precious habitats outside the NATURA 2000 areas, preservation of endangered genetic resources of plants in agriculture and preservation of endangered genetic resources of animals in agriculture*. The research material is data originating from The Agency for Restructuring and Modernisation of Agriculture (ARMA) concerning applications submitted by farms. Calls for proposals were held from March 15, 2014 till June 10, 2016. The object of the research was an analysis of the activity of Polish applicants. The article uses the descriptive and tabular method of statistical data analysis. In addition, the purpose of the analysis was to analyze the literature of the subject.

3 Results and discussions

Packages under the agri-environmental-climatic measure are mostly continuation of the packages implemented under the agri-environmental program RDP 2007 -2013. However, with the experience of implementing the agri-environmental program, they have undergone some modifications. Organic farming in the financial perspective 2014-2020 is functioning in Poland as two independent actions, which is different from the previous one within RDP 2007-2013, where organic farming was one of the packages of the agri-environmental program.

The essence of agri-environmental-climate action is to promote agricultural practices that contribute to the protection of soil, water, climate, valuable natural habitats and endangered bird species, endangered genetic resources of crops and livestock, and the protection of landscape diversity. Practices applied in the Measure affect biodiversity diversity in rural areas, contribute to the diversity of species and abundance of pollinating insects, and to the habitat of many other animal species.

The support under the measure may be used (Agri-Environmental Action Guide 2016):

- farmer conducting agricultural activity on a farm located in Poland; under the concept "farmer" means a natural or legal person, or a group of natural or legal persons, irrespective of the legal status of such group and its members,
- land manager - entity (natural person, legal person, group of natural or legal persons) farming in natural areas, ie non-agricultural land, on which there are certain types of natural habitats or bird nesting habitats
- group of farmers or group of farmers and land managers.

 Table 1 **Characteristics package and variants**

Package	Variants
Pack 1. Sustainable farming	
Pack 2. Protection of soils and waters	2.1. Catch crops
	2.2. Protective belts on slopes with a slope above 20%
Pack 3. Preserve orchards of traditional fruit tree varieties	
Pack 4. Valuable habitats and endangered bird species in Natura 2000 areas	Protection of natural habitats:
	4.1. Varied wet meadow meadows
	4.2. Selenite meadows and sunflowers
	4.3. Grasslands
	4.4. Wet meadows
	4.5. Semi-natural fresh meadow
	4.6. Peat bogs
	4.6.1. Peat bogs - mandatory requirements
	4.6.2. Peat bogs - compulsory and supplementary requirements
	4.7. Extensive use in special protection areas (SPAs)
	Protection of bird breeding habitats:
4.8. Protection of nesting habitats for birds: ryegrass, duckweed, bloodworm or lapwing	
4.9. Protection of breeding habitats of birds: Aquatic Warbler	
4.10. Protection of nesting habitats of birds: dubelta or big ball	
4.11. Protection of breeding habitats of birds: corncrake	

Package	Variants
Pack 5. Valuable habitat outside the areas Natura 2000	Protection of natural habitats:
	5.1. Varied wet meadow meadows
	5.2. Selenite meadows and sunflowers
	5.3. grasslands
	5.4. Wet meadows
	5.5. Semi-natural fresh meadow
	5.6. bogs
	5.6.1. Peat bogs - mandatory requirements
Pack 6. Preserve at risk genetic resources plants in agriculture	6.1. Preservation of endangered genetic resources of plants in agriculture - in the case of cultivation
	6.2. Preservation of endangered plant genetic resources in agriculture - in the case of seed or seed production
Pack 7. Preserve at risk genetic resources animals in agriculture	7.1. Preserve local breeds of cattle
	7.2. Behavior of local breeds of horses
	7.3. Preserve local breeds of sheep
	7.4. Preserve local breeds of pigs
	7.5. Behavior of local goat breeds

Source: Own study based on data from the Ministry of Agriculture and Rural Development, 2017.

Farmer has a wide selection of 7 packages to choose from the 28 variants are shown in table 1.

Each beneficiary of the Action is obliged to comply with the following requirements (Agri-environmental and climatic guide 2016):

- must have an agri-environmental activity plan,
- must keep a register of agri-environmental activities,
- cannot transform existing permanent grassland on the farm;
- must keep on the farm elements agricultural landscape not used in agriculture, which are the mainstay of nature.

Table 2 Participation of agricultural producers in agro-environmental and climatic action

Voivodship	Total number of applications submitted	PACK			
		1	2	3	4
		Sustainable farming	Soil and water protection	Preserve orchards of traditional fruit tree varieties	Valuable habitat and endangered bird species in NATURA 2000 areas
Dolnośląskie	768	40	24	4	325
Kujawsko-Pomorskie	841	542	56	5	152
Lubelskie	1813	390	81	22	524
Lubuskie	476	29	1	1	271
Łódzkie	276	83	20	4	69
Małopolskie	896	14	83	58	267
Mazowieckie	1162	119	112	20	649
Opolskie	106	69	4	0	7
Podkarpackie	1954	61	36	31	850
Podlaskie	1300	90	31	15	829
Pomorskie	1025	373	66	4	213
Śląskie	152	12	15	5	23
Świętokrzyskie	495	85	103	18	170
Warmińsko-Mazurskie	841	154	22	3	347
Wielkopolskie	904	193	136	5	392
Zachodniopomorskie	692	105	15	5	390
SUMMARY	13701	2359	805	200	5478

Voivodship	Total number of applications submitted	PACK		
		5	6	7
		Valuable habitat outside the NATURA 2000 areas	Preservation of endangered plant genetic resource in agriculture	Preservation of endangered genetic resources of animals in agriculture
Dolnośląskie	768	329	15	31
Kujawsko-Pomorskie	841	72	3	11
Lubelskie	1813	582	134	80
Lubuskie	476	159	5	10
Łódzkie	276	60	16	24
Małopolskie	896	208	2	264
Mazowieckie	1162	183	24	55
Opolskie	106	20	0	6
Podkarpackie	1954	896	30	50
Podlaskie	1300	244	10	81
Pomorskie	1025	281	23	65
Śląskie	152	80	4	13
Świętokrzyskie	495	79	24	16
Warmińsko-Mazurskie	841	257	7	51
Wielkopolskie	904	124	14	40
Zachodniopomorskie	692	152	16	9
SUMMARY	13701	3726	327	806

Source: Own study based on unpublished data from ARMA.

By joining the implementation of the measure, the beneficiary, together with the agri-environment adviser, develops a agri-environmental action plan. The plan covers the entire period of the agri-environment-5-year commitment. Contains a description of the farm, specifies what packages (variants) will be implemented, and provides other information about the obligation involved, such as crop rotation, grazing, mowing times.

Applications are submitted to the Agency for Restructuring and Modernization of Agriculture, which acts as a payment institution in Poland, as part of the activities of the Common Agricultural Policy.

Based on the analysis of data obtained from the Agency for Restructuring and Modernization of Agriculture, it can be concluded that the activity of Polish farmers was very different (Table 2). Farmers from Lubelskie voivodship (13.23%), podkarpackie (14.26%), podlaskie (9.49%), Mazowieckie voivodships (8.48%) were the largest share of applicants for payment under the agri-environmental- , Pomorskie (7.48%), Kujawsko-Pomorskie (6.14%), Lesser Poland (6.54%), Warmińsko- Mazurskie (6.14%), Wielkopolska (6.60%), Lower Silesia (5, 61%) and West Pomerania (5.05%).

Less than 5% of requests came from the following voivodeships: Świętokrzyskie (3.61%), Silesian (1.11%), Łódź (2.01%), Lubuskie (3.47%). Very little interest was shown by farmers from Opolskie Voivodship (0.77%). It may be presumed that such a situation was due to insufficient knowledge among farmers, poor promotion, or farmers' concerns regarding fulfillment of the requirements during the implementation of the action.

In addition, applicants are most likely to submit applications under Package 4, ie, Habitats and Endangered Bird Species in NATURA 2000 [Number of Submissions 5 478], Package 5 - Valuable Habitats Outside NATURA 2000 Areas [Number of Applications Received 3 726] and Package 1 - Sustainable Agriculture [number of applications submitted 2 359]. It can be assumed that such high interest on the part of farmers was mainly due to the high rate of payment for the given package. For example, in the case of sustainable agriculture, the rate of payments per hectare was 2015. - 400 zlotys. In the case of the fourth package, the payment per hectare was in the range of PLN 600 to PLN 1276 [depending on the bird species conservation project]. Preserving orchards of traditional varieties of fruit trees is a package that Polish farmers were least interested in. Only 200 agricultural producers submitted applications for this project, despite the fact that the payment per hectare was high and amounted to PLN 1964 [in 2015].

It was noted that among the applicants, male applicants were 87.04% male. The above situation may be the result of an entry into the Register of Manufacturers (EP), which takes place in ARMA District Offices. Bearing in mind the legal form, it was stated that individuals showed great interest. A small share was made up of legal entities and organizational units without legal personality.

It was noted that men representing 87.04% dominated among the producers submitting applications. The above situation may be the result of an entry in the Register of Producers (RP), which takes place at the District Offices of ARMA. Bearing in mind the legal form, it was found that natural persons showed great interest. Only legal persons and organizational units without legal personality constituted a limited share.

Table 3 The rate of success in receiving EU funds under the Agro-environmental-climate program [decision positive-payment]

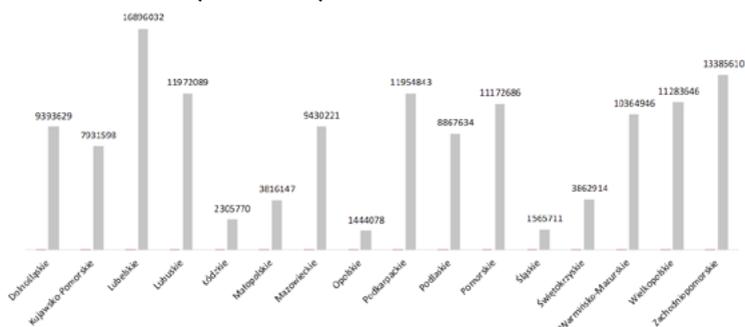
No	Voivodship	Success rate [%]
1.	Dolnośląskie	73
2.	Kujawsko-Pomorskie	62
3.	Lubelskie	94
4.	Lubuskie	99
5.	Łódzkie	84
6.	Małopolskie	60
7.	Mazowieckie	80
8.	Opolskie	70
9.	Podkarpackie	75
10.	Podlaskie	73
11.	Pomorskie	88
12.	Śląskie	85
13.	Świętokrzyskie	89
14.	Warmińsko-Mazurskie	83
15.	Wielkopolskie	89
16.	Zachodniopomorskie	93
	Average in Poland	82

Source : Own study based on unpublished data from ARiMR [as of 06/07/2017].

Due to the fact that the applications for the "positive decision-payment" status constitute a high percentage in relation to the total number of applications submitted as part of the analyzed activity in the audited period, the success rate was presented (Table 3). When examining positively considered applications, it should be noted that the success rate in the analyzed period was 82% for Poland. For a more detailed explanation, the voivodships were compared according to the success rate in relation to the agri-environmental-climate action. The analysis allowed to indicate voivodships with the highest success rate (over 90%). These were the following provinces: zachodniopomorskie, lubuskie and lubelskie. In these voivodships, the greatest interest from farmers was noted and the majority of applications were positively examined. Definitely the lowest success rate was recorded by farmers applying for funds from the Małopolska province (only 60%) and Kujawsko-Pomorskie (62%). The remaining voivodships oscillated at the level of 73% [Dolnośląskie and Podlaskie Voivodships] to 89%, including the

Wielkopolskie and Świętokrzyskie Voivodships. It should be emphasized that the beneficiaries from the Podkarpackie, Podlasie and Pomeranian provinces showed high activity [number of submitted applications] in acquiring EU funds, however, some of them due to non-compliance received a negative decision and funds were not granted or were granted in a reduced amount. It should also be pointed out that the high level of financial resources received in these voivodships (Figure 1) is due to the fact that farmers participated in the packages for which the subsidy was the largest, hence the high level of funds in a given province.

Figure 1 The amount of support [PLN] provided in individual voivodships within the analyzed city



Source: Own study based on unpublished data from ARiMR.

There were differences in the amount of funds raised by agricultural producers in the system of voivodships. To determine the regional variation, it is important to determine the relationship between the value of submitted applications and the total number of farms within the voivodship, which makes it possible to make comparisons. Analyzing the average value of financial aid granted to beneficiaries who submitted an application under the agri-environmental-climate action, it was found that it varied depending on the region and the package in which the farmer participated. Analyzing the aspect regarding the payment of financial resources (Figure 1), it can be seen that farmers from the Lubuskie Voivodeship received a financial envelope in the amount of over PLN 16 million, then beneficiaries from the West Pomeranian Voivodeship over PLN 13 million. Producers from the Wielkopolskie, Pomorskie, Podkarpackie and Lubuskie voivodships received financial resources for the amount of over PLN 11 million [each voivodship]. Beneficiaries from the Opolskie, Śląskie and Łódzkie voivodships received a subsidy in the amount of PLN 1 to 2.3 million.

4 Conclusions

Agri-environmental and climatic action as an instrument for the protection of landscape diversity is an important support instrument for Polish farmers. It turns out that farmers see in these programs the development opportunities of their farms, especially in the field of sustainable agriculture. In addition, it should be emphasized that Polish farmers who own their farms in Natura 2000 areas are aware of how valuable natural areas are and are willing to make use of the financial resources of EU aid that are largely targeted at these areas.

In conclusion, it should be stated that from the very beginning of Poland's accession to the EU (2004), farmers are aware that agricultural activity should be carried out in accordance with sustainable development and that the CAP's agri-environment and climate programs only easier.

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