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MONOTHEMATIC ENVIRONMENTAL REPORT
**The effectiveness of agri-environmental measures in relation to the
territorial intervention priorities defined by the RDP**
NON-TECHNICAL SYNTHESIS

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Introduction

The proposed monothematic report intends to represent a contribution to the analysis of the effects of the programmatic approach in light of what emerged from the first phase of implementation of the RDP, and with particular reference to the intervention priorities identified and defined at a territorial level for agri-environmental measures. This theme was developed according to two specific aspects:

- The effectiveness of the intervention priorities identified and defined at a territorial level for Environmental Agro-Climate Measures.
- The strategies of the companies in the bovine and buffalo sector falling within the new delimitation of the Areas Vulnerable to Nitrates of Agricultural Origin.

2 Effectiveness of the intervention priorities identified and defined at a territorial level for Environmental Agro-Climate Measures

The purpose of this thematic study is to analyse the effectiveness of the operations implemented within the framework of the RDP'S payments in favour of agro / forest-climate-environmental and organic agriculture commitments, using, as evaluation criterion, the consistency of their territorial distribution in relation to the different characteristics and therefore to the different "needs" of intervention in the regional territory. The following table shows the diversity of needs that the Programme takes into account through the identification and application of territorial priorities in the selection procedures of the interventions.

Priority areas of intervention

Areas	Type of intervention									
	10.1.1	10.1.2.1	10.1.2.2	10.1.3.1	10.1.3.2	10.1.4	10.1.5	11.1.1	11.2.1	15.1.1
Vulnerable areas to nitrates	X									
Macro-areas B and C		X	X							
Disadvantaged areas				X	X			X	X	
Areas relevant to groundwater resources in poor condition				X	X					
Areas relevant to groundwater resources in poor condition				X	X					
Areas protected for various reasons						X	X	X	X	X
Natura 2000 areas										X
Vulnerable areas in relation to hydrogeological risk										X

In particular, the following actions have been analysed:

10.1.1 Integrated production

The selected selection criterion implies the attribution of a score for companies whose particles also fall partially in Nitrate Vulnerable Areas (NVA).

The total area requested as a premium shows an Area under Commitment / Agricultural Area (AuC/AA) ratio of 7.6%, this figure is lower than the regional concentration rate of 9.5%.

The reward criterion for the companies falling within the NVA, therefore, does not seem to have determined a greater concentration of the surfaces in the NVA areas where the planned commitments maximize the effect of the Measure.

10.1.2.1 Contributions of organic matrices to the soil

The identified selection criterion implies the attribution of a score for companies whose particles fall also partially in Macro areas B (areas with intensive agriculture) and / or C (intermediate rural areas).

Of the 4,350 ha requested to the Measure, only 18% of 768 ha are placed in Macro areas B and C. The AuC/AA ratio in the priority areas shows a concentration equal to 0.19% compared to the regional average figure of 0.56%.

The reward criterion for farms in macro areas B and C does not therefore seem to have led to a greater concentration of the surfaces in these areas 10.1.2.2 Conservative agronomic techniques for the cultivation of cereals, herbaceous crops and annual forage cultures and pastures.

10.1.3.1 Active management of "green infrastructures" created with the type of intervention 4.4.2, 10.1.3.2 Maintenance of disposable crops for the benefit of wildlife, 10.1.3.3 Habitat protection actions 6210

The selection criterion identified envisages the attribution of a score for companies whose particles fall in disadvantaged areas, in areas relevant to surface and underground water resources in poor conditions.

The area assigned as a premium for the operations 10.1.3.2 and 10.1.3.3 is entirely located in the disadvantaged areas. With respect to the operations 10.3.2 and 10.3.3, this concentration derives from the fact that belonging to the Natura 2000 area was a condition of eligibility, and the 92% of the surface of these areas is inside the disadvantaged areas, while the remaining 8% belongs to the non-disadvantaged ones.

The priority areas of intervention relating to the zones exposed to the Sensitivity of the regional territory to the quality of Groundwater Resources (sensitivity 7), and those exposed to Sensitivity of the regional territory to the quality of surface water Resources (sensitivity 8) do not seem to be not affected by the area subject to commitment.

10.1.4 Cultivation and sustainable development of native plant varieties threatened with genetic erosion

The RDP identifies as a priority criterion the location of the engaged areas in protected areas such as parks, regional and national reserves and Natura 2000 areas.

Only 7.68 ha are involved in the intervention in the entire regional territory, of which about 5% belongs to the protected area.

10.1.5 Sustainable breeding and development of native breeds threatened to be abandoned

The RDP identifies as a priority criterion the location of companies in protected areas such as parks, regional and national reserves and Natura 2000 areas.

It should be noted that only four of the 31 beneficiary companies are based in a protected area.

11.1.1 Conversion of farms to organic farming systems, 11.2.1 Maintenance of organic farming practices and methods as defined in regulation (EC) no. 834/2007

The RDP identifies as a priority criterion the location of companies in disadvantaged areas and protected areas such as parks, regional and national reserves and Natura 2000 areas.

Compared to the less favoured areas, it is highlighted that in these areas the desired concentration has occurred both as an absolute value of the areas requested as a premium (20,352 hectares) and

in relation to the Agricultural Area and they represent 5.03%, a value higher than the regional concentration rate .

In the protected areas (Special Areas of Conservation, Special Protection Areas, parks, regional and national reserves considered net of overlaps), commitments for 11,469 hectares (37% of the total area) can be found and this value represents 7.5% of the Agricultural Area in the same areas, therefore showing a concentration percentage higher than the regional average (4%).

15.1.1 Payment for forestry, environmental and climate commitments

The RDP identifies as priority criteria the location of companies in the N2000 areas, in other protected areas (parks, national and regional reserves) and vulnerable areas in relation to hydrogeological risk.

The location of these interventions highlights high implementation rates of the commitments both in the Natura 2000 areas (71.5%) and in the other protected areas (73.2%).

In relation to the location of the areas of the sub-measure in vulnerable zones to hydrogeological risk, it is observed that, overall, 60% of the surfaces declared to the Measure are located in areas with landslide hazard P3 "High hazard" and P4 "Very high hazard," highlighting a good localization of the surfaces engaged in these areas.

3 Corporate strategies of companies in the buffalo and bovine sector falling into the new delimitation of Nitrates-Vulnerable Areas of Agricultural Origin (NVA AO).

With a resolution of the Regional Council n. 762 of 05/12/2017, the Campania Region approved the new delimitation of Nitrates-Vulnerable Areas of Agricultural Origin. Following the approval of the new delimitation, an updating of the Action Program for nitrate-vulnerable areas (currently in the Strategic Environmental Assessment phase) has proved necessary to undertake. Once approved it will determine, for zoo-technical companies, an obligation of compliance with the most rigorous restrictions contained therein regarding the agronomic use of wastewater.

Due to this new delimitation, the number of Municipalities affected by the NVA AO has risen to a total number of 311, for a territorial surface of 316,470 hectares, equal to 23.15% of the regional territorial surface.

Campania's zoo-technical sector shows - despite a general reduction in farms and livestock of bovine zoo-technical species - a strong increase in the buffalo species. The buffalo livestock farms are not positioned evenly over the regional territory, but with evident geographical concentrations. Therefore, the agronomic spreads of zoo-technical waste on farm soils is distributed consequently. The buffalo farms located in Campania's vulnerable areas, as recently redefined, account for 81% of the regional total.

Particularly for livestock farms in the provinces of Caserta and Salerno that will be included in the new delimitation (835 buffalo farms for 190,000 animals and 1,412 bovine farms for 30,000 animals), the application of the new delimitation will generate significant repercussions on business management.

In order to understand the adaptation strategies of the companies in the buffalo and bovine sector, a specific study has been carried out by obtaining information from two representative sample of zoo-technical companies (beneficiaries of the RDP and non-beneficiaries) whose surfaces fall within the new ZVNOA.

The results of this investigation have been analysed under different aspects:

- *The farmers' degree of knowledge of the new delimitation of the NVA AO, of the management tools (Action Program) that are being adopted by the Region and of the new commitments that will weigh on the management of their farms.*

Regardless of the long procedural *iter* that the new delimitation – and above all the Action Plan – has faced and continues to face, and of the protests raised by the breeders, that have appealed twice – to Campania’s Regional Court and to the President of the Republic – still ¼ of the interviewees is not aware of the fact that their company falls within the new delimitation of the NVA AO. When investigating the breeders’ level of awareness and checking their degree of knowledge of Campania’s Action Program, it is noted that the percentage of breeders declaring to be informed decreases (65%) and becomes even more limited when it comes to the knowledge of obligations deriving from the new delimitation (45%). The comparison between beneficiary and non-beneficiary companies of the RDP shows that the former have a greater awareness of the territorial limits of the new zoning.

As regards the burden of the obligations, all of them receive rather high scores ranging from a minimum of 3.4 for those relating to the management of irrigation water, up to a maximum of 4.2 for the obligations related to management of zoo-technical effluents and / or digested. Obligations relating to nitrogen fertilization management and land use management (rotations and alternations, arrangements, processing) are an intermediate position, with values respectively equal to 3.7 and 3.5.

The comparison between the answers provided by the beneficiaries of the RDP and the non-beneficiaries does not highlight significant differences, except in general the recognition of a greater onerousness of the commitments to be undertaken, especially as regards the management of effluents and the management of nitrogen fertilization, for companies not benefiting from the RDP.

- *The business strategies primarily adopted by companies, in order to comply with the new obligations imposed by the NVA AO, with particular reference to the management of zoo-technical waste.*

The primary strategy implemented by companies will concern an increase in company areas, in order to respect the restriction of 170 kg of nitrogen/hectare in the areas where the ban will come into force. The purchase of machinery and equipment for the treatment of waste and / or digested and for the reduction of nitrogen content ranks fourth, the transfer of zoo-technical waste to collective treatment plants ranks fifth, with an average score of 3.9 out of 7. The comparison between the adaptation corporate strategies identified by the companies benefiting from the RDP and the non-beneficiary ones reveals a substantial uniformity with respect to the strategic choices that the two groups of companies plan to implement. The only relevant differences concern: a greater propensity of the beneficiary companies to resort to the increase of the company areas through rental of new land, and a greater propensity of the non-beneficiary companies to evaluate a possible transfer of the company in the ordinary area.

- *the degree of knowledge of tools implemented by the Campania Region through the RDP to facilitate compliance with the new obligations*

More than 60% of companies is aware of the possibility offered by the PSR Campania, through Measure 4.1.3, to make investments aimed at improving of zoo-technical waste management.

Concerning the use of training and consultancy activities promoted by the Campania Region 2014-2020 RDP, the agricultural entrepreneurs interviewed would seem more likely to use the training activities co-financed by the RDP through Measure 1.1.1 (58%), to increase their skills on the improvement of waste management, rather than the consultancy services promoted by measure 2.1.1 of the RDP (32%).

The comparison of the answers provided by the RDP beneficiary group and the non-beneficiary group highlights how the latter are decidedly more likely to exploit the training activities offered by Measure 1.1.1. This propensity could be attributed to the fact that the

non-beneficiary companies could be represented by less structured companies and therefore more "in need" of training activities necessary to improve corporate waste management.

- *the measures that should be envisaged in the new programming to provide support aimed at facilitating compliance with the commitments and obligations imposed by the new legislation*

Companies focus more on individual solutions through the financing of corporate systems for reducing nitrogen content in wastewater; the second option is represented by collective treatment systems. The choice of least priority for interested companies concerns specific consultancy measures for the adoption of waste management plans.