

National Governance Approach for Agriculture Land in Natura 2000 Areas. Evidence from Plovdiv District, Bulgaria

Yanka KAZAKOVA-MATEVA*

Economics of Natural Resources Department, University of National and World Economy (UNWE), Students' Town "Hristo Botev", Sofia 1700, Bulgaria

* corresponding author: yanka.kazakova@gmail.com

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Abstract

The designation and implementation of Natura 2000 sites faced many challenges across most of the member states in the EC. Some related to consultation and involvement of stakeholders, funding the conservation objectives and providing compensation to land owners, farmers and foresters for restrictions on their land use. The national governments adopted different approaches to address these issues. The aim of the paper is to assess the governance approach for agricultural land in Natura 2000 in Bulgaria with a focus on the contribution of the Natura 2000 compensatory payments. The results suggest that the measure is instrumental in mitigating farmers' frustration and in providing support to them; although its contribution to the favourable conservation status is still uncertain. Another weakness is the lack of awareness on Natura 2000 location and restrictions as well as on nature-friendly farming practices among farmers.

Keywords: Natura 2000, farmers, compensatory payments

Introduction

Natura 2000 is the European network of protected sites designated under the Birds and Habitats Directives. The designation of sites follows European scientific criteria and strict procedures and timeframes. Their implementation created frustration, opposition and even conflicts across different member states (Borrass et al., 2015; Crofts, 2014; Paavola, 2004; Grodzinska-Jurczak and Cent, 2011). The key challenges in this process for member states were interactions between national and regional/local authorities; appropriate consultation, timely involvement and sufficient information to stakeholders, securing funding for the different stages of the process (Ferranti et al., 2014, Grodzinska-Jurczak and Cent, 2011). The designation of protected sites on private forest and agriculture land and its

impact on private property rights is a recurring problem at national and local levels (Alphandery and Fortier, 2001; Borrass et al., 2015; Diez et al., 2015; Weber and Christophersen, 2012; Hiendpää, 2002; Paavola, 2004; Pellegrino et al., 2016; Bouwma et al., 2016). Other conflicting uses are tourism (including ski development), housing and infrastructure development (Beunen and de Vries, 2011). This is reported as a concern (especially) in less developed regions in studies from new member states (Grodzinska-Jurczak and Cent, 2011). The national implementation challenges most often relate to balancing nature conservation objectives and socio-economic needs in Natura 2000 network.

There is general agreement in literature that the lack of involvement of key stakeholders in the designation process of Natura 2000 is a major

weakness in the early years of Natura 2000 (Crofts, 2014; Ferranti et al., 2014). The transparent and effective engagement of stakeholders, land owners and users, as well as local governments are reported to have improved the acceptance, reduced the conflicts and enabled consensus on future socio-economic uses in Natura 2000 sites (Diez et al., 2015; Rauschmayer et al., 2009; Weber and Christophersen, 2012). Therefore, public participation in both the designation and implementation is strongly encouraged in the post-2000 period (Ferranti et al., 2014; Beunen and de Vries, 2011; Kati et al., 2015).

Most the countries developed new approaches for stakeholder involvement, management and/or financial instruments for the implementation of Natura 2000 at national level (Crofts, 2014; Pellegrino et al., 2016; Bouwma et al., 2016). A shift from a top-down to a more flexible bottom-up approaches (Rauschmayer et al., 2009), organization of a deliberate planning process (Beunen and de Vries, 2011), or empowerment of local self-government (Klúvanková-Oravská et al., 2009) reduce the tensions and contribute to achieving Natura 2000 objectives.

The funding for Natura 2000 sites management is very important for delivering the nature conservation objectives of the Natura 2000 network (Ferranti et al., 2014, Pellegrino et al., 2016). From this perspective the lack of dedicated EU funding for Natura 2000 despite the Article 8 provisions for co-financing of management measures by the EC is another implementation challenge (Crofts, 2014). In the 2007-2013 programming period, the EU introduced the option for providing compensatory payments to farmers and forest owners for land use restrictions imposed by Natura 2000 management plans or designation orders. Bulgaria is one of the 16 member states implementing the option for Natura 2000 compensations on agricultural land (ENRD, 2015)

The paper aims to assess the national governance approach for agricultural land in Natura 2000 in Bulgaria with a focus on the contribution of the Natura 2000 compensatory payments under the rural development programme (RDP Natura 2000 measure). The attention is on farmers and nature friendly farming practices since the interaction between the agriculture and nature conservation sectors was almost non-existent in

the country before the discussions about Natura 2000 designation started.

Materials and methods

The study utilizes a combination of research methods: Documentary analysis of key governmental documents (laws, ordinances, strategies and programmes) in biodiversity and agriculture policies. A case study assessment of the implementation of Natura 2000 in Plovdiv district (NUTS 3 level) comprising (1) Spatial analysis of the agriculture land use in Natura 2000 zones in Plovdiv. (2) Descriptive statistics analysis of the Natura 2000 compensatory payments. (3) Qualitative analysis of farmers' awareness about Natura 2000 using structured interviews with 68 farmers. The survey was carried out in Plovdiv district in the summer of 2016.

Results and discussion

Natura 2000 governance approach in Bulgaria

Natura 2000 zones in Bulgaria cover 34.4% of the national territory (Figure 1). This places the country third in the EC, after Slovenia and Croatia. The Special Protection Areas (SPAs) under the Birds Directive are 119 and cover 22.7% of the national territory. The Sites of Community Interest (SCIs) under the Habitats Directive are 233 and cover 30% of the territory. There are 13 Natura 2000 zones with overlapping SPAs/SCIs boundaries.

Forest ecosystems cover more than half (56.5%) of the Natura 2000 territory in the country (PAF, 2014). The water and sea ecosystems are (9%); urban areas (2%). Farming related ecosystems are agriculture land (12%) and grasslands (13.5%). Scrub and areas of sparse vegetation (7%) are sometimes also used for grazing of farm animals, but are not counted in the agriculture land fund and are not eligible for CAP area-based support. The large areas of agricultural land designated in Natura 2000 sites created confusion and concerns about its future use.

The Biodiversity Law outlines the governance approach for Natura 2000 in Bulgaria. The Ministry of environment and water (MoEW) consulted by the National Biodiversity Council takes the majority of decisions on sites designation, management, monitoring, communication, etc.

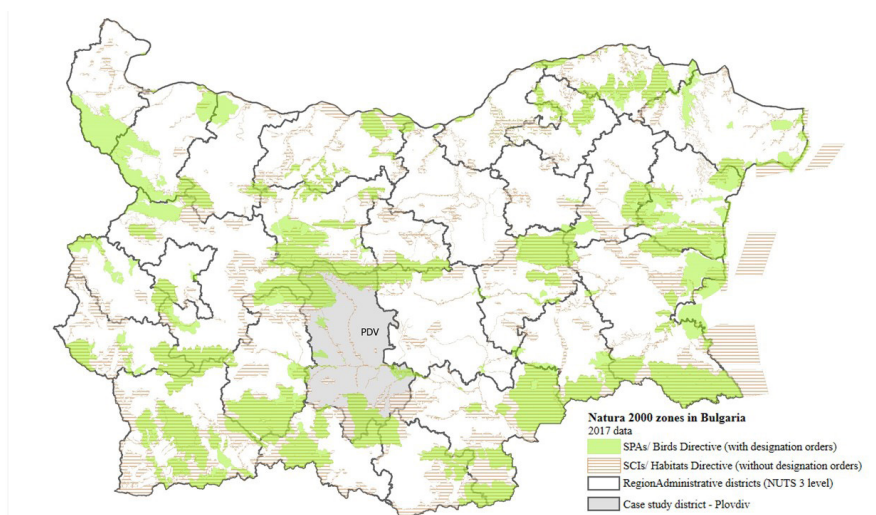


Figure 1. Natura 2000 zones and the case study region in Bulgaria

The Council of Ministers decides on the final list of the proposed sites. The Executive Environmental Agency, part of the MoEW institutions, develops the methodologies for species and habitat mapping, favourable conservation status, and monitoring of species and habitats. The sectoral ministries and state agencies such as the agriculture and forestry have to consider the Natura 2000 requirements in their strategies and plans.

The Biodiversity Law specifies also three main instruments for the management of the Natura 2000 zones: designation orders (article 12), management plans (articles 27-29), and territorial or sectoral development plans (article 30).

Designation orders: the Minister of Environment and Water issues them after which they are published in the State Gazette. The designation order contains information about the name and location of the zone; the conservation objectives and the species/habitats subject to protection; the total size and the land parcels within the boundaries of the zone; and last, but not least, the prohibitions and/or restrictions to activities with potential harmful effect on the conservation objectives. The draft order is available to the public for comments and positions for one month. Then, the Ministry of Environment has one month to review the submitted positions and to issue the order. All SPAs have designation orders in 2017. However, the SCIs still do not have such orders indicating significant delay in the actual implementation of the Natura 2000 network in Bulgaria.

Management plans: the Biodiversity Law says that Natura 2000 zones may have management plans. A dedicated ordinance lays out the procedure for the development of management plans. The ordinance is adopted in 2008 and changed several times since then. In 2017, there are seven management plans adopted for SPAs. Thus, 10 years after Bulgaria joined the EC, less than 6% of the SPAs have management plans. Two of them are for SPAs in Plovdiv district.

Territorial development plans: in Bulgaria these are the municipal development plans (LAU 1 level) and district development strategies (NUTS 3 level). However, most of the territorial plans for the period 2014-2020 either at municipal or district level do not contain implementation measures about Natura 2000 (Kazakova and Stefanova, 2015). In the best case, they describe the Natura 2000 zones on their territory in terms of location and species and/or habitats for protection.

Sectoral development plans: the most relevant sectors in terms of land cover and land use in Natura 2000 are forestry and agriculture. The Ministry of Agriculture developed measure Natura 2000 compensatory payments for agricultural land (in short, RDP Natura 2000 measure) under the Rural Development Programme in Bulgaria. The National Forestry Agency published guidance for Natura 2000 in forests.

RDP Natura 2000 compensatory payments measure in Bulgaria

The RDP Natura 2000 measure is developed upon proposals of environmental NGOs to mitigate the concerns of farmers in the Natura

Table 1. Characteristics, total area and spread over administrative districts of the Natura 2000 zones in Plovdiv district, Bulgaria

Natura 2000 zone		Total area* (ha)	Districts (NUT3)*	Type of region**			Restrictions to agricultural land**
Code	Name			M	S	O	
BG 0494	Central Balkan	72021	5	77	-	23	n.a.
BG 2010	Yazovir Pjasachnik	3178	1	4	-	96	[1]
BG 2015	Yazovir Konush	38	1	-	-	100	[2]
BG 2016	Ribarnitsi Plovdiv	146	1	-	-	100	[1]
BG 2054	Sredna gora	99062	3	80	20	-	[1],[4]
BG 2057	Bessaparski ridove	14765	2	100	-	-	[1], [2],[4],[5]
BG 2073	Dobrostan	83655	3	97	-	3	[4]
BG 2081	Maritsa-Parvomai	11513	3	-	10	90	[1],[4]
BG 2086	Orizishta Tsalapitsa	3675	1	-	7	93	[1],[2]
BG 2087	Maritsa-Plovdiv	1109	2	-	-	100	[4]
BG 2105	Persenk	16120	2	100	-	-	[1],[4]
BG 2128	Central Balkan bufer	72021	5	100	-	-	[2],[4]

Note: Type of region (share of the territory in): M-mountainous, S-poor soil, O-other (no natural constraints). Restrictions: [1] No removal of landscape features. [2] No use of unselective pest control. [3] No mowing of meadows before 1 July. [4] No use of pesticides and mineral fertilisers in pastures and meadows. [5] No mowing of meadows by fast machinery from the periphery to the center before 15 July. [6] No mowing of meadows from the periphery to the center before 15 July.

Source: Own summary based on: * Natura 2000 zones national register. Online module. Accessed 5 May 2017; ** RDP 2014-2020, Annex 13.

2000 regions. The measure is implemented since 2011. It is applied across all SPAs with imposed restrictions for agricultural land in the designation orders. The restrictions are divided according to their compliance with the Greening scheme under CAP Pillar I (therefore, not compensated for) and others, which are eligible under RDP Natura 2000 measure. The compensatory payments are calculated based on the share of territory in specified regions – mountainous; regions with poor soil conditions; and all others. The restrictions applicable to certain land use type (arable land, permanent crops and permanent pastures) are grouped, and single compensatory payment level is calculated (Table 2). The SCIs are still not eligible for support under the RDP Natura 2000 measure due to the lack of designation orders.

Case study: Natura 2000 in Plovdiv district

Plovdiv district (NUTS 3 level) is situated in central south Bulgaria and covers 5.4% of the national territory (Figure 1). Its territory is nature-rich both in highly productive arable land and in high biodiversity value and protected areas (RIEW-Plovdiv, 2017). Three reserves, 34 protected sites, and 7 natural landmarks represent the national protected areas.

Plovdiv district hosts 12 SPAs and 21 SCIs, some of which overlap. Only four of the SPAs fall entirely within the boundaries of Plovdiv district. The other eight extend to as many as five administrative districts. The analysis in the paper is focused only on the land that falls within the limits of Plovdiv administrative district. Six of the SPAs are situated in mountainous parts of the district. The other six are in areas with no natural constraints although three have some land (less than 20%) with poor soil quality (Table 1).

The spatial calculations indicate that the total agricultural area eligible for CAP payments in the SPAs in Plovdiv is 21 426 ha (2015). The majority is arable land (71.2%), followed by permanent pastures (27.1%) and permanent crops (1.8%) (Table 2). Since all SPAs have restrictions to agriculture land use in them, they are eligible for the compensatory payments provided by the RDP Natura 2000 measure. The only exception is Central Balkan SPA. It has a dedicated agri-environmental measure supporting traditional seasonal grazing. Thus, it is not eligible for the RDP Natura 2000 measure.

The implementation of the RDP Natura 2000 measure in Plovdiv district

Table 2. Agricultural land and compensatory payments under RDP Natura 2000 measure in the Natura 2000 zones in Plovdiv district only, Bulgaria

Natura 2000 zone	Compensatory payments (Euro/ha)*			Total agricultural area in N2000, Plovdiv ** (ha)		
	Pastures	Arable	Permanent crops	Pastures	Arable	Permanent crops
BG 0494***	0	0	0	1 098	0	0
BG 2010	24	46	40	124	1 708	26
BG 2015	0	20	51	0	26	1
BG 2016	24	46	40	5	44	4
BG 2054	40	41	36	2 103	901	88
BG 2057	89	57	72	309	792	86
BG 2073	16	0	0	447	127	2
BG 2081	41	45	40	380	6 938	116
BG 2086	24	66	90	4	3 546	0
BG 2087	17	0	0	36	516	39
BG 2105	40	41	36	72	0	0
BG 2128	16	15	36	1 220	653	15
Total agricultural area per category in Plovdiv district (ha)				5 798	15 251	377
Share in the total agricultural land in N2000 in Plovdiv (%)				27.1	71.2	1.8

Note: ***Natura 2000 zone BG 0494 has no payments calculated since it has a dedicated agri-environmental measure implemented in it, thus the RDP Natura 2000 measure is not applicable in it.

Source: * RDP 2014-2020, Annex 13; ** Own calculations based on Land Parcel Identification System 2015 (LPIS). Online modules. Accessed 5 May 2017

The estimated potential support for all eligible agriculture land in the Natura 2000 zones in Plovdiv district amounts to 895 586 Euro/year. Support is usually provided for a 5-year period, however, applications have to be submitted annually and there are no penalties if the commitment is stopped earlier. The actual implementation data (Table 3) reveals that uptake is increasing on an annual basis with a significant six times difference between 2014 and 2016. The total amounts paid have also increased and reach 62-67% of the estimated potential. The resulting figures indicate that:

The variability in the amounts paid (eg. higher in 2015, lower in 2016) could mean that the area claimed reduces from one year to the next, hence lower amounts paid. It could also mean that the claimed land has a different land use, hence lower payments – arable payments vs. pasture payments vs. permanent crops payments. Having in mind that the change of the permanent land use in Natura 2000 zones is mostly prohibited (unless arable land is converted to pasture), it most likely indicates a change in the actual land claimed. In other words, the 5-year commitment with annual

arrangements is used as an annual commitment by beneficiaries. This variability prevents estimation of longer-term effects.

The sharp increase in the number of beneficiaries in comparison to the lower increase in the amounts paid indicate that the new beneficiaries have less land that falls within the boundaries of Natura 2000 zones. This is tested by an analysis of the payments received by beneficiaries per year (Table 4). The minimum amount paid in 2016 indicate that the land area claimed is close to the minimum size of land parcel under the RDP Natura 2000 measure, which is 0.3ha, opposite to the situation in 2014 and 2015. The maximum payments per beneficiary vary in the three years, with a peak in 2015. The mean payment per beneficiary is highest in the first year, and reduces after that, confirming that the beneficiaries with less land enroll in the RDP Natura 2000 measure after the beneficiaries with more land.

The increase in the number of beneficiaries from 2015 to 2016 and the maintained high share (67% and 62% respectively) of the actual use of the estimated potential of payments (Table

Table 3. Implementation data in relation to potential support from RDP Natura 2000 measure in Plovdiv district

Year	Beneficiaries (no.)	Total payments (Euro)	Actual to estimated potential (%)
2014	36	400 158	45
2015	63	599 379	67
2016	216	553 482	62
Annual estimated potential	not known	895 586	-

Source: Own calculations

Table 4. Annual payments per beneficiary under RDP Natura 2000 measure in Plovdiv district (Euro)

Year	Count	Min	Max	Range	Sum	Mean	SD
2014	36	1 265	67 549	66 284	400 158	11 115	16 589
2015	63	1 344	108 893	107 549	599 379	9 514	17 846
2016	216	7	57 463	57 456	553 482	2 562	7 548

Source: Own calculations based on Integrated Administration and Control System (IACS). Online module. Accessed 5 May 2017

Table 5. Uptake of selected RDP measures and Pillar I main scheme in Plovdiv district in the 2014-2016 period (number of beneficiaries)

RDP Measure/ Pillar I scheme	2014	2015	2016
[1] Natura 2000 compensatory payments in agricultural land (RDP)	36	63	216
[2] Agri-environment-climate (RDP)*	349	346	316
[3] Organic farming (RDP)*			84
[4] Single Area Payment Scheme (Pillar I)	1850	1929	3448
Share of [1+2+3] in [4] (percent)	21%	21%	18%

Source: Own calculations based on online IACS data, accessed on 4 May 2017.

Note: * The Agri-environment and Organic farming were still implemented as one measure in 2014 and 2015, following the rules under the 2007-2013 programming period

3) indicate also annual dynamic in the rights to claim payments – land changes hands between beneficiaries. Interestingly, the figures indicate disaggregation of land between beneficiaries. Information is not sufficient to consider it a tendency, however, it is a finding that needs further monitoring and investigation.

The official implementation data reveals a high uptake of the RDP Natura 2000 measure in Plovdiv district - over 62% of the estimated potential of the measure is utilized. At the same time, there is high variability in the size of farmed agricultural land by the beneficiaries, potentially leading to annual changes in the land management practices. Overall, this reduces the predictability of the expected effects on Natura 2000 species and/or habitats.

The conservation objectives of the Natura 2000 zones can also be supported by nature-friendly agricultural practices implemented around the protected zones. Crofts (2014)

underlines the need of sympathetic management in the surrounding territories to contribute to the conservation objectives in the protected areas. He states that this is particularly necessary where habitats and species have been impacted by intensive agricultural practices. Plovdiv is a region known by its primarily intensive agriculture. At the same time, most of the pioneer organic farming and agri-environmental initiatives have taken place here in the early 2000s (prior to EU accession). The uptake of the three relevant environmental measures under the Rural Development Programme 2014-2020 is reviewed concurrently: Agri-environment-climate (AEC), Natura 2000 compensatory payments in agricultural land and Organic farming (OF) (Table 5). It reveals that the uptake of the RDP Natura 2000 measure is continuously increasing, as is the support under the Single Areas Payment Scheme (SAPS). The SAPS uptake has almost doubled from 2015 to 2016. Part of the increase is due to the reduction in

Table 6. Survey results about farmers and nature friendly farming practices in Plovdiv district

Questions within Natura 2000		Respondents, stating that their land is..			Total
		outside Natura 2000	not aware		
The location of farm's land (no.)		16	6	46	68
Practiced farming systems on the farm		(percent of total in column)			
Conventional, intensive		31.25	50	34.8	35.3
Conventional, low inputs		31.25	50	47.8	44.1
Organic farming		12.5	0	2.2	4.4
Practices compatible with Natura 2000		25	0	2.2	7.4
Agri-environment practices		0	0	4.3	2.9
Biodynamic/permaculture		0	0	2.2	1.5
Undefined		0	0	6.5	4.4
Official registration of the farmer and the farm	Yes	87.5	83.3	78.3	80.9
	No	12.5	16.7	21.7	19.1
Information on nature-friendly forms of farming	Yes	50	33.3	24	30.9
	No	50	66.7	76	69.1
Interactions with institutions					
National Agriculture Advisory Service	Yes	68.75	66.7	58.7	61.8
	No	37.5	33.3	19.6	25.0
Municipal Agriculture Office	Yes	75	66.7	58.7	63.2
	No	25	33.3	19.6	22.1
Regional Paying Agency	Yes	37.5	50.0	45.7	44.1
	No	62.5	50.0	54.3	55.9

Source: Own survey

the minimum threshold of land size eligibility from 1.0 ha to 0.5 ha in the new programming period. The uptake of the AEC and OF measures in 2014 and 2015 is maintained at the same level, because it is a continuation of the 5-year commitments from the previous programming period. There was some increase in 2016, but it is unlikely that it will grow since the budget allocated under both measures is already committed until the end of the 2014-2020 programming period. This creates tensions in the AEC/OF farming communities who request increases in the measures' budgets. The lack of budget for new commitments under the AEC/OF measures is likely to lead to full utilization of the support potential of the RDP Natura 2000 measure in the coming years. The reasoning is based on that: (1) RDP Natura 2000 measure will remain the only measure supporting nature friendly farming activities until 2020. (2) The still dynamic change in the land use (rights) in Natura 2000 zones is supportive of such development.

Farmers' awareness about Natura 2000 and nature-friendly farming practices

One third of the farmers knows if their farmland is within or outside Natura 2000 zones (Table 6): sixteen farmers have land within Natura 2000, and six - outside. The other two thirds of farmers are not aware if their land was within or outside Natura 2000.

The highest share (37.5%) of farms with nature-friendly farming practices is within Natura 2000. This group also has the highest share of officially registered farms and farmers (87.5%). On the contrary, the farms outside Natura 2000 zones are 100% conventional, although split in half to conventional intensive and conventional with low inputs; the share of registered farmers is 83.3%. The farmers that are not aware if their land is within or outside Natura 2000 define low share of nature-friendly farming systems (10.9%); and have high share of conventional but low input systems (47.8%). Conventional intensive is

practiced by 34.8%. They are the only group that has some farms with undefined practices (6.5%) and has the highest share of farmers that are not officially registered (21.7%).

Respondents are also questioned whether farmers have sufficient information about the benefits and limitations of nature friendly farming practices. The farmers within Natura 2000 stated 50/50 share of informed-not informed opinions. The farmers outside Natura 2000 stated 66.7% not informed. The farmers unaware if their land is within/outside Natura 2000 stated 76% not informed.

Overall, less than a third of the farmers are informed about the benefits and limitations of nature-friendly farming practices; and two thirds are not aware if their land is within or outside Natura 2000. These gaps in information and knowledge indicate a need of significant awareness raising, information provision and training both among farmers within Natura 2000 zones and outside them.

The institutions that farmers are most in contact with are the municipal offices of agriculture (63.2%) and the offices of the National Agriculture Advisory System (61.8%). The proximity of these institutions to farmers can be used to provide more information about the farms' location in Natura 2000 zones and/or nature-friendly agricultural practices. Now, their potential is not utilized.

Conclusion

The overall governance approach for Natura 2000 in Bulgaria with designation orders, management plans and integration in sectoral/regional development plans utilizes the instruments listed in the Habitat Directive and as such do not provide a new approach. The significant delays in the designation orders of the SCIs and development of management plans resembles developments in other countries (Bouwma et al., 2016).

The development of the RDP Natura 2000 compensatory measure by the Ministry of Agriculture, however, was instrumental in mitigating tension and conflicts over management restrictions on agricultural land. Agricultural landowners and users utilize the support even if it only pays for compensation of incurred costs and/or income foregone. The Plovdiv case study reveals that the uptake is over 60% across

the years. Nevertheless, the ongoing changes in the number of beneficiaries, size and type of supported land in the studied period (2014-2016) prevent formulations of longer-term tendencies and contribution to the favourable conservation status of the species and habitats.

Additionally, there is still significant lack of awareness among farmers (two thirds) on the territorial coverage of Natura 2000 zones. Their knowledge about the benefits and limitations of nature-friendly farming practices is rather limited even among the farmers that are aware about Natura 2000 and that declare they implement such practices. The results reinforce the need for intensified capacity building and training of farmers on practical aspects of nature conservation in their farming activities.

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