



ISMERI EUROPA

Unitary Evaluation Service of the 2014-2020 European Union co-financed Operational Programmes

II Thematic Evaluation Report - Environmental
sustainability

Executive Summary - English

FEBRUARY 2019

Introduction

The theme of environmental sustainability in the European Structural and Investment (ESI) funds

The second thematic evaluation of EU regional programmes in Friuli Venezia Giulia for the programming period 2014-2020 focuses on the contribution of regional programmes to improve environmental sustainability. The analysis includes all the European Funds, the ERDF, the EAFRD and the ESF.

Environmental sustainability is a key objective of the European Union. The role of ESI funds, with respect to it, is defined through different modes:

- the Article 8 of the Common Regulations (Reg. 1303/2013) states that all European Structural and Investment Funds (ERDF, ESF and EAFRD) are implemented in line with the principle of sustainable development;
- the link between the ESI funds and the Europe 2020 objectives, including those related to the reduction of gas emissions, increase energy efficiency and increased renewable resources;
- the identification of thematic objectives (TO) with a high environmental value, including one TO specifically dedicated to preserving and protecting the environment and promoting efficient use of resources (TO6) and two TOs aimed at supporting the transition towards a low-carbon economy in all sectors (TO4) and to promote adaptation to climate change, prevention and risk management (TO5).

Just over 20% of total funds SIE go to environmental sustainability in Friuli Venezia Giulia

At European level, the ERDF, ESF and EAFRD allocate EUR 103 billion to the environmental objectives in 2014-2020, accounting for nearly 30% of the total funds; though this percentage is alike in Italy, it is lower in Friuli Venezia Giulia, where the three programmes allocate overall EUR 85 million to environmental issues, amounting to just over 20% of the total funds.

Complementarity between the different ESI funds

At European and national level, EU funds act in an integrated manner, while in Friuli Venezia Giulia the funds are more specialised on different topics: while the ERDF covers the energy issues, EAFRD works on different topics allocating 40% of its resources on the environmental prevention, a theme almost not covered by the ERDF.

Finally, it should be noted that the relevance of regional funds for environmental sustainability is between 5 and 5.5% of total public investment.

The following sections presents the analysis on the European co-financed programmes in Friuli Venezia Giulia.

The RDP EAFRD and environmental sustainability

CAP and environment Agriculture is one of the productive sectors most influenced by climate change: this is why the Common Agricultural Policy (CAP) has identified some priority areas of intervention to protect and enhance the EU's rural heritage. Between these:

- biodiversity and conservation and development of "natural" agricultural and forestry systems and traditional agricultural landscapes;
- management and use of water.

In Friuli-Venezia Giulia certain areas (e.g. mountain) are affected by the abandonment of agricultural activity, the reduction of the action to protect and manage the territory and increase the risk of floods. In this sense, the initiatives aimed at increasing the sensitivity of companies towards environmental sustainability appear, favouring the use of sustainable agricultural and forestry techniques and practices, i.e. the introduction of innovative processes able to reduce anthropogenic pressures on the ecosystem, as well as the training of entrepreneurs (e.g. organic farming, renewable energy production, land consumption, carbon sequestration, etc.).

The following table summarizes the main critical issues found during the ex-ante evaluation

1 Inefficient management of natural resources
2 Decline of agroforestry activities and loss of the landscape
3 Intensive agriculture with a high use of inputs
4 Decreased soil fertility
5 Rather compromised mountain hydrographic lattice 7 Abandonment of pastoral agri forestry activity in mountain areas
19 Poor propensity to diversify agricultural and non-agricultural production and UAA mainly for low value-added crops (cereal-growing - maize)
20 Difficulty in obtaining satisfactory yields in areas with water shortages (persistence of plant diseases and pest insects, price increase)
31 Structural weaknesses in the organic sector
32 Limited diffusion of organic products
33 Under-utilization of forest production potential
34 Not very innovative irrigation systems with high water consumption

The RDP strategy

Based on this requirement, the FVG 2014-2020 RDP has therefore envisaged 4 Focus Area (FA) as per EU Regulation 1305/2013, namely:

- FA4a: safeguarding and restoring biodiversity;
- FA4b: better management of water resources;
- FA4c: better soil management;
- FA5e: promoting carbon sequestration in the agricultural and forestry.

In light of these programmatic choices, the report highlighted some preliminary considerations regarding M10 "Agri-climate-

The advancement of the analysed measures

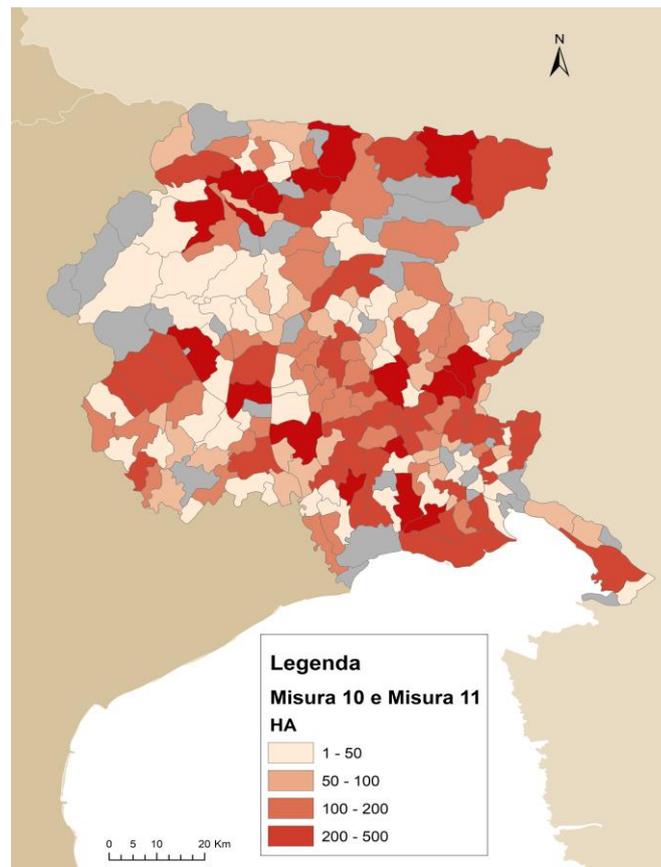
environmental payments" (Article 28) which promotes the sustainable management of agricultural and environmental resources, encouraging the resilience of agricultural systems to changes climate change and the harmonization of economic, social and environmental needs and M11 "Organic Farming" (Article 29), which participates in the achievement of the specific objectives of safeguarding and restoring biodiversity, improving the management of water resources and soil, and landscaping of Europe, through the introduction and maintenance of agricultural practices to protect biodiversity.

Overall, in terms of number of beneficiaries the interventions carried out through the M11 registered the highest figures, while some M10 interventions appear to be more contained (10.1.1, 10.1.4, 10.1.6 and 10.1.8).

On the other hand, as regards the financial progress of the interventions, the monitoring data seem to suggest the absence of significant procedural difficulties, highlighting a high degree of progress for both interventions.

Generally, M10 and 11 show a high coverage throughout the regional level, presenting a greater concentration, in terms of HAs supported, in the areas subject to intensive and continuous arable land, and the mountainous areas characterized mainly by pastures and wooded areas (see map below).

The territorial distribution of the interventions



The agri-climate-environmental payments (M10)

According to what beforementioned, for agri-climate-environmental payments, which play a major role in promoting the sustainable development of rural areas and in meeting the growing demand for environmental services, some main reflections can be listed below:

- conservative agriculture (CA), financed through intervention 10.1.1, insists in areas, such as those subject to intensive and hilly agriculture, characterized by high levels of soil erosion and a high fragmentation index, on which optimizing the favourable effects on biodiversity. It is worth mentioning that the Region has implemented the HelpSoil project aimed at demonstrating how conservative management practices of agricultural land are able to increase their biological functionality and fertility, the sequestration of CO2 in the soil, the protection from erosion, the development of agri-biodiversity, thus contributing to the ability of the cropping systems to adapt to changes (resilience), including the climatic ones;
- the integrated production techniques (IP), financed through the 10.1.2 intervention, involved the territorial areas suited to the main regional crops (arable land, orchards) with a good level of coverage, concentrating its effects in areas apparently marked by the phenomenon of erosion risk;
- the permanent grassing of orchards and vineyards, financed through intervention 10.1.3, concentrated mainly in areas not subject to naturalistic restrictions, widely cultivated and for this reason more exposed to erosion risk;
- intervention 10.1.5, aimed at encouraging the correct management of lawn areas aimed at maintaining biodiversity and protecting the fauna, has seen a good concentration of operations in the hilly and mountain areas. Apparently, moreover, farms in "protected" areas appear to be particularly interested, a suggestion deserving further study.

Organic farming (M11)

As far as organic farming is concerned, on the other hand, in Friuli-Venezia Giulia, the percentage of agricultural land used to non-conventional accounts for 2.4% of the regional territory in 2015, while in 2016 it was 6.6%, for a total of 13,900 cultivated hectares. Therefore, the change from 2014 to 2015 was almost 40% and from 2015 to 2016 growth was over 170%. The number of farms also increased hand in hand, registering a + 21% between 2014 and 2015 and almost 60% more between 2015 and 2016. In such a framework the objective of the intervention consisted in consolidating and extending the techniques of biological agricultural production aimed at safeguarding the environment, maintaining the good conditions of the land (FA4c) and contrasting the current climate changes (FA5e), contributing to ensure farmers an adequate income, offsetting the higher costs that organic farming entails and that are not always satisfied by adequate prices for the producer.

Conclusions in a nutshell

The analyses carried out show a wide propensity to consolidate and convert sustainable practices, widely in the region, even in those areas where soil erosion and / or loss of biodiversity are more at risk.

Moreover, although the contribution of the interventions financed by the Program to the different environmental aspects (Biodiversity, Water Resources, Soil Erosion and Carbon Sequestration) appears potentially effective to achieve the expected results, the values of the indicators of results to date quantifiable do not seem to be satisfactory to elaborate answers to the evaluation questions, for which there is a need for an overall analysis of all the RDP interventions that contribute directly or indirectly to the achievement of the underlying objectives.

The indirect contribution of the

Another objective of the analysis was to assess the contribution of the interventions of the Youth Package (Pacchetto Giovani, PG) to environmental sustainability. The PG is a new integrated approach supporting business development and generational change in agriculture. It meets two needs identified by the RDP Friuli Venezia Giulia 2014-2020: encouraging the average lowering of age of workers in the sector, simultaneously promoting an increase in the basic qualification of farmers (F8), and supporting creation of new companies (F19), to promote the diversification of business activities (F7).

The analysis verified the effectiveness of environmental selection criteria used, through the detailed data of the lists of admitted beneficiaries. Overall, the analysis showed that:

- "Positive environmental effects" was the macro-criterion that has contributed to a greater extent the eligibility of the Youth Package projects, with an average contribution of more than 36% in the ranking score obtained by the initiatives eligible for funding
- the distance between the mean value obtained and the maximum value obtainable in relation to the macro environmental criterion (highest gap among the criteria considered) is due essentially to a limited activation in Business Plans of the sub-measure 4.1.2 for the efficiency and the reduction of energy consumption of irrigation which covered only 28 packages Young on 62 total. In this regard it is noted that, considering only these PG 28, the eligible costs for the average sub 4.1.2 were just over EUR 32,000 far from the maximum value that may be granted by the regional call (EUR 300,000).
- considering the types of eligible intervention through the sub-measure 4.1.1, a greater interest of the companies for the energy issues (for the improvement of performance of production buildings and installations and for the reduction of consumption of fossil fuels for heating in the production processes) and for interventions of improvement of distribution techniques of fertilizers and pesticides is shown.

The ROP ERDF and environmental sustainability

Evaluation questions

The ROP ERDF support environmental sustainability in two manners: 1- directly, through interventions for energy efficiency funded by the axis III; 2- indirectly, through the application of specific selection criteria in the calls for the enterprises in the Axes I and II, aimed at facilitating investments towards the development of "green technologies" and the adoption of sustainable production processes.

The following evaluation questions were identified in agreement with the Region:

- *Is the projects implementation in line with what was planned?*
- *What effects the ERDF had/will have on savings in CO2 emissions and on the reduction of emissions of major air pollutants, PM10 and NOx?*
- *Did the interventions permitted to the beneficiaries to reduce their costs?*
- *What indirect effects did emerge?*

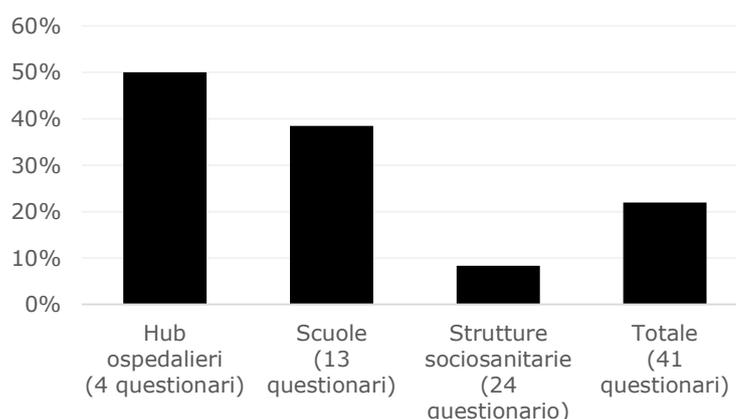
With regard to the interventions funded by the axes I and II, the evaluation questions was the following: which contribute to the environmental sustainability was given by the selection criteria?

The implementation of the projects

As for the measures targeted at the energy efficiency of school buildings and social and health infrastructures (Axis III), a first element to highlight is the validity of the regional strategy, characterized by a good level of consistency with the needs of the territory and with regional strategies in the energy sector. Furthermore, there was a strong thematic concentration in the areas selected: the attention paid to the subject of energy efficiency of public buildings, in proportion to the total resources, has no equal in Italy within the regional programmes funded by ERDF. The concrete design of the energy efficiency policy does not differ from that followed by other Italian Regions but one point: in Friuli Venezia Giulia the previous possession by the proposing entities of a preliminary project at the moment of the application is not a condition of eligibility of projects. This choice has its pros and cons, because on one hand favoured a varied participation of institutions including small ones, on the other hand led to a higher implementation effort by the Region and by implementing bodies.

Some elements hampering the implementation of projects, in fact, occurred. According to the project leaders' answers, only one fourth of the projects is in line with what was initially programmed, while another fourth strongly evidences delays. A first analysis based on procedural data, albeit partial, made it possible to identify in the phase of preparing the preliminary project the most critical point. Delays are still low, in any case they require a careful monitoring action by the regional authority. The major critical factors were the lack of technical expertise for many social and health institutions, especially the smallest, and the need to adapt to anti-seismic regulations in the case of school buildings.

Percentage of projects that state to be in line with the planned timetable



Source: Ismeri's elaborations on data from FVG

The direct effects of Priority III on savings in CO2 emissions

More than two thirds of the respondents recognize the added value of the ERDF, without which the intervention would not have happened, or would have occurred in varying degrees and less articulated for another 20% of entities. In perspective, the potential direct effects of interventions are quite positive: a reduction in the primary energy consumption of 22%, greater than the target of 15%, and a cost effectiveness (13 €/kWh) which is in line with that of other national interventions of this type; 10,000 tons of CO2 avoided, which in the future will ensure the next 25 years a reduction of EUR 5 to 8 million of the social costs due to climate change, that could be used for other purposes by the region; a saving in energy expenditures of about EUR 4 million per year, which will allow many of the funded institutions to use these resources to improve or increase their services or to make further investments for the benefit of the community; a lesser dependence on energy sources of fossil nature, highlighted by an increase from 2% to 8% of the consumption covered by renewable sources. Even in presence of a "rebound effect", regional objectives would not be compromised if this effect was equal to or less than 32%, a figure in line with or higher than that identified in several studies on this type of intervention.

Indicators on reducing emissions, for Axis III intervention line

	Estimated Reduction tCO2	tCO2 Reduction - var%	Weight on the total reduction	Cost / benefit: Euro per tCO2 avoided
Schools	-1191	-59%	12%	15,198
Hub	-6463	-19%	63%	3,216
Socio-Health structures	-2524	-24%	25%	8,980
Total	-10,178	-22%	-100%	6,048

Note: 4 projects do not have data on the CO2 reduction

Source: Ismeri's elaborations on data from FVG

The indirect effects of the interventions

Beside the above mentioned results the analysis identified some potential indirect effects. A first point to note is that investment of public building might lead to imitation effects from other local public institutions. Moreover, the investments in this field were important because they pushed the institutions to change their

energy management practices, at least in terms of attention to monitoring of consumption.

Recommendations for the future

Several recommendation, both at operational and strategical level, were provided. At operational level:

- To support projects which are in delay in the coming months and to accelerate, as much as possible, the approval phase of the projects submitted by the public institutions
- To support the institutions in the ex-post measurement of the result indicators
- To solicitate the institutions to respect of CAM (environmental criteria), as required by the new law on public calls
- To support the institutions in training activities for users of their services, to help to reduce potential direct effects of rebound.

At the strategic level:

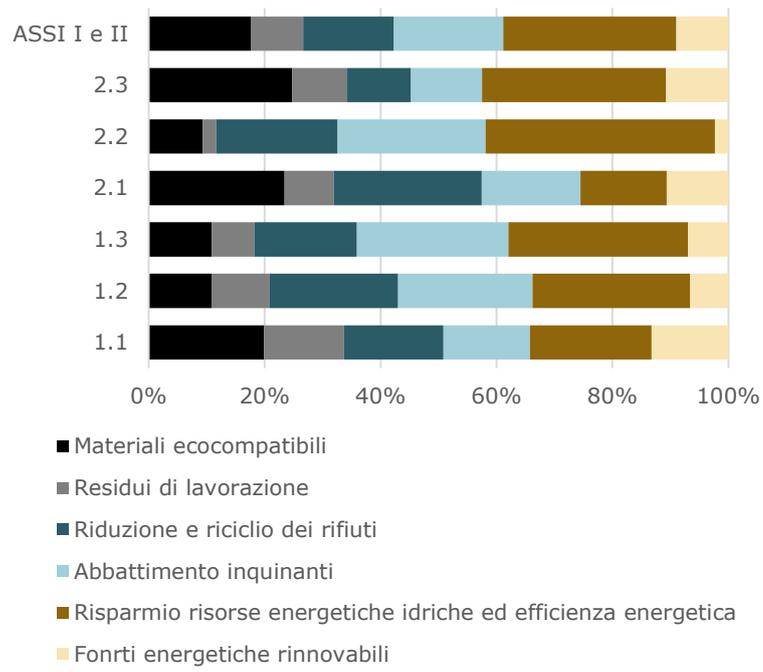
- Consider the possibility of giving more time for the submission of applications
- The above recommendation would encourage saving some resources that could be used to finance a support service for the benefit of recipients public bodies
- Consider supporting organizations in the selection and procurement procedures with a single central regional commission

The contribution of Axes I and II to the environmental sustainability

The analysis of Axis I and II projects found that a consistent use of environmental selection criteria has certainly facilitated the selection of environmentally significant projects: they are 70% of the total selected projects. The most spread environmental theme is the energy efficiency and savings in energy consumption. The analysis of the operation of the selection criteria, although limited to selected projects, has highlighted that the environmental criteria obtained in average scores lower than those obtainable theoretically. This result is consistent with the aim of these interventions, for which the environmental impacts are not the main objectives. In this area there are no particular suggestions by the evaluator. The only possibility that could be considered is to apply, in some areas with a high potential in terms of environmental effects (for example some areas of the smart specialisation, such as maritime technology), a minimum thresholds to be achieved in the criteria concerning the environmental aspects of the projects. For example, in collaborative research competitions (see the DGR 646 of 2016) to the first environmental policy¹, which account for 5 points, could be assigned a minimum threshold to be attained by the projects equal to 1.

Main environmental areas of industrial projects (more areas are possible for the same project)

¹ "A) the environmental fallout of the project whose results are: - the use of environmentally friendly materials, - the reuse of process waste, - the reduction and recycling of waste, - the reduction and emissions control equipment.



Source: Ismeri's elaborations on data from FVG

The ROP ESF and environmental sustainability

A careful strategy for sustainable development

The ESF could give only an indirect contribution to the sustainability. The ESF OP takes into account this opportunity envisaging actions for placement, training and entrepreneurship in relevant fields to the sustainable development (Axis 1) as well as supporting research and development actions within the local development processes (Axis 3). The analysis focused on Specific Programmes (PS) supporting the Integrated Plan of Policies for Employment and Labour (PIPOL) the higher education course (ITS courses and IFTS), and the Education and Training (IeFP).

... but that is only partially reflected in the selection of operations

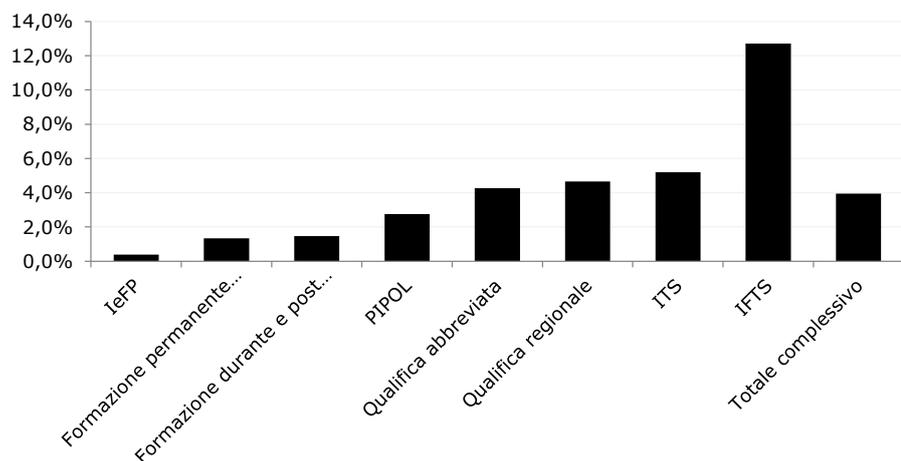
The Periodic Operations Planning (PPO) encouraged projects in the fields of green and blue economy, but it did not establish specific criteria for this aim. Indeed, the instruments to select operations (guide lines and calls) did not reflect the attention paid to the sustainability in the PPO. This approach has been the same in the previous years as well as in every field of the intervention addressed.

The mapping of interventions with a potential environmental value led to the identification of 19 out of total 132 PS (as at October 2018). These represent around EUR 108 million of total EUR 230 million.

The incidence of the resources employed for Sustainable Development: estimated to 4%.

However, considering the projects selected, the incidence of the resources actually allocated for the sustainability drops to 4%, equivalent to 2,35 million of Euro. The "environmental" investments increased from hundreds of thousands of euro in 2014 and 2015, one million euro from 2016.

ESF resources for sustainable development operations, by type of policy (% of total)



Source: Ismeri's elaborations on data from FVG

... but for IFTS the proportion it is much higher than average

The financial incidence in the IFTS field was well higher than in the other policy fields (roughly 12%, three times the average). The PS concerning IFTS benefited from a limited amount of resources financing a small number of projects (courses); indeed, only 5 projects out of 20 were those relevant to the environmental sustainability objective. However, also PS concerning IFTS on the sustainability mobility had been planned, but they were late so the resources allocated to finance the projects were still limited when the analysis was carried out.

The results suggest that there is space for improvements in the selection of operations

The results of the evaluation might underestimate the scope of the contribution of the ESF OP to the environmental sustainability. However, these results allowed us to conclude that **the contribution of the OP to the sustainability principle has been limited compared to the importance that the same principle had within the OP strategy**. This is due to the fact that the Periodic Planning of Operations did not reflect fully the OP strategy in this field as well as specific criteria in selecting operations had not been envisaged so far.