

Magnificent Community of Fiemme

1,000 Years of Forests at the
Service of the Community:
Heritage, Sustainability and Shared Value



COUNCIL OF EUROPE LANDSCAPE CONVENTION
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Italian Application

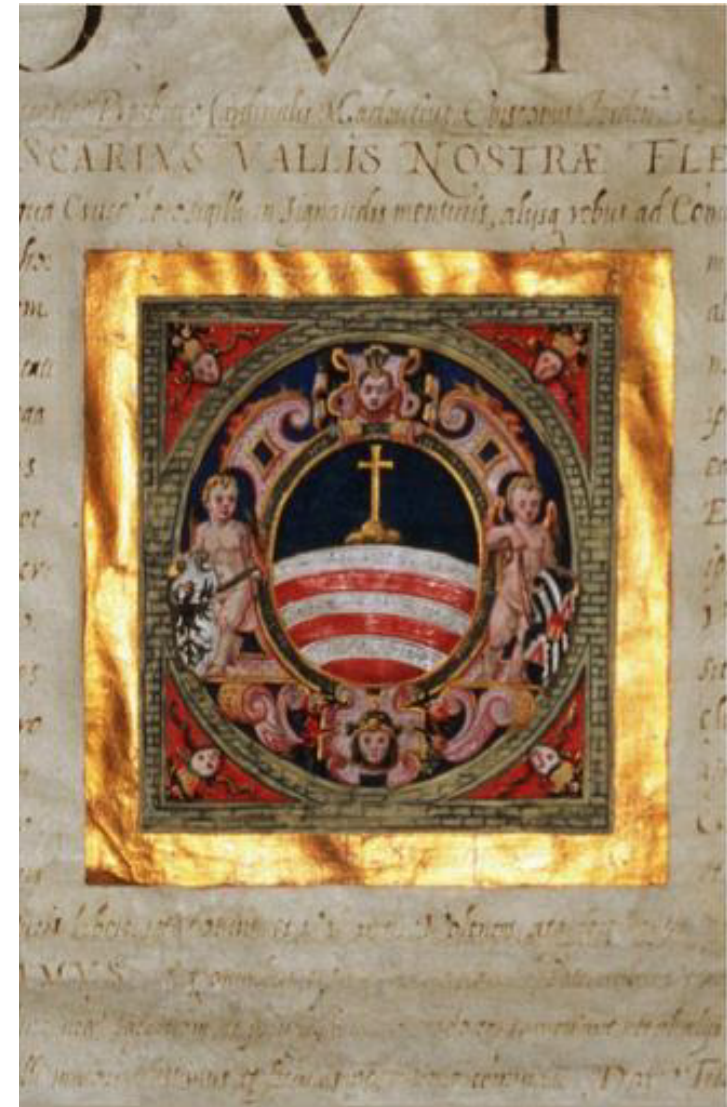
The Magnificent Community of Fiemme

The Magnificent Community of Fiemme is an ancient institution that has its roots in the Middle Ages and that still preserves and enhances an extraordinary territory that embraces 11 Rules (corresponding to 9 administrative municipalities) between the Val di Fiemme, the Val di Fassa and South Tyrol. Its official birth dates back to 1111, when Bishop Gebardo recognised the autonomy of the community by signing the so-called Gebardini Pacts. This institution represents a unique example of self-management of the territory: the heritage does not belong to individuals, but to the entire community of the "Neighbors of Fiemme", that is, to the inhabitants of the eleven historical Rules.

The heritage administered by the Community is vast: about 20,000 hectares of woods and pastures, but also real estate, such as huts, shepherd's cottage, and also the evocative Palace of the Magnificent Community, an ancient bishop's palace in the heart of Cavalese, today a symbol of the historical and cultural identity of the valley. For centuries as guardian of its forests, the Magnificent Community of Fiemme has carefully followed every step of the timber supply chain. For this reason, for over forty years, it has owned and managed a sawmill where Fiemme wood is processed with competence and passion, transforming a precious resource into quality works.

The forests of the Magnificent Fiemme Community are divided into 10 forest districts, each managed according to its own Corporate Forest Management Plan that is updated every twenty years. The general coordination is entrusted to the Technical Forestry Office (TFO), which deals with the planning, care and enhancement of this extraordinary heritage.

Out of 12,000 hectares of forest, over 9,000 hectares (about 75%) have a productive function: attentive and sustainable management delivers high-quality timber, highly demanded in construction, craft and even musical sectors. The remaining woods have on the other hand, a protective function, very important for the stability of the soil and the hydrogeological safety of the territory.





Bolzano - Bozzen
262 m



Merano - Merano
305 m



Bozen - Bozen
520 m



Lermo - Lermo
205 m



Brunico - Brunico
510 m



Sterzing - Sterzing
945 m



Klausen - Klausen
513 m



Gurno - Gurno
907 m



Innichen
514 m



EUROPAREGION EUREGIO Tirol Südtirol Trentino Tirolo Alto Adige Trentino



Südtirol - Alto Adige
Fläche: Superficie 13.640 km²
Hauptstadt: Capoluogo Bozen
Landessprachen: Lingue parlate Deutsch, Italienisch, Ladinisch
Bevölkerungszahl: abitanti 1.277.700 (Jahr: anno 2009)
Sprachgruppen: Lingue parlate Deutsch, Italienisch, Ladinisch
Italienisch, Italienisch 61,6% Ladinisch, Ladinisch 4,5%



Trentino
Fläche: Superficie 6.205 km²
Hauptstadt: Capoluogo Trento
Landessprachen: Lingue parlate Italienisch, Ladinisch, Fiemmentisch
Bevölkerungszahl: abitanti 1.415.000 (Jahr: anno 2009)
Sprachgruppen: Lingue parlate Italienisch, Ladinisch, Fiemmentisch
Italienisch, Italienisch 96,4% Ladinisch, Ladinisch 3,6%



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CH



Kufstein
499 m



Wörgl
520 m



Hall in Tirol
524 m



Schongau
540 m



Lienz
622 m



Imst
822 m



Kirchbühl
760 m



Landeck
840 m



Trento - Trento
194 m



Rovereto
204 m



Val di Fiemme
490 m



Arco
90 m



Riva del Garda
290 m



Ala
200 m



Lomas
510 m



Bressanone
510 m



Fiemme
505 m

MAGNIFICA
COMUNITA'
DI FIMME





One territory, three languages

The cultural uniqueness of the Magnificent Community of Fiemme is now enhanced by an agreement signed by the entity, the Comunità General de Fascia and the Oltradige Comprehensive Community -Bassa Atesina/Bezirksgemeinschaft Unterland.



The Magnificent Community of Fiemme is a unique entity at national level. What makes it sui generis is not only its millennial history, nor even exclusively its particular legal regime. Among its specificities, in fact, there is also a cultural peculiarity: on the territory of the entity there are three languages (Italian, Ladin and German) and different dialects deriving from these languages, the result of historical events and multiple contaminations.

As part of this collaboration between entities, one of the most ambitious projects is the creation of a unitary dictionary of Fiemme, an online consultation tool that can represent the linguistic complexity of the territory, only partially studied and explored. This is a challenging goal, which will require time and economic resources, more easily available thanks to the official signing of the agreement.

Trilinguism will then be strengthened with educational activities, translations, historical research, awareness-raising initiatives and participation. Among these, for example, the promotion of mountain choirs, an important local cultural reality. In the coming months, concerts will be organized with various musical groups, offering songs in Italian, German, Ladin and Fiamazo.

In occasion of the signing of the convention the Ladin and South Tyrolean flags were placed in the Salone Clesiano, which now flank the banners of the Magnificent Municipality of Fiemme, the Autonomous Province of Trento, Italy and the European Union, demonstrating the cultural and identity complexity that has characterized this territory for centuries.

Forestry certifications

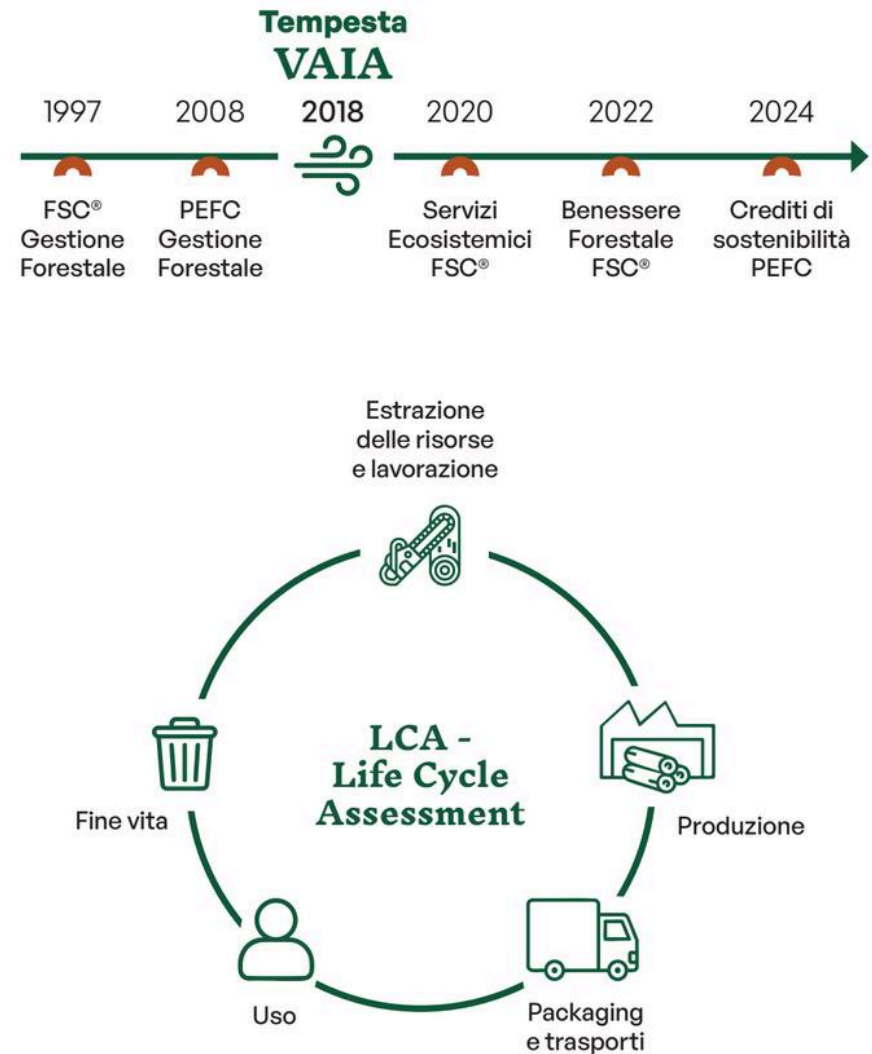
In 1997, the Magnificent Community was the first Italian forestry body to obtain FSC® certification for sustainable forest management. In 2007, it also extended the certification to the PEFC system, becoming the first company in the Alps to obtain double certification.

The Magnificent Community of Fiemme manages its forests seeking to maintain ecological balance, increase environmental, economic and social benefits, and respond to local and global needs. Over time, the community has pursued active forest management, attentive to the resilience of ecosystems, the constant monitoring of resources and the enhancement of ecosystem services (such as water regulation, CO² absorption, soil protection, biodiversity, tourism, etc.), for which it has obtained further certifications. In 2024, the Magnificent Fiemme Community started, together with the University of Trento, a pioneering project: the first Italian Life Cycle Assessment (LCA) study on the entire forest supply chain. The goal? Measuring CO² emissions and carbon storage capacity linked to sustainable forest management.

In this analysis, all phases have been considered: nursery, harvesting and transport to our storage yards. The results are interesting:

- Each cubic metre of logs produced generates an average of 7.13 kg of CO²;
- Each cubic metre of chippings produced generates only 0.27 kg of CO²;
- A single plant produced emits just 0.0046 kg of CO²;
- However, each m³ of tree trunk retains over 800 kg of CO² thanks to biogenic absorption, contributing to the fight against climate change.

The study shows that our logs are more sustainable than those from other similar companies: less emissions and more CO₂ absorption. This paves the way for new opportunities to enter the voluntary carbon and sustainability markets.



The Sawmill

The first small sawmill of the Magnificent Community was born in Ziano di Fiemme in the post-war period. In the following years, its evolution was marked by continuous investments in machinery and skills. The factory was expanded in the first half of the 1970s, then modernized in 1984 and the early 1990s. On 11 March 2002, the sawmill assumed the legal form of a joint-stock company. Today the Sawmill of the Magnificent Community is a company that looks to the future with responsibility, integrating sustainability into its DNA to generate shared value for the benefit of people, the community and the environment. With the support and collaboration of the Magnificent Community institution, it has embarked on a solid sustainability path, based on an in- depth ESG analysis and the definition of a targeted strategic plan.

The performance of the Institution and the Sawmill were evaluated through the B Impact Assessment which allowed to identify strengths and areas for improvement. Based on this analysis, the MCF Sawmill has developed a tailor-made Strategic Sustainability Plan, with concrete and measurable objectives. The Magnificent Community has also calculated the impact of its products through an accurate LCA analysis. Thanks to its environmental perspective, all the sawmill's products are FSC and/or PEFC certified.



Sustainability Projects

Events such as Storm Vaia and the bark beetle outbreak temporarily increased timber availability, but also caused severe environmental damage, increased maintenance costs, and economic losses. With the end of the extraordinary withdrawal phase, a significant drop in revenues is expected, putting at risk the care of the territory and the provision of ecosystem services.

It is therefore urgent to rethink forest management, enhancing all the services offered by forests and activating new forms of public and private financing. The care of the woods is in the interest of the whole community, as it guarantees fundamental benefits:

- Absorption of CO², and air purification: capture of carbon dioxide, reduction of fine dust and pollutants.
- Water regulation and protection against upheaval: slowing down the flow of rain, recharging the groundwater, consolidating the soil.
- Timber and biomass production: a resource for construction, furniture, paper, musical instruments and renewable energy.
- Non-wood forest products: mushrooms, berries, herbs, resins, honey, to support the local economy.
- Tourism and recreation: trails and safe spaces for outdoor activities, with positive economic repercussions.
- Cultural and landscape value: identity, memory and beauty of forest landscapes.
- Habitat and biodiversity: refuge for numerous animal and plant species.

Pasture at high-altitude

With forest management, an activity that for centuries has shaped the territory of the Magnificent Community of Fiemme.

Over 10% of the territory of the Magnificent Community of Fiemme consists of mountain pastures: 2,225 hectares (equal to 22.25 square kilometers) divided in 28 pasturing stations.

The characteristics of the soil, the quality of the fodder, the presence of running water and buildings are fundamental to determine the destination of the land. For milk cows, heavier and slower in movements, the ideal pasture is generally flat, with a good quality of food and abundant water available. The management of livestock must be entrusted to at least one shepherd for milking, which is done twice a day, in the morning and in the evening. If the number of cows is high, there must be at least two shepherds. The pasture station must have at least one stable, a milking parlor and must be reachable without undue difficulty with the truck for the downstream transport of milk. The Valmaggioro, Sadole, Toazzo, Valmoena, Cadinello and Lavazè huts are intended for the grazing of milk cows. In the cases of Sadole and Toazzo, the hut buildings belong respectively to the Municipalities of Ziano di Fiemme and Panchià, which granted them for use by the Community. The hut buildings in Lavazè are owned by the Municipality of Ville di Fiemme and are granted directly to the pasture and grazing company. Six are, therefore, the huts for the production of milk, with a net area of 418 hectares and a capacity of 303 heads.

There are eleven huts for dry cattle, with 968 hectares of pasture. They have shepherd's lodging and a stable or animal shelter

They can accommodate 967 adult cattle.

In the rule of Castello Molina di Fiemme there is the only hut for dairy sheep and goats, Malga Agnelezza, which has a pasture of 45 hectares and can accommodate about 300 animals, while in the Rule of Tesero there is Malga Lagorai which, together with the pastures of Mandre and Malga Frattin, is intended for the grazing of dry sheep.

The Rocca's pastures are also intended for dry sheep cattle, being quite poor in vegetation and with scarce water resources, the 75 hectares of pasture can accommodate 16 ALU.

Finally, there are the highlands, or the high parts of the mountains, which are intended for transhumant flocks of sheep and goats, in total there are about 591 hectares of pasture for 570 ALU (3,800 heads).

For the management of the pastures, some general rules have been established: the entire area granted must be used, however, avoiding concentrating livestock in areas where the sward is ruined or trampled and where there are nitrophilous herbs such as nettles and deschampsia. The pasture can only be fertilized with the manure produced in the hut. The mounted beast must be recorded in the loading register and must be in compliance with all veterinary regulations.



ALU: What are they?

The livestock load, the consistency of the pastures and that of the animals reared, with coefficients of equivalence between breeding densities are compared to A.L.U.: Adult Livestock Unit, a term widely used in the agricultural environment. It is a conventional unit of measurement that allows the calculation of the number of animals raised, with equivalence coefficients between different species and, within the same species, between adult and young animals, and between animals for meat or breeding. Applying the coefficients, for example, one adult bovine is equivalent to approximately seven goats

The pasturing season lasts approximately between 70 and 90 days, usually from mid-June to the end of September. Grasslands at lower altitudes can be used a couple of weeks in advance of that date. At the end of the mountain period, the animals return to the stables at the bottom of the valley. They are the montega/montegada and the desmontega/desmontagada, which for tourists and the population represent a real folklore event around which village festivals are set up. Even the breeders themselves dedicate themselves to it with enthusiasm, decorating the garments with flowers and bells.

The pasture helps to keep the clearings open and to keep the excessive expansion of the woods under control. In the past, when pastoral activities were more widespread - albeit with a family dimension, therefore more modest - this regulatory action was more evident. The limit of the forest was, in fact, at higher altitudes and the grazing areas were much larger. Still however, the grazing activity represents an important factor for the management of the territory, although the difficulties of the farming sector, also highlighted by the scarcity in the editorial, make it increasingly tiring and less attractive. It is from this centuries-old balance between pastures and woods that the landscape of the Magnificent Community of Fiemme has been shaped.



Beyond numbers

The accounting activity of the Magnificent Community of Fiemme is very complex: each sector has its own specific balance sheet. The numbers, objective by their nature, do not tell the complex work of the Accounting Office and the external dynamics that affect the entity's profits.

The Magnificent Community not only cares for the conservation of the forests or of the works of the art gallery; its activities are various and multiple. To manage this complex organization, the activities are grouped into four sectors: institutional, forestry, real estate and museum, in addition to the lumber sawing activity carried out by a joint-stock company, autonomous but whose shareholding belongs to the entity. Each of these sectors corresponds to a specific accounting and balance sheet. The institutional body manages the cross-cutting activities that concern the entire Magnificent Community. This includes expenses for institutional bodies (Scario and the Council of Regulators), the Control Board which is responsible for guaranteeing the legitimacy of the measures, the Board of Auditors which certifies the regular and truthful keeping of accounts, the secretariat, the institution's representation and defense activities and interventions in support of activities of Community interest, including any social interventions. This sector does not carry out profitable activities and does not have its own resources, it is financed with funds from

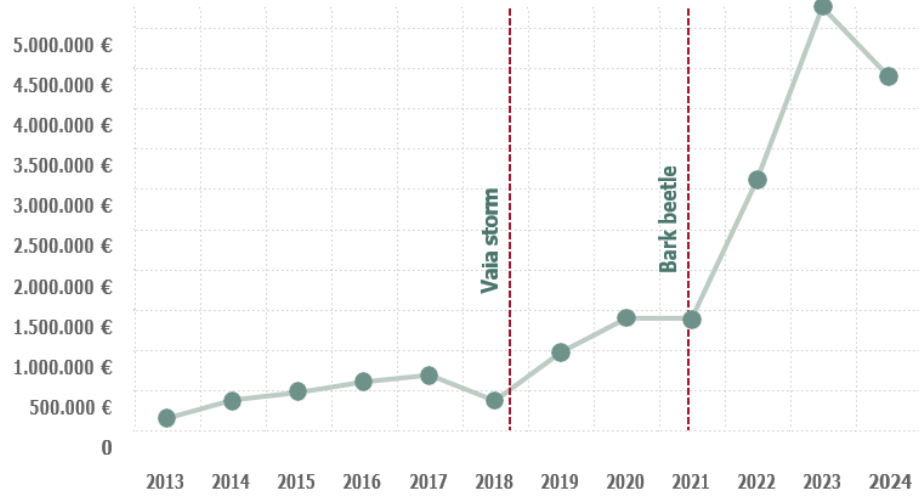
other activities. The forestry farm is the beating heart of the Community, it is the sector that has so far produced most of the income thanks to the cutting and sale of timber. The company manages forests and forest nurseries; it is responsible for the maintenance (or construction) of forest roads, pastures and huts, huts and other rural buildings or, even if located in the village, functional to the exercise of forestry. Finally, fishing and the custody of the waters are entrusted to it. The graphs illustrate how the increase in timber cut or recovered corresponds to a significant increase in operating profits. The timber trade in logs is not the only source of financing but it is certainly the most relevant and the one that generates the greatest income. All agricultural workers, the technical office and the accounting office are assigned to this sector. The real estate company oversees the buildings present in the countries but not intended for agricultural activities. It includes the office building in Cavalese, the complex known as the Predazzo bus station, the buildings and the squares of the sawmill in Ziano di Fiemme (in this case it should be noted that all the machinery is owned by the sawmill company). The income of this sector is given by the rent of the sawmill and the bus station; the latter includes shops and offices, bars, two apartments and some cellars.

The historical, artistic and cultural heritage is curated by the Museo Pinacoteca. The activity

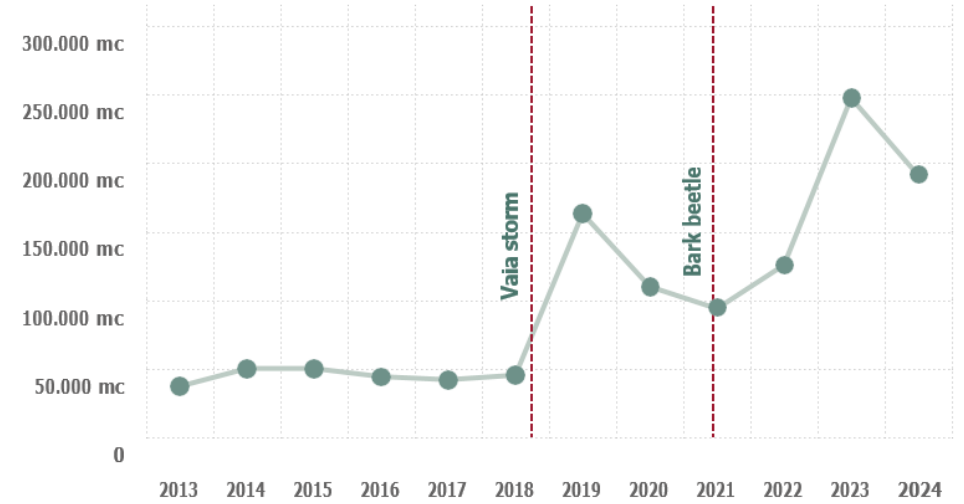
includes the management of the Palace as a monument, the conservation, inventory and increase of the artistic collections, the care and management of the historical archive, the organization of exhibitions, events, concerts and conferences, the educational activities that the staff conducts at the institutes of every grade both from the valley and from other origins.

In this graph we present the results of the financial statements of the Magnificent Community of Fiemme from 2013 to 2024. As you can see, until Storm Vaia the balance sheets were quite regular. Since the end of 2018 and, in particular, since 2021, the results for the year have marked an increase that is reflected in the amount of timber recovered and sold (see relative graph). This highlights a situation with lights and shadows. On the one hand, it highlights the ability of the entire structure to quickly recover wood damaged by crashes and parasitic attacks and sell it at the best prices, taking advantage of the market trend. On the other hand, in a few years a quantity of timber equal to that which would otherwise have been recovered in over 35 years was forcibly cut. The revenues of these years will have to be used for future years, when the forest will no longer be able to supply the quantities of timber to which we are accustomed.

Results



Wood cut or recovered from 2013 to 2024 in net cubic metres





Forest, plants and climate crisis. The case of the Euregio

The new cultural project of the Palace of the Magnificent Community of Fiemme.

In June, the Palace of the Magnificent Community launched a new cultural project of great impact, created in collaboration with the Civic Museum Foundation of Rovereto and conceived in the occasion of the Year of the Euregio Museums 2025. The Tyrol-Alto Adige-Trentino Euregio, inspired by the commemoration of the peasant wars of 1525 - a crucial event for the shared history of the three territories- launched a challenge to museums: to address issues related to social justice, crisis management, social changes and forms of resistance.

In this context, marked by the current climate crisis that is profoundly transforming the flora and landscapes of the Alps and large portions of the Euregio, the Palace of the Magnificent Community of Fiemme and the Civic Museum Foundation of Rovereto have decided to combine skills and visions to create a large cultural project entitled: "The forest and plants in the current climate crisis: the case of Europe", with the aim of helping the public to understand the dynamics underway from a floristic and vegetational point of view.

In particular, the Palace of the Magnificent Community of Fiemme will develop the theme through a series of initiatives that, started in the summer, will continue throughout the autumn:

- excursions on the territory, carried out in close collaboration with the Technical Forestry Office of the MCF, to discover the new reforestation and floristic changes caused by global warming;
- meetings at the "Banco della Reson", to bring the community and its territory to the center of attention;
- conferences of a historical, naturalistic and floristic nature;
- the creation of a podcast, which will gather the voices of administrators and experts directly on the field during public meetings;
- educational activities aimed at schools and the adult public.

The project will end with an exhibition event focused on the historical and identity link between the Fiemme community and its forestry heritage, today challenged by the effects of Storm Vaia, drought and the spread of the bark beetle. The exhibition, housed in the halls of the Palace, will guide visitors in a path of reflection that goes from ancient regulations for the management of collective forests to post-Vaia forestry, up to contemporary strategies of environmental rebirth, marked by biodiversity and resilience.

An opportunity to rethink the role of the forest: from a productive resource to a collective good, a generator of ecosystem services and a new environmental awareness. The goal is to give voice to a community that, for centuries, has based its economic and cultural well-being on balance with nature.

FOREST DISEASES IN THE WOODS OF THE MAGNIFICENT COMMUNITY OF FIEMME

2018



VAIA STORM



2020



EARLY SPRING and RISING TEMPERATURES

OCTOBER 2018

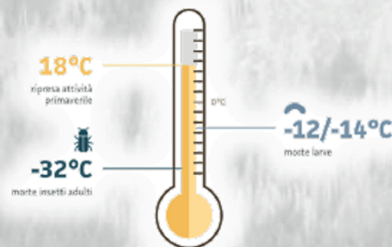
Extremely STRONG WINDS ACROSS North-Eastern ITALY.
It's **VAIA STORM**.

Trentino Alto – Adige is the REGION MOST AFFECTED: THE FOREST HERITAGE IS HEAVILY COMPROMISED, there are damages TO THE WATER NETWORK AND THE ROAD NETWORK. DIFFICULTIES in ACCESSING PLANTS fallen on the GROUND WILL BE ONE OF THE CAUSES OF THE BARK BEETLE EPIDEMIC, BECAUSE IT WILL PROVIDE THE INSECT with LARGE AMOUNTS OF FOOD AND habitat where IT CAN REPRODUCE FOR AN EXTENDED PERIOD OF TIME.

2021



SNOW CRASHES AND FIRST DAMAGE FROM BARK BEETLE



47.000 m³

Taglio annuo medio pre-Vaia



500.000 m³

Materiale schiantato dalla tempesta Vaia

BEFORE VAIA, A FEW TENS OF THOUSANDS OF CUBIC METERS OF TIMBER WERE CUT. SINCE 2019, THE SITUATION has CHANGED. WE ARE DEALING WITH A LARGE AMOUNT OF WOODY MATERIAL.

2022



HIGH TEMPERATURES and DROUGHT AMPLIFY THE DAMAGE

THE **BARK BEETLE**, AN INSECT NATIVE TO THE SPRUCE WOODS, BEGINS TO MANIFEST ITSELF IN THE PERIOD FOLLOWING VAIA. The INCREASE IN TEMPERATURES AND LONG PERIODS OF DROUGHT CAUSE THE SPREAD IN LARGE FOREST AREAS. A REAL EPIDEMIC BREAKS OUT THAT CONTINUES TO THIS DAY.

DIGGING AN INTRICATE SYSTEM OF TUNNELS, IT FEEDS ON THE LIVE TISSUES USED TO TRANSPORT THE PROCESSED SAP, THUS CAUSING THE DEATH OF THE AFFECTED PLANTS IN A FEW WEEKS.

?



END OF EPIDEMIC?



Magnifica
Comunità
di Fiemme



For a safer territory

Numerous interventions have been carried out to address risky situations for residents and road traffic arising from Storm Vaia and the bark beetle epidemic.

Generally, the crashes, whether caused by wind or snow, or the parasitic attacks always leave behind, to varying degrees, an unpleasant legacy for our forests: the fragility of the territory and the poor resistance of the slopes. Stripped of its forest cover, the terrain is unable to slow the flow of avalanches, mud, and rocks; it cannot prevent the rolling of rocks and dead tree stumps down the valley. Trees that have been damaged by bark beetles and are still standing are at risk of being broken by the wind or falling, because they have now lost their stability and rootedness in the soil. These are situations that represent a potential source of danger for residents and for traffic on the roads.

In addition to ordinary land maintenance activities, ditches and gutters are constantly cleaned to ensure proper channeling and to remove rainwater from the road surface. In addition to these, after every disturbance to the territory (snow, bark beetle, crashes) the MCF has always carried out safety interventions. In recent years, in step with the recovery of fallen trees and with the cutting of trees dried out by bark beetles, this activity has become increasingly intense for obvious reasons, with the aim of restoring as quickly as possible the essential protective function that the forest performs.



Some of the recent actions

Securing the National Street 50 of Passo Rolle, towards the mountains

Just above the town of Predazzo, around twenty plants dried out by bark beetles and "trapped" between the mountainside and the rockfall nets were cut down and left on the ground, appropriately oriented. In this case, any falling trees would have compromised the nets; in times of strong wind, there was also the fear that the tops would break and fall onto the road.

Securing the National Street 50 of Passo Rolle, towards the valley

In the stretch between Villa Vandina and the Zaluna area, a cluster of bark-infested plants posed a danger to the road and the houses below. The trees were felled and removed in late spring; in the fall, faster-growing broadleaf trees will be planted.

Intervention at Maso Troter (Maso Bomba)

Just above the house, on a slope characterized by falling and rolling rocks, the trees were all bark-infested and at risk of collapse. 20% of the trees were cut down with oriented release and subsequently reforested.

Reforestation spread throughout the territory

Where the presence of the slopes required it, red spruce, larch and broad-leaved trees were planted to accelerate regrowth (Cadinello, Bareta del Cermis, Banca Alta Valmaggiore, Malga Caore...).

Verification of the stability of the stumps

Along the Provincial Street 31 of the Manghen Pass and in San Lugano on the upstream side of the cycle path ("Old Railway"), a specialized company has supervised the stability of the stumps, those with less rooting have been removed.

Securing the wooded slope in San Lugano at Fontanefredde

In collaboration with the Territorial Community of Bassa Atesina, responsible for the management of the "Old Railway" cycle path, an intervention was carried out to secure a particularly dangerous rocky slope. The MCF took care of removing the wood dried out by the bark beetle, while the Territorial Community built the rockfall barriers to protect the cycle path below. This intervention has effectively resolved a long-standing problem that had further worsened following Vaia and the bark beetle epidemic that affected the slope itself.

Rocks testing

In some cases, the felling of trees revealed rocks, the stability of which was verified with the assistance of a geologist and on a couple of occasions these boulders were blasted.

Granting of higher stumps

Since the first fallings following the Vaia disaster, the instructions given to logging companies when allocating the forest lots were to leave the stumps higher than usual, so as to constitute a physical obstacle to the rolling of logs and boulders downstream and to the sliding of snow.

These interventions are not always supported by public funding (contributions); sometimes they are supported by private or corporate donations and are often activities carried out with the organization's own funds. The Magnificent Community believes it is important to focus its efforts on securing the area, to ensure the safety of forest users.

What will the woods of tomorrow look like?

In the nurseries of the Magnificent Community of Fiemme, not only seedlings are grown. The future is mainly cultivated in Masi and Solaiolo. Those seeds that sprout and grow represent, in fact, the forests of tomorrow, those that will be admired by future generations. As a famous Native American proverb says, we don't inherit the land from our ancestors, but we borrow it from our children. Just what the Magnificent Community of Fiemme has been putting into practice for almost a thousand years.

The MCF garden centers in Solaiolo and Masi supply enough seedlings each year to reforest approximately 40 hectares of land. All the seeds used for plant production come from the Community forests and are certified.

The species cultivated are spruce, larch and Swiss pine.

It takes four years to produce a spruce seedling.

On average, 2,000 seedlings are required to reforest one hectare of land.

Natural regeneration is the main component for forest recovery. It is ideal for creating strong, resilient forests that are better adapted to climate change. Artificial reforestation is carried out mainly in areas exposed to hydrogeological risks (landslides, avalanches), in areas that have greater difficulty in renewing themselves and are more extensive. Since 2019, an average of 40 hectares per year have been artificially reforested, imitating the dynamics of nature.

Translated with DeepL.com (free version)

How will the tomorrow's forests be?

Tomorrow's forests will be very different from the ones we were used to. They will be formed by a greater number of species and, precisely for this reason, more resistant to epidemics and extreme weather events. The landscape, as a result, will also change: instead of the vast expanses of red fir More varied and complex forests will emerge. These new ecosystems will guarantee richer biodiversity, offering refuge to wildlife and new economic opportunities. Therefore, the forest of the future will be more dynamic, functional, and capable of adapting to ongoing climate change.

The economic consequences of the Vaia storm and the bark beetle epidemic will be felt for a long time, as in just a few years the timber that

would normally be cut in decades has been extracted.

The Fiemme forests will regrow and become productive again, but time is needed. In the meantime, the forest will continue to offer fundamental benefits, the so-called ecosystem services: biodiversity conservation, carbon storage and removal, water regulation, soil protection and recreational services.



What future for the forests of Fiemme?

The MCF informs and engages Neighbours by sharing insights on the topic of disasters and the future of the forest.

The Vaia storm at the end of October 2018 and the resulting bark beetle epidemic have severely affected the landscape of the MCF area. The forest is wounded, fragile and exposed, but it is not dead. It will take decades, but the forests will return to being dense and beautiful, even if different from those of the past: they will be more varied, more resistant, more suited to coping with the climate changes currently underway. It takes time. The time of nature, however, which rarely corresponds to anthropic time, that of everything and immediately.

So, all we can do is wait? Or is it possible to help the forests recover more quickly?



Did Vaia and bark beetle leave different consequences on the forest?

Both events have heavily affected the forests of the Magnificent Community of Fiemme, but influencing in a different way the subsequent dynamics of rebirth. The forests affected by Storm Vaia have a faster natural renewal. The crashes, uprooting the roots of the trees, have brought to the surface - in a kind of natural ploughing - a soil rich in minerals in which the seed is better suited. In addition, an orographic discontinuity has been created. The trees affected by the bark beetle are cut down, keeping the stump in place. Therefore, the different leveling of the soil that favors spontaneous regrowth is not created. The presence of stumps however brings advantages: for example, it protects the seedlings from slipping snow, which, together with the presence of ungulates, is one of the major obstacles to the planting and growth new trees.

Reforestation: can man and nature collaborate?

Certainly, but taking into account some important aspects. First of all, it should be noted that providing for the artificial reforestation of all the areas affected by Storm Vaia and the locust epidemic would be impossible, both from an economic point of view, and in terms of human resources and available plants. When the forest is spontaneously renewed, it is also more varied and resistant.

Will the bark beetle mark the end of Fiemme's forests?

Not at all. The bark beetle is doing significant damage, the landscape will be affected for decades, but the very existence of the forest is not in danger. Indeed, for the forest this is an opportunity: soils will be more fertile, biodiversity will increase, trees will grow stronger and able to deal with ongoing climate change. Obviously, the forests of the coming decades will be very different from those preceding Storm Vaia, but no less beautiful for this reason. It will take time and patience: to have a mature forest we will have to wait 80 years, but in 20/30 years you will be able to admire young and varied trees.



We are not facing a natural catastrophe, then?

No, this is not a natural catastrophe, it's always an economic catastrophe. The forest will return stronger, more vigorous and beautiful than before; the forest owners, such as the Magnificent Fiemme Community, will have to remodel their activities. If, before Vaia, the entity cut about 50,000 m³ of timber per year, once the emergency is over, the amount available will be significantly lower. The diameter and quality of the wood will also change. This necessarily involves reflections on the financial future of the institution.

Isn't it better to let the forest renew itself in a completely natural way?

From a purely conceptual point of view, it could be done. The forest does not need human intervention to grow and develop, but in the face of the extension of the land affected by Vaia and the bark beetle, it is necessary to support natural renewal in those areas at higher altitudes and with a high slope - and there are many - where spontaneous reforestation times would be too long, consequently hydrogeological risks that in some areas may endanger homes or roads. For this reason, it is necessary to define priorities, intervening where natural renewal is slower (e.g. for particular exposure conditions) and where the forest played a particular role, especially for the hydrogeological protection of the slopes. Even when it is decided to proceed with artificial reforestation it is important to imitate as much as possible what nature would do spontaneously,

Why are we not proceeding with reforestation hand in hand with the cutting of barricaded plants to accelerate the process of forest renewal?

Providing artificial reforestation on all areas affected by Storm Vaia and the bark beetle epidemic would be impossible, both from a labor point of view and regarding the availability of seedlings. Just think that the Solaiolo nursery, owned by the Magnificent Community of Fiemme, produces 50,000 seedlings annually: to cover one hectare of forest, 2,000 are needed and the hectares owned by the Magnificent Community affected by the epidemic are already 2,500. Reforestation is carried out by imitating natural dynamics, favouring the arrangement, in favourable situations, of small groups. Each seedling must be cared for and followed for at least a couple of years before it can be left to grow naturally. The entity has agreements in place with the Provinces of Trento and Bolzano for the supply of seedlings, but even with these precious aids it is not possible to cover all the areas that are currently deforested. For this reason, priority is being given to areas where natural reforestation is slower, i.e. in wide clearings, in high-altitude areas and in those where the hydrogeological risk is greater. In other areas, natural renewal is preferred, which will guarantee a stronger, more resilient and adaptable forest to climate change... and at no cost!

If the income from timber is going to be greatly reduced, how will the MCF be able to finance itself?

Given the damage caused by the Vaia storm and the bark tree, the entity will have less and less income from the sale of timber: in a few years the period that was generally cut in over 20/25 years has been consumed, therefore the Magnificent Community must be able to enhance the other benefits that the forest makes available for free, the so-called "ecosystem services": biodiversity conservation, carbon storage and sequestration, water regulation services, soil conservation and recreational services. In 2020, the Magnificent Community of Fiemme obtained the FSC® certification for ecosystem services that guarantees the quality of its forest management, a sector in which more and more companies choose to invest. The correct enhancement of ecosystem services could open up numerous new avenues, which are economically advantageous and environmentally sustainable.

What will be the future of the wood supply chain?

There will be inevitable and heavy consequences on the entire wood supply chain. In the future, the cutting activity will be reduced and forestry companies will be called upon to reconvert, moving from cutting and logging to care and restoration activities or operations related to the use of biomass. Sawmills will also have to deal with a reduced and different availability of raw material. The Magnificent Community of Fiemme is already reflecting on how to enhance wood professionals, in order to accompany the transition towards new working methods.





The text is a translation of an organised anthology of in-depth articles on topics relevant to the Magnificent Community of Fiemme, as published over the last two years in the magazine and in informational documents sent to the families of members throughout the Community and to anyone who requests them.

For authors and references, see <https://www.mcfiemme.eu/pubblicazioni/>