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INDEPENDENT EVALUATION SERVICE OF THE REGIONAL RURAL DEVELOPMENT PROGRAMME FOR THE PERIOD 2014-2022 LIGURIA REGION

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Summary - Thematic Report - The Effectiveness of Forestry Measures in Relation to Territorial Potentials and Criticalities

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Acronyms

AER: Annual Evaluation Report

AGEA: Agency for Disbursements in Agriculture

AIR: Annual Implementation Report

CAP: Community Agricultural Policy

CSR: Complement of Regional Rural Development

CEQ: Common Evaluation Question

DGR: Deliberation of the Regional Council

EAFRD: European Agricultural Fund for Rural Development

EU: European Union

EXPE: Ex Post Evaluation

INFC: National Inventory of Forests and Forest Carbon Sinks

IV: Independent Evaluator

FA: Focus Area

GIS: Geographic Information System

LAG: Local Action Group

MA: Managing Authority

MM: Measure Manager

PA: Paying Agency

PMPF: Maximum Prescriptions and Forest Police

RDp: Rural Development priorities

RDP: Rural Development Program

SIAN: National Agricultural Information System

SM: Submeasure

SWOT: Strengths, Weaknesses, Opportunities, Threats.

TA: Technical Assistance

VA: Value Added

Contents

Foreword

In agreement with the Managing Authority, the thematic study focuses on the effectiveness of the interventions supported by the forestry measures of the 2014-2022 RDP of the Liguria Region in relation to the territorial potential and criticalities.

The evaluation question expressed by the Region concerned the contribution of the following forestry measures of the Liguria RDP to the improvement and protection of forests:

- M08.03 - Prevention of damage to forests by fire and natural disasters,
- M08.04 - Interventions to restore forests damaged by fire and natural disasters,
- M08.05 - Forest mitigation and enhancement of environmental value.

In particular, the evaluation analysis aimed at identifying how forestry measures, from a territorial point of view, allocate resources in relation to related issues such as forest fires and hydrogeological risk.

In addition to this, an analysis of the selection criteria adopted in the published calls for tenders was carried out, on the one hand to verify whether the selected projects are consistent with the strategy and priorities identified by the Ligurian planner and, on the other hand, to obtain cognitive elements to support the drafting of the calls for tenders for the 2023-2027 programming cycle.

The general aim of the report is to analyse the effectiveness of the RDP forestry measures and of the projects financed, taking as an evaluation criterion the consistency of their territorial distribution, in relation to the different characteristics and therefore the different needs or criticalities of intervention present in the regional territory.

1. Evaluation Objectives and Methodology

1.1 Objectives of the territorial and selection criteria analysis

The territorial analyses carried out have the operational objective of verifying whether, and to what extent, the desired "concentration" of forestry interventions has been achieved in the regional territorial areas in which, due to the presence of environmental criticalities or potentialities, they determine the greatest effects. This entailed the construction of a cognitive framework with which to analyse the territorial distribution of interventions in relation to the issues of interest (fire risk and hydrogeological risk). Through the analysis of the selection criteria adopted in the published calls for proposals, it is possible to obtain a series of supporting information useful both to guide the drafting of the planned calls for proposals and to direct future rural development policies. In detail, the aim was to verify whether the selection of applications submitted contributed to achieving the aims of the various Sub Measures and, more generally, contributed to the development of the Ligurian forestry sector.

1.2 Methodology

Consistent with the aims of the thematic report, the evaluation of the effectiveness of forestry measure interventions has involved, on the one hand, a territorial analysis, focused on the distribution of interventions with respect to the areas indicated as being at risk of fire and hydrogeological instability; on the other hand, an analysis focused on the selection criteria adopted in the calls for the implementation of the Sub Measures under examination.

As far as the first product is concerned, a series of spatial and cartographic elaborations and analyses were carried out based on the integration ('cross-referencing') in a GIS (Geographic Information System) environment of the information deriving from the maps relating to the environmental themes analysed, with the information relating to the amounts disbursed obtainable from the Data Banks deriving from the SIAN (Italian National Environmental Information System) according to the maximum level of detail available. This methodology was chosen because it was not possible to use the vector information present on the SIAN accompanying the application, which would have allowed the precise location of the interventions. This information, in addition to not always being present in the attachments to the application, is not homogeneous in terms of file type (in some cases they are not vector files), definition of the intervention areas (sometimes only the precise location of the infrastructure is indicated, but not the pertinence area on which the structure produces effects); furthermore, the system does not allow a massive download of the documentation accompanying the application, but it is necessary to make queries for each individual application. The evaluator, in collaboration with the MA, has identified the thematic cartography of interest, i.e., the cartographic reference that geographically specifies and positions the priority areas on the territory; in particular, the following documents have been used.

- Map of forest types of the Region of Liguria Scale 1:25,000 ed.2013, this map allowed the classification of the municipal territory into forest and non-forest territory;
- map of forested areas at greatest hydrogeological risk, which identifies regional areas according to risk, using the type of forest existing on the territory, the steepness of the

area and the presence of landslide phenomena (Inventory of Landslide Phenomena in Italy- 2014);

- map of fire risk at municipal level (period from May to October); the classification made in this map of risk at municipal level for the summer macro-season is derived from the raster cartography of forest fire risk for the year 2015. This raster cartography is related to the revision of the Regional Plan for Forecasting, Preventing and Actively Fighting Forest Fires, prepared with the technical-scientific collaboration of the International Centre for Environmental Monitoring - CIMA in Savona. The map identifies 5 classes:
    - Class 1 - Very low risk,
    - Class 2 - Low risk,
    - Class 3 - Medium risk,
    - Class 4 - High risk,
    - Class 5 - Extreme risk,
- Vectorial municipal boundaries of the Region of Liguria (Istat).

The cartography of interest was overlaid geographically (overlay) with the vector files of the municipal boundaries in order to refer to each individual municipality the information on the forest area, the area at greatest hydrogeological risk and the area at risk of forest fires.

The classification of the municipalities by forest area class was carried out by the evaluator as the ratio of forest area to total municipal area, the resulting values were divided into quartiles. The extremes of the quartiles were used to classify the municipalities into:

- ✓ Class A - Ratio of forest area to total municipal area less than 53.38 % (1st quartile);
- ✓ Class B - Ratio of forest area to total municipal area greater than 53.38 and less than or equal to 72.96 % (2nd quartile);
- ✓ Class C - Ratio of forest area to total municipal area greater than 72.96 and less than or equal to 84.74% (3rd quartile);
- ✓ Class D - Ratio of forest area to total municipal area greater than 84.74% (4th quartile).

The high values of the percentage of municipal forest area result in an uneven distribution in quartiles, so much so that the first quartile already has a value above 50%; this distribution is a natural consequence of the importance in terms of surface area of forests in Liguria.

The classification of municipalities by hydrogeological instability classes was carried out by the evaluator as a ratio of the following two parameters:

1) Hydrogeological instability area, as defined by the map described above, falling within the municipality;
2) forest area of the municipality.

The values of this ratio were divided into quartiles and thus, the municipalities classified in:

- ✓ Class A - Low risk - Ratio of forest area at increased hydrogeological instability to total forest area less than 22.40 % (1st quartile);
- ✓ Class B - Medium risk - Ratio of forest area at increased hydrogeological instability to total forest area greater than 22.40 and less than or equal to 34.35 % (2nd quartile);

- ✓ Class C - High risk - Ratio of forest area at higher hydrogeological instability to total forest area greater than 34.35 and less than or equal to 49.99% (3rd quartile);
- ✓ Class D - Very High Risk - Ratio of forest area with higher hydrogeological instability to total forest area greater than 49.99% (4th quartile).

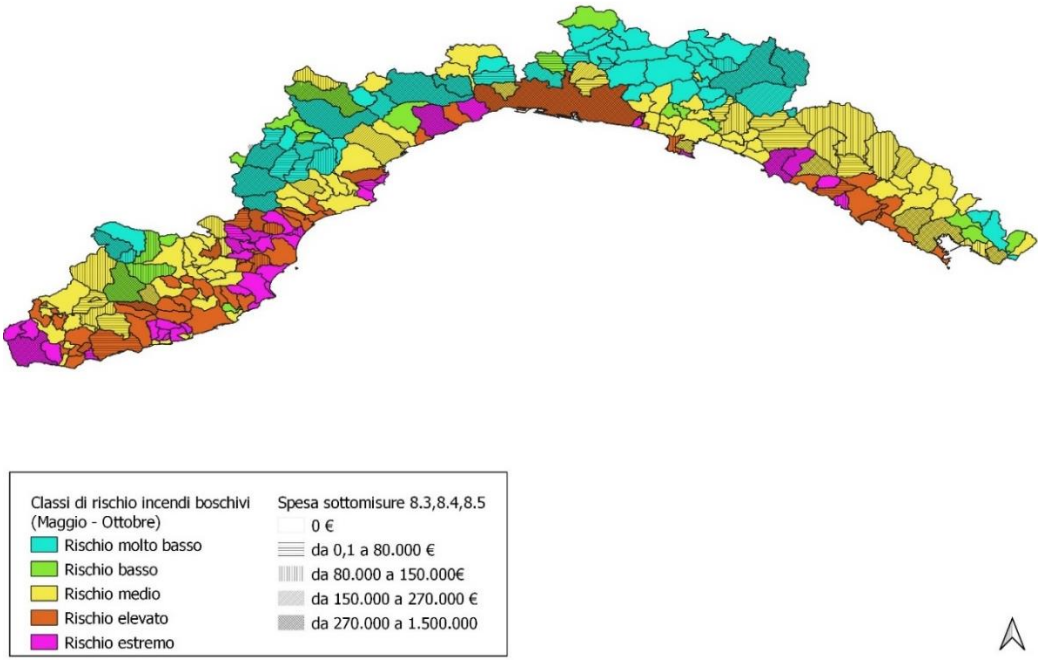
The alphanumeric information, deriving from the geographical integrations, was imported into a relational DB that allowed both to classify the Ligurian municipalities according to the different degree of forest coverage and to the different fire and hydrogeological risk classes, and to refer to those same municipalities the information related to the contribution paid to the Sub Measures 8.3, 8.4 and 8.5. With regard to the measures considered, only the applications that received the balance payment were included in the analysis, calculating for each application the total liquidated contribution, i.e. relating to the advance, down payment and balance. In order to identify the location of the project, the technical documentation accompanying the application on the SIAN was analysed. Then, for each project, the municipality in which the intervention was actually carried out was defined and the relative liquidated contribution was ascribed to that municipality. This activity was necessary since the measure databases only report the location of the registered office of the proposing beneficiary, which may not correspond to the location of the intervention. In the case of projects referable to more than one subject, if not specified by the files present on the SIAN, the liquidated contribution was redistributed in the municipalities of location identified. In the case of projects with wide repercussions, referable to the entire regional territory, or to that of a single province, the value of the liquidated contribution has been divided among all the municipalities of the region or of the province already present in the measure database as location of other projects of the same intervention. With regard to the selection criteria, the closed calls for proposals for which the final rankings were available were taken into consideration, i.e. the two calls for proposals published respectively by Resolution of the Regional Council no. 1335 of 30/12/2016 and by Resolution of the Regional Council no. 719 of 2/10/2019. The analysis was conducted on the scores obtained, at the sub-criterion level, by the applications for support financed under each published call. From this dataset, applications with anomalies when uploaded to the SIAN portal were excluded. Since the scores assigned to unfunded applications were not available, it was impossible to establish the selective effectiveness of the criteria adopted in discriminating between the applications received. The scores totalled by the financed applications were however able to inform which criteria were most frequently met, and consequently which were the characteristics of the interventions that best met the needs identified by the Programmer in relation to the territorial needs that emerged from the SWOT analysis. To complete the picture, on the basis of this information, the consistency between the objectives of the individual SubMeasure and the selective criteria adopted was also assessed.

2. Territorial Analyses

2.1 Forestry measures and fire risk

The following spatial analyses verify the distribution of forestry operations that potentially have an effect on fire risk reduction. The distribution was carried out by geographically placing the interventions of operations 8.3,8.4,8.5 on the Ligurian territory in relation to the fire risk map at municipal level.

Map 1 - Distribution of expenditure in municipalities by fire risk class (period May to October)



Source: Assessor's elaborations on SIAN data and fire map by the International Centre for Environmental Monitoring - CIMA in Savona

The previous figure and the table below, where the distribution for the sum of Measure 8 interventions is shown, show a non-linear expenditure in relation to risk classes, with higher levels in municipalities in very low and medium risk classes and lower levels in those in higher risk classes. This distribution is related to the higher presence of forest areas in the municipalities with lower risk. On the other hand, an analysis of the expenditure per hectare of forest surface shows that the municipalities with extreme and high-risk classes have the highest expenditure per hectare, respectively 81€ and 61€. This compares with a regional average value of 51 €/ha.

Table 1 - Distribution of the cleared grant amount of Sub-Measures 8.3,8.4,8.5 in the municipalities per fire risk class

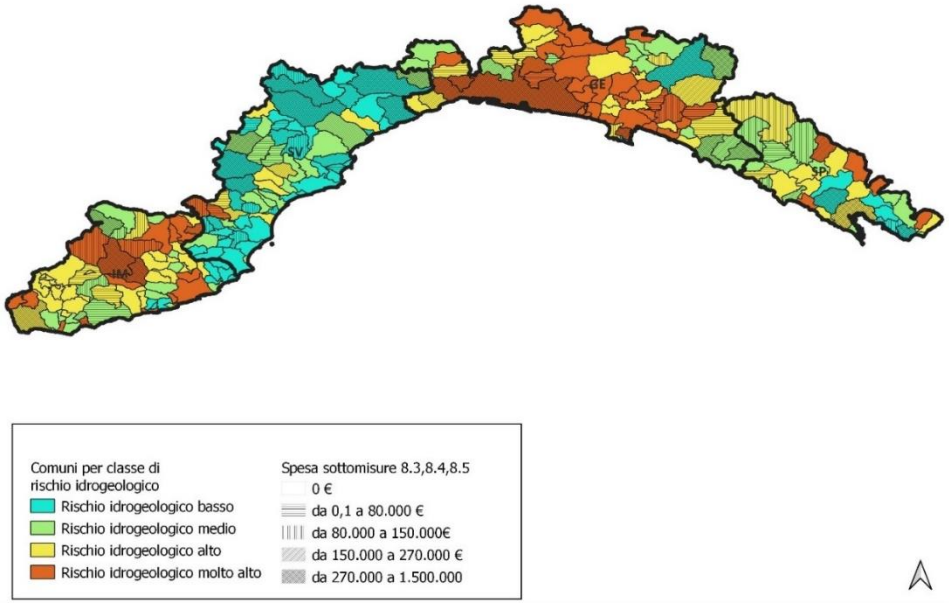
Municipalities by fire risk class	Expenditure Under Measures 8.3 - 8.4 - 8.5	Forest area	Expenditure per hectare of forest area
	€	ha	€
1 - Very low	7.850.207,32	126.062,70	62,27
2 - Low	1.094.549,66	32.850,23	33,32
3 - Medium	5.196.683,11	147.165,82	35,31
4 - High	3.364.598,76	55.135,21	61,02
5 - Extreme	2.532.152,94	31.263,04	81,00
Total	**20.038.191,78**	**392.477,00**	**51,06**

Source: Assessor's elaboration based on the Fire Risk Map at municipal level in the Liguria region and Sian databases

2.2 Forestry measures and hydrogeological risk

The following spatial analyses verify the distribution of forestry interventions that potentially have an effect on hydrogeological risk reduction. The distribution was carried out by geographically placing the interventions of Sub Measures 8.3, 8.4, 8.5 on the Ligurian territory in relation to the classification of municipalities by hydrogeological risk of wooded areas. The classification of municipalities by hydrogeological risk of wooded areas was carried out according to the methodology.

Map 2 - Distribution of expenditure in municipalities by hydrogeological risk class of wooded areas



Source: Assessor's elaborations on SIAN data and Map of wooded areas at greater hydrogeological risk

The figure above and the table below, where the distribution for the sum of Measure 8 interventions is shown, show an expenditure that is not proportional to the hydrogeological risk classes, with higher levels in municipalities in the lower risk classes and lower levels in the higher risk classes. The highest expenditure per hectare of forest area, at 77.5 €, occurs in municipalities with low risk. Compared to a regional average value of 51 €/ha, it is evident that in the very high-risk class the value of €/ha per forest area is lower than the regional average (45 €/ha).

Table 2 - Distribution of the liquidated contribution of Sub-Measures 8.3,8.4,8.5 in the municipalities per hydrogeological risk class of wooded areas

Municipalities by hydrogeological risk class of forested areas	Area with hydrogeological disruption of wooded areas	Expenditure 8.3,8.4,8.5	Forest area	Expenditure per hectare of forest area
	Ha	€	~~Ha~~	~~€~~
A - Low risk	15.109,84	7.366.135,56	95.049,21	77,50
B - Medium risk	27.525,89	5.601.455,88	95.896,91	58,41
C - High risk	41.610,92	2.597.540,06	102.861,53	25,25
D - Very high risk	58.132,56	4.473.060,28	98.669,35	45,33
Total	**142.379,21**	**20.038.191,78**	**392.477,00**	**51,06**

Source: Elaborated by the evaluator on the basis of the map of wooded areas at greater hydrogeological risk in the Liguria region and Sian databases

2.1 Forestry measures in areas of coinciding fire and hydrogeological risk

In consideration of the fact that the alterations to the natural conditions of the soil caused by fires increase the phenomena of slope instability causing, in the event of intense rainfall, the slippage and removal of the surface soil layer, the consequences for the natural balance are very serious and the time needed to restore the forest and environmental ecosystem is very long, it may be useful to evaluate the distribution of forestry interventions in relation to the combination of the two risks. In the areas with high and extreme fire risk and high and very high hydrogeological risk, there are 34 of Liguria's 287 municipalities. There are six municipalities where there is a maximum and combined incidence of the two indices (Airole, Civezza, Olivetta San Michele, Ospedaletti, Castelbianco, Bogliasco).

Expenditure of the three Sub-Measures in these 34 municipalities amounts to 3,089,070 about 15% of the total, while in the 38 municipalities at lower risk (Hydrogeological Risk Low and Medium and Fire Risk Very Low and Low - In green in tables 3.7,3.8, 3.9) it amounts to 7,765,589 almost 39% of the total resources spent.

Table 3 - Expenditure of Sub-Measures 8.3, 8.4, 8.5 in Combined Risk Classes

Hydrogeological risk	Fire risk					Total
	1	2	3	4	5	
	€ Under sizes 8.3-8.4-8.5					
A	4.114.120,50	400.765,78	1.240.125,65	703.313,05	907.810,58	7.366.135,56
B	3.250.702,41		1.154.195,22	428.492,65	768.065,61	5.601.455,88
C	485.384,41	188.029,07	930.173,14	244.952,12	749.001,33	2.597.540,06
D		505.754,81	1.872.189,09	1.987.840,95	107.275,43	4.473.060,28
Total	**7.850.207,32**	**1.094.549,66**	**5.196.683,11**	**3.364.598,76**	**2.532.152,94**	**20.038.191,78**

Source: Elaborated by the evaluator on the basis of the Map of wooded areas at greater hydrogeological risk, Map of fires at municipal level in the Liguria region and Sian data

Expenditure per hectare of forest area is higher in municipalities with a lower combined risk, totaling 83 €/ha compared to 68 €/ha in areas with a higher combined risk.

Table 4 - Expenditure per hectare of Sub-Measures 8.3, 8.4, 8.5 in combined risk classes

Hydrogeological risk	Fire risk					Total
	1	2	3	4	5	
	€ SM 8 expenditure/ha forest area					
A	90,13	32,80	74,84	79,64	77,03	77,50
B	92,76	0,00	28,98	38,99	83,98	58,41
C	21,81	32,27	18,56	13,16	124,05	25,25
D	0,00	36,36	46,06	119,07	24,98	45,33
Total	**62,27**	**33,32**	**35,31**	**61,02**	**81,00**	**51,06**

Source: Elaborated by the evaluator on the basis of the Map of wooded areas at greater hydrogeological risk, Map of fires at municipal level in the Liguria region and Sian data

In areas with a higher combined risk, there is no evidence of a greater concentration of expenditure both in absolute terms and in terms of expenditure per hectare of forest area. This analysis could be useful for the identification of selection criteria for programming 23-27, since the definition of combined risk areas (fire risk + hydrogeological risk) as priorities would increase the effectiveness of interventions since the reduction of fire risk reduces the hydrogeological instability of forested areas.

3. Analyses of the selection criteria

3.1 Sub-Measure 8.3

Analysis of selection criteria

The selection criteria adopted in all three published calls were the same and were structured in six principles declined in several options (Table below).

Overall, in line with the critical situation of the Ligurian forestry sector, the intention was to incentivize projects presented by associated forestry operators, based on forest management plans that had previously identified the need for preventive measures, and falling within protected areas.

To prioritise the most urgent investments, additional conditions were set, which if not met, would result in a deduction of points. Specifically, a penalty was assigned to projects that were at least 50% outside areas at high fire risk, or at greater hydrogeological risk, or at greater risk for plant diseases. The delimitation of these areas considered to be at high risk was reported in official thematic maps.

Table 5 - Selection Criteria for Sub-Measure 8.3

Selection Principles	Declination	Score 1335/2016	Score 719/2019	Score 663/2022
1. Associated management of forest areas	1.1 Association between landowners and forestry companies established for at least three years	30 points	30 points	30 points
	1.2 Associations of landowners and forestry companies established for less than three years	25 points	25 points	25 points
	1.3 Owners' associations without forest enterprises with an area > 50 hectares	20 points	20 points	20 points
	1.4 Owners' associations without forest enterprises with an area < 50 hectares	10 points	10 points	10 points
2. Prevention measures provided for in the forest management plan	2.1 Interventions foreseen in an existing plan related to the acquisition of means and equipment exclusively functional to prevention	40 points	40 points	40 points
	2.2 Prevention measures indicated in an existing second or third level forest planning instrument	30 points	30 points	30 points
	2.3 The beneficiary undertakes to draw up a forest management plan including aspects related to prevention	20 points	20 points	20 points

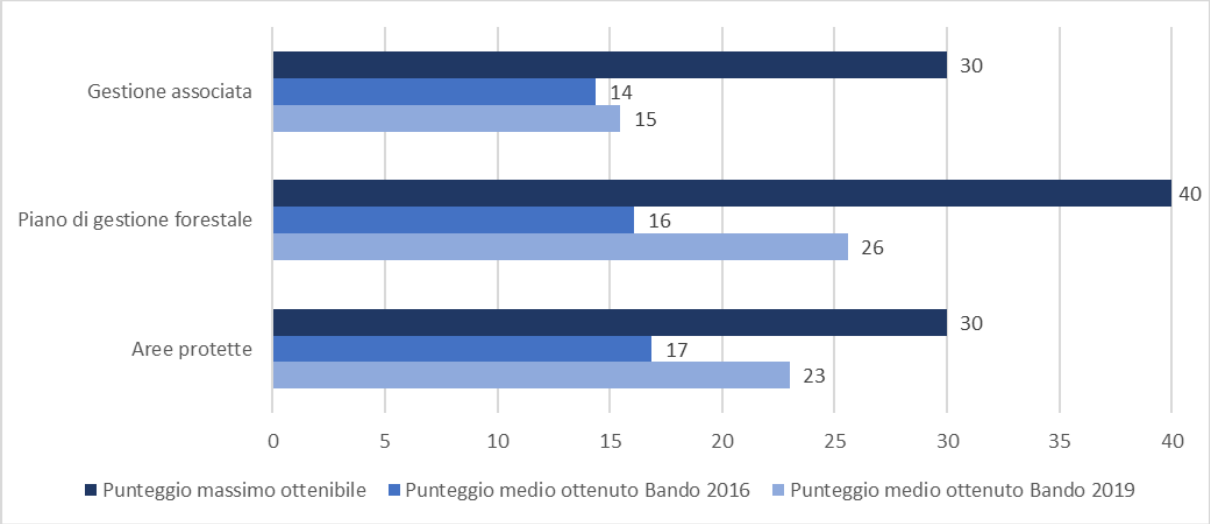
Selection Principles	Declination	Score 1335/2016	Score 719/2019	Score 663/2022
3. Interventions involving areas within protected areas (Parks, Reserves, Natura 2000 Network Areas)	3.1 Area between 76 and 100 per cent	30 points	30 points	30 points
	3.2 Surface area between 51 and 75 per cent	20 points	20 points	20 points
	3.3 Area between 26 and 50 per cent	10 points	10 points	10 points
	3.4 Area between 1 and 25 per cent	5 points	5 points	5 points
4. Fire prevention works carried out on areas classified as high fire risk	4.1 Area comprising at least 50 per cent	The defined score remains	The defined score remains	The defined score remains
	4.2 Area not included in high fire risk areas	minus 10 points	minus 10 points	minus 10 points
5. Hydrogeological risk prevention interventions carried out on areas at greater hydrogeological risk	5.1 Surface area > 50 per cent	The defined score remains	The defined score remains	The defined score remains
	5.2 Area between 1% and 50%	minus 5 points	minus 5 points	minus 5 points
	5.3 Area not subject to particular hydrogeological risk	minus 10 points	minus 10 points	minus 10 points
6. Phytopathological prevention measures carried out on areas at higher risk of plant diseases	6.1 Forest area subject to pathology > 50 per cent	The defined score remains	The defined score remains	The defined score remains
	6.2 Forest area subject to pathology between 1% and 50%	minus 5 points	minus 5 points	minus 5 points
	6.3 Area not falling within the forest category subject to the disease	minus 10 points	minus 10 points	minus 10 points

The maximum score obtainable was 100 while the minimum threshold for eligibility was set at 20 points. Once selected, eligible applications were placed on a ranking list to be financed until the allocated resources were exhausted. In the event of a tie, forest areas in protected areas were favoured and projects with a lower eligible expenditure were second.

Looking at the scores obtained by the applications funded in the two calls for which monitoring data were available, two things stand out: the evaluation achieved was not particularly high, but there was an increase in the average score of the projects submitted in 2019 (61 points, SD=13) compared to those submitted in 2016 (46 points, SD=20). In fact, in the last call for which data was available (2019), the applications funded most frequently fell into the 41-60 point and 61-80 point classes, and only one application belonged to the lowest 20-40 point class. In both years, the criterion related to associated management was the one with the worst performance. The

average score obtained was 14 points in 2016 and 15 points in 2019, thus stopping at around 50% of the maximum obtainable.

Graph 1 - Average scores obtained by funded applications for each selection sub-criterion in relation to the maximum score attainable for the given sub-criterion



Source: Assessor's elaboration based on SIAN data

However, the score values for associated management were characterized by a high degree of variability, especially in the 2016 call (DS=12). On this occasion, in fact, there were many projects that scored 0 points (41%), thus considerably lowering the average. Only 3 applicants were associations formed more than 3 years ago between land managers/landowners and forestry companies (characteristics associated with the highest award); while 38% had formed an association between land managers/landowners and forestry companies for less than 3 years. Overall, therefore, around 47% still had some form of association between managers/landowners and forest enterprises. In 2019, the number of non-associated applicants fell to 6, the number of applicants with the highest score remained unchanged, and the percentage of applicants with associations between land managers/landowners and forestry companies fell to 19%. Consequently, the majority of eligible projects (56%), were submitted by associations of owners without forest enterprises. Overall, therefore, a comparison of the two years shows an increase in the number of applicants involved in associations but at the same time a decrease in the involvement of forest enterprises. In addition to associated management, another strategic aspect for the development of Liguria's forestry sector is the dissemination of management plans for the rational and sustainable use of wooded areas. There is a lack in this aspect in the regional context, especially as regards detailed planning. In fact, only 3.7% of Liguria's forest area has detailed plans, compared to a national average of 15.3%. On the other hand, the portion of forest subject to the Prescrizioni di Massima e Polizia Forestale (PMPF), and therefore to an authorization system for cuts, is very high (98.6% compared to a national average of 86.5%) (INFC2015).

The importance of the use of forest planning tools that include preventive measures is underlined by the weight given by the Programmer in the selection process of projects to be financed. The introduction of this criterion has had a twofold importance: on the one hand, it has made it possible to incentivize the implementation of forest plans; on the other hand, thanks to this tool, it has helped to promote long-term forest management. Of the total number of eligible applications, 19% in 2016 and 29% in 2019 concerned areas covered by management plans in which prevention played a central role. In contrast, for 9% and 19% of the applications in the two years respectively, prevention was one of the aspects contained in the management plans. In both calls for applications, 25% of the applicants undertook to draw up a forestry plan that included the theme of prevention. Of particular interest is the percentage of projects without management plans, or with management plans that did not cover prevention aspects, which fell from 44% in 2016 to 13% in 2019. Applicants who undertook to have a forest management plan could count on the contribution of MS 8.5, which finances 100% of the production of this documentation.

The third parameter on which the projects were assessed concerned the location of interventions in relation to protected areas. As in the case of the other criteria, there was a reduction in the percentage of projects totally lacking the feature sought by the Planner. In fact, applications with zero points fell from 34% to 6%. In addition, the proportion of projects at least 50% in protected areas increased from 50% to 66%.

In all the notices published in implementation of MS 8.3, a system of points subtraction was also introduced to ensure that priority was given to interventions carried out in areas with a higher potential risk of fire, plant disease and hydrogeological instability. The analyses carried out showed how the discriminatory power of this criterion was greater for the aspect linked to the areas at greater fire risk, while it had little effect for the areas at greater hydrogeological risk and none at all for the areas at greater plant disease risk, where no project suffered the deduction of points. Overall, therefore, the projects submitted and judged eligible included the implementation of prevention measures in vulnerable areas.

3.1 Sub-Measure 8.4

Analysis of selection criteria

The selection of applications for support received was made, in both published calls, by giving priority to interventions that:

1. were carried out by implementers of an associated management of forest areas capable of ensuring greater continuity of restoration work;

2. concerned areas in protected areas;

3. concerned areas in particularly damaged areas.

Table 6 - Selection Criteria for Sub-Measure 8.4

Selection Principles	Declination	Score 1335/2016	Score 663/2022
1. Associated management of forest areas	1.1 Association between landowners and forestry companies established for at least three years	30 points	30 points
	1.2 Associations of landowners and forestry companies established for less than three years	25 points	25 points
	1.3 Owners' associations without forest enterprises with an area > 50 hectares	20 points	20 points
	1.4 Owners' association without forest enterprises with an area < 50 hectares	10 points	10 points
2. Interventions involving areas within protected areas (Parks, Reserves, Natura 2000 Network Areas)	2.1 Area between 76 and 100 per cent	30 points	30 points
	2.2 Surface area between 51 and 75 per cent	20 points	20 points
	2.3 Area between 26 and 50 per cent	10 points	10 points
	2.4 Area between 1 and 25 per cent	5 points	5 points
3. Interventions affecting the areas that suffered the most damage	3.1 Damage found on > 80% of the surface area	40 points	40 points
	3.2 Damage found on 61-80% of the area	30 points	30 points
	3.3 Damage found on 41-60% of the area	20 points	20 points
	3.4 Damage found on 20-40% of the area	10 points	10 points

Source: Elaboration by the evaluator on the basis of procedural acts published on National Rural

The selection criteria identified were therefore very similar to those adopted for MS 8.3 with the exception of the parameter related to the adoption of a forestry planning document, which was not included here. According to the established criteria, applications could obtain a maximum of 100 points, while at least 20 points were required to pass the eligibility threshold. Once selected, eligible applications were placed on a ranking list to be financed until the allocated resources were exhausted. In the event of a tie, forest areas in protected areas were favoured, and projects with lower eligible expenditure were given second place. The monitoring data of the 7[1] funded applications revealed that overall the scores obtained by the projects were not very high. On average, in fact, 51 (DS=13) points out of 100 were awarded. Among the three criteria, the one that allowed applicants to score highest was the extent of damage. This criterion rewarded projects in proportion to the extent of the damaged area to be restored and, consistent with the main purpose of the Sub-Measure, corresponded to the parameter that was given the most importance in the selection process.

Overall, MS 8.4 financed restoration work on damaged areas for more than half of their extent (> 61%). Only in one case did the damaged area represent 20-40% of the intervention area. On the other hand, 57% of the projects had planned the restoration of more than 80%, earning the maximum score attributable. On the other hand, with respect to the criterion related to associationism, none of the applications obtained the maximum score requiring participation in an association form for more than three years between forest owners/managers and forest enterprises. Only two projects originated from the collaboration between owners and enterprises and one from the association of only owners with a total area of more than 50 hectares. Most (57%) of the projects were submitted by individual owners and thus did not have the necessary characteristics to score points for this criterion. Even for the third and last parameter on which the projects were assessed, i.e. the location in protected areas of the wooded areas to be restored, only a minority of the funded applicants (two out of seven) fully met the required characteristic. In

[1] There were 9 applications funded but 2 were excluded from the analyses because they had anomalies in the compilation that could interfere with the outcome of the analyses.

fact, 71% of the interventions fell outside protected areas. On the whole, therefore, the projects financed presented, on average, characteristics that complied with the parameters identified by the Programmer only with regard to the extension of the damaged area to be restored. The majority of them, in fact, did not fall within protected areas and were not presented by associations established between forest owners and companies. The selection of interventions to be financed therefore seems to have been made mainly at the level of eligibility rather than through selection criteria.

3.1 Under Measure 8.5

Analysis of selection criteria

Compared to the calls for Sub Measures 8.3 and 8.4 where the same selection criteria have been maintained over the years, in the case of those activated for MS 8.5 there have been variations between the two calls. Whereas in the 2016 call for proposals the Sub-Measure was intended to give priority support to operations carried out by associations between forest managers and forestry companies on forest areas falling within protected areas, in 2022 an additional principle was introduced and given significant weight, focusing on Forest Management Plans. In this second call, the role of the location of the intervention areas in protected areas was also scaled down, from a maximum of 60 points to a maximum of 40. In both calls, however, it was possible to cumulate up to 100 points and the eligibility threshold was set at 20 points. In the event of a tie, as for the other SubMeasures, the project with the highest percentage of area included in protected areas was preferred, and in the second instance the one with the lowest eligible expenditure.

Only 11% of the applications submitted did not meet the eligibility requirements, while almost all eligible applications were financed thanks to the allocation of additional resources. It follows that the discriminating power that guided the choice of projects to be funded was exercised more by the eligibility conditions than by the selection criteria.

Table 7 - Selection Criteria for Sub-Measure 8.5

Selection Principles	Declination	Score 1335/2016	Score 663/2022
1. Associated management of forest areas	1.1 Association between landowners and forestry companies established for at least three years	40 points	30 points
	1.2 Associations of landowners and forestry companies established for less than three years	30 points	25 points
	1.3 Owners' associations without forest enterprises with an area > 50 hectares	25 points	20 points
	1.4 Associations of owners without forest enterprises with an area between 30 and 50 hectares	20 points	10 points
	1.5 Other associated parties	10 points	absent
	2.1 Area between 76 and 100 per cent	60 points	40 points

Selection Principles	Declination	Score 1335/2016	Score 663/2022
2. Interventions involving areas within protected areas (Parks, Reserves, Natura 2000 Network Areas)	2.2 Surface area between 51 and 75 per cent	45 points	30 points
	2.3 Area between 26 and 50 per cent	30 points	20 points
	2.4 Area between 1 and 25 per cent	15 points	10 points
3. Interventions foreseen in the forest management plan that has previously identified the particular need for such interventions	3.1 Interventions envisaged in an existing plan	absent	40 points
	3.2 The beneficiary undertakes to draw up a forest management plan including aspects related to increasing environmental value	absent	20 points

Source: Elaboration by the evaluator on the basis of procedural acts published on National Rural

From the analysis of the 124[2] applications financed in the 2016 call for applications, it was possible to draw some indications on the characteristics of the projects submitted, with respect to the two selection principles: associated management of forest areas and interventions in protected areas. Overall, the average scores obtained were not particularly high, reaching 64 (DS=21) points out of a maximum of 100. Given the discrete variability of the sample, the frequency of funded applications falling into four distinct score classes was also observed. This further investigation showed that the most frequent scores (41% - 51 questions) were those in the 41-60 point class and secondly in the highest 81-100 point class (28% - 35 questions).

The criterion related to protected areas, for which the Planner had foreseen the highest award, contributed above all to increasing the value of the overall score, in line with the aim of MS 8.5 to improve the value and resilience of forests, which become even more relevant if they involve valuable forest areas such as those included in protected areas.

For the criterion relating to protected areas, an average score of 47 (DS=21) was achieved, but even here the distribution of values showed non-negligible variability. The majority of projects (62%) achieved the maximum score, while 13% fell outside protected areas. Shifting the focus to the criterion that dealt with the associated management of forest areas, it was found that only 10% of the funded projects had achieved the maximum score, indicating that only rarely were operations with the aims of MS 8.5 carried out by associations of forest owners and enterprises that had been established for at least three years. However, this type of association established for less than three years accounted for one third of the projects (33%), an interesting fact that should be further investigated. The participation of these recent associations in the call, a strategic point for the development of the Ligurian forestry sector, could give the RDP an important role in the growth of the forestry sector, not only as a financial tool for the development of these initiatives, but also as a stimulus to their establishment. The presence of this criterion in the selection system could have led to the emergence of new associations formed precisely in order to be able to participate in the call for proposals and which, once started, could consolidate in the future. Overall, projects submitted by owners' and business associations made up 43% of the total funded projects.

[2] The total number of applications funded was 141. However, 17 of them were excluded because they had anomalies in the compilation that could have compromised the validity of the results obtained.

4. Conclusions and recommendations

In order to meet the overall objective of the Forestry Sub Measures of increasing the value of forest management, both from a productive and environmental point of view, the funded interventions were selected on common criteria that recalled the priorities identified as necessary for the development of the regional forestry sector.

In detail, three aspects were considered: management aspects, spatial characteristics, and environmental value.

With respect to the first element, the focus was on strengthening cooperation among the various owners/managers of forested areas also and especially in association with forest enterprises. The understanding between forest owners, who hold most of the forested areas but often have no interest in managing them, and forest enterprises, which on the contrary base their business on the forest heritage, is one of the elements that most contribute to the development of the forest sector also through the consolidation of employment in the sector.

Added to this aspect is the issue related to forest resource management planning. Liguria, in fact, has a considerable forest heritage in terms of surface area, which, due to a widespread lack of management, is not exploited for what could be the potential for use in a multifunctional perspective.

Both issues, therefore, concur to ensure the implementation of coordinated interventions, framed within a long-term vision, and over areas of significant size.

Regarding the spatial aspect, interventions were chosen according to their priority taken into account, in SM 8.3, through the scoring deduction for projects in areas less exposed to damage, and in SM 8.4, with the importance given to the criterion related to the extent of damage to be restored.

The results of the spatial analyses showed that the highest expenditure values for SM 8.3 and 8.4 were in the highest fire risk class, confirming the importance of the selection criterion related to areas at high fire risk (8.3) and the selection criterion related to the finding of damage to forest potential (8.4). In order to maintain the concentration of interventions in areas with the greatest need, the Liguria Region has identified eligibility criteria within the CSR for the next programming period that take into account fire risk and damage to forest potential. In fact, for restoration investments under Action SRD12.2), support covers forest and forest-like areas affected or damaged by disasters and catastrophic events whose damage is recognized by the Responsible Authority/Entity, and for Action SRD12.1) AIB prevention interventions are eligible only on areas classified at least medium risk. In contrast, for hydrogeological risk, higher expenditure was shown in municipalities in lower risk classes and lower in high-risk classes. In fact, the highest expenditure per hectare of forest area (amounting to 77.50 €/ha) fell in municipalities with low risk. This result could be related to the greater extent of the risk areas, used for scoring, which resulted in a more widespread coincidence of the project area with the priority areas and consequent scoring of a higher percentage of beneficiaries. Moreover, the criterion does not provide for graduation of hydrogeological risk, but only differentiates the area between areas at

risk and areas not at risk, contributing to a high diffusion of the allocation of the priority criterion that further limits its effectiveness.

In the areas of highest combined risk (fire risk and hydrogeological risk), a concentration of spending in both absolute terms and spending per hectare of forest area did not emerge.

The recommendations aimed at assigning specific priority for areas with higher hydrogeological risk class and combined risk areas (fire risk and hydrogeological risk) refer both to any calls that are still intended to be opened on the 2014-2022 RDP, and to the CSR implementing devices referring to intervention SRD12.1). In fact, selection principles related to territorial characteristics have been identified in the CSR, which can be declined into selection criteria that take into account these needs. The third aspect related to the environmental value of forests, proved to be a pivotal point for MS 8.5 in which interventions that fell in protected areas were positively selected.

THEME	CONCLUSION	RECOMMENDATION
Effectiveness of the selection criteria	Even though the greatest selection of applications is made at the eligibility level, the highest expenditure values for sub-measures 8.3 and 8.4 are in the highest risk class, confirming the importance of the selection criterion related to areas with a high fire risk (8.3) and the selection criterion linked to the detection of damage to forest potential (8.4).	It is recommended that the selection criteria be maintained in order to concentrate commitments in the areas of greatest need
	In relation to hydrogeological risk, there is a higher expenditure in municipalities in lower risk classes and lower expenditure in higher risk classes. The low incisiveness of the selection criterion of SubMeasure 8.3 with respect to hydrogeological risk, could be linked to the greater extension of the areas at risk, and to the lack of graduation of hydrogeological risk.	It is recommended that hydrogeological risk intensity be graded differently, and that priority be given only to the highest risk classes in order to concentrate efforts in the most critical areas.
	In the areas with the highest combined risk (fire risk and hydrogeological risk), there is no concentration of expenditure both in absolute terms and in terms of expenditure per hectare of forest area.	The identification of selection criteria linked to combined risk areas is recommended for programming 23-27 to increase the effectiveness of interventions.
	SM 8.4 saw low participation in the published calls for tenders	It is recommended to investigate the reason for the lack of interest shown by potential beneficiaries.

THEME	CONCLUSION	RECOMMENDATION
	Applicants' scores on the criteria related to associated management and management plans were not particularly high.	It is advisable to promote these aspects more, to stimulate future beneficiaries to contribute to solving these two critical issues in the Ligurian forestry sector.
Monitoring of interventions	It was not possible to use the vector information on the SIAN to accompany the application, as it was not homogeneous in terms of file type and definition of intervention areas.	It is recommended that a regional system be set up for storing vector information on the intervention areas and that specifications be identified to allow not only the correct positioning of interventions, but also the areas on which the effects fall.
	The available monitoring data concerned the scores of only those applications that were funded, while for those that were not eligible for funding the information was not present. It was therefore not possible to determine the selectivity of the criteria used. Furthermore, the collection of information proved to be rather cumbersome as an adequate procedural monitoring system was lacking (the information returned by the SIAN did not appear to be sufficient).	It is recommended to provide for a structured and detailed monitoring of the selection and implementation procedures, with particular attention to the outcomes of the preliminary assessments, to allow the stakeholders, first and foremost the MA, to verify the effectiveness of the choices made in order to ensure a project park adhering to the regional strategic priorities.