



A modern forest-dependent the Magnifica Comunità di Fiemme in Italy

R. Morandini

Riccardo Morandini was formerly Director (1973-1995) of the Istituto Sperimentale per la Selvicoltura, Arezzo, Italy. A native of the Val di Fiemme, Professor Morandini has been associated with FAO since 1956.

The Magnifica Comunità di Fiemme, located in the Italian Alps, is a forest-dependent community that has managed forest heritage as a common property resource for nearly 1000 years.

Community forestry has a long tradition in Italy, going back to the beginning of this millennium. Although social and economic evolution and progress have resulted in modifications in traditional collective land ownership and management, several examples of such cooperation are still present and active, especially in the central Italian Alps. The *Magnifica Comunità di Fiemme* is an example of effective and modern management of common land for the benefit of a forest-dependent community.

The Val di Fiemme is a lateral valley in the catchment area of the River Adige which crosses the Alps. Although some signs have been found of a Roman presence in Fiemme at the beginning of the first century BC, difficult access and limited economic resources kept the people of Fiemme away from frequent human contact and from invaders crossing the Adige valley. The inhabitants were consequently able to maintain a considerable degree of independence and autonomy. This autonomy was officially acknowledged by the Bishop-Prince of Trento in a document written in the year 1111, called the *Patti Ghebardini*, and was repeatedly recognized in the following centuries. The so-called *Privilegio Enriciano* of 1314 gave the *Homines Vallis Flemarum* (the inhabitants of Fiemme) direct common ownership of their lands, forests and pastures, as well as all the related rights of land use, including wood harvesting, use of pasture, hunting and fishing. The Bishop-Prince also confirmed that "all the land, forest and pastures had been common property of the people of Fiemme for more than two hundred years".

Written records indicate that in 1270 the assembly of the *Homines Vallis Flemarum* declared that the forests of the valley were reserved for the needs of the church, for building and for the general needs of the valley population. This is not only an affirmation of the rights of ownership, but at the same time a clear indication of the importance of the forest for the valley inhabitants at that time. Indeed, the forest constituted a basic element in the local economy, providing timber for house building, maintenance and repair and fuelwood that was needed in vast quantities because of the cold climate. It also provided a fundamental source of labour and income for the poor mountain dwellers.

[Winter in the Val di Fiemme, Italy](#)

The people were well aware of the necessity to conserve, to protect and to use the forest patrimony with great care to exploit it without damaging it in order that it might be passed on to future generations.

Given the importance of forests, both as a source of income and as a fundamental protection in the difficult mountain environment, the population of Fiemme strongly defended their ownership rights and their free use of forests against external interference. The ownership and use rights were bestowed only on the *vicini*, the permanent inhabitants of the valley; no outsider (significantly, the word for outsider in Italian means foreigner) was allowed to join the *Comunità*, not even through marriage. Rights were inherited only by males, and were assigned to the head of a family.

The direct use rights of the *vicini* were wood harvesting for house construction or repair: wood harvesting for sale (in accordance with special regulations and under control); pasture for their animals; hay harvesting; excavation of peat, sand and gravel; hunting; and fishing.

Structure of the comunità

The *Comunità* was governed on a direct democratic basis. The *vicini* of each village elected a *regolano* who represented his village in the valley governing council within which a *scario* (president) was chosen. General assemblies of the *vicini*, called *comuni* general), gathered for the most important decisions.

The main criminal cases were judged by a delegate of the Bishop-Prince, but civil disputes and all administrative affairs were managed by the *scario* and the *regolani* according to written regulations (the Quadernollo of 1480 and, later, the Libro delle Consuetudini of 1613). It is noteworthy that no family had any privilege, special right or feudal power.

This relative independence of the *Comunità* lasted until the beginning of the nineteenth century, when the whole region came under first Bavarian and then Austrian rule. In 1807, the old statutes were abolished and a central administrative system was imposed. The valley villages were reorganized as separate municipalities under the new rules and several attempts were made to divide up the common heritage. But, despite repeated requests to the Austrian authorities (up to 1918) and, later, to the Italian authorities as well as to courts of justice, all pleas of this type were rejected. Recent decisions by the Italian High Court, as well as the Special Law for Mountain Regions (1952), have confirmed the unity and the indivisibility of the heritage of the *Comunità di Fiemme*, and directed that it remain under the common, collective ownership of the *vicini*.

Statutes which were renewed in 1993 declare that "... the community of the *vicini* of Fiemme, called *Magnifica Comunità di Fiemme*, is the universality of the *vicini* to whom, in accordance with the original rights, the collective patrimony belongs, mainly consisting of silvopastoral land, on which the *vicini* exercise their rights according to consolidated customs...." "*Vicini* are physical persons having been born in a family of *vicini* or permanently living in the valley for at least 20 years". At present, 18 800 *vicini* are recognized, out of a total of about 20 000 residents in the valley.

The forest resource of the Val di Fiemme

The Val di Fiemme has a rich forest cover; more than half the total surface supports extensive forest stands. Spruce is dominant and larch, fir and mountain pines grow at different altitudinal belts; the floor of the valley lies at 900 to 1 000 m, the tree-line at about 2 300 m. Of a total surface of 45 000 ha, approximately 24 500 ha are forests and 2 700 ha are rocky, mountainous or nonproductive areas, while the remainder is pasture and alpine meadows.

The climate is typically continental: rainfall averages 1 000 to 1 200 mm, one-third falling as snow.

[A mature spruce stand](#)

[Extensive spruce stands cover the sheltered side of the valley](#)

Under these favourable conditions spruce (*Picea abies* Karst) develops extensive, even-aged, high-quality stands. At the higher elevations columnar tree forms grow, which provide the resonance wood required for musical instruments.

The forests of the valley produce about 70 000 m³ of timber annually, representing a dynamic trade and, even more important, an active wood-based industry. Sawntwood, windows, furniture, toys, musical instruments together with crates and pallets are manufactured in various small industries and workshops. Wood harvesting and transport, woodworking and the wood trade directly involve a large part of the local population. In the Val di Fiemme, fewer than 2 000 ha of forest are under individual private ownership. Public entities such as the province and various municipalities own some land, but by far the largest single owner is the *Magnifica Comunità di Fiemme* - owner of a forest patrimony that, because of its extent and diversity, is the most important in the Italian Alps. It consists of 11 400 ha of forest. 2 300 ha of pastureland. 4 700 ha of alpine meadows and 1 200 ha of non-productive land, making a total of 19 600 ha.

These forests are extremely dense, with a total standing volume of 3.6 million m³. By comparison with the rest of Italy where the mean standing volume of high forests is about 160 m³ per hectare, in the forests of the *Comunità* the figure reaches 320 m³ and even 420 m³ per hectare in production forests. Many trees exceed a height of 45 m and a few even attain 50 m.

Rights and obligations of the vicini

From earliest times, care has been taken over the rational use of the forest. Strict regulations have controlled use by the *vicini* in order to ensure equality of rights, avoid abuses and prevent any damage to the forest. As early as 1529, the traditional oral regulations were confirmed in written legislation. In 1592, a detailed revision of these *Ordini dei boschi* was approved, containing 42 paragraphs covering wood harvesting, trade and forest management in detail. Some of the most important of these rules state that:

- several forests were to be reserved strictly for protection purposes - only limited fuelwood collection and wood harvesting for house repair were to be permitted;
- each *vicino* could harvest and sell every year, upon authorization, ten trees, to be processed and sold only in prescribed dimensions. If they were sold, they had to bear the brand of the *Comunità* (a practice that still continues today);
- trees were to be felled no later in the growing season than June; branches and waste were to be removed from the forest and further processing was permitted only outside the forest;
- special attention was to be given to avoiding the risk of fire;
- the *scario* was to be held personally responsible for the protection of the forest and for the implementation of the regulations through the *saltari* (forest guards).

These rules were revised from time to time, until 1738, when the *Ordini nuo-vissimi dei boschi* were promulgated.

Industry and trade

The timber trade has always been important for the *Comunità*. Most of the wood was carried or floated along the River Avisio to the Adige valley, where the *Comunità* kept a timber yard for its own wood as well as for the convenience of the *vicini*. An additional volume of wood crossed the mountain passes to the shipyards of Venice; several historical documents refer to the wood trade with the Republic of Venice, which addressed the *Comunità* as "Magnificent Sister", thus recognizing its independence.

During the eighteenth century, some of the forests were rented to foreign merchants who had contracts of up to 20 years. However, mismanagement and abuse led the *Comunità* resume the direct management of the forests and the timber trade.

In 1878, a forest technical service was established in the *Comunità*, headed by a professional forester who, in 1980, drafted the first summary management plan. Since 1896, all wood harvesting has been based on detailed management plans, which are regularly revised and updated.

The First World War brought the battlefield to the border of the valley. Many trees were cut or damaged along the front; extensive clear-cuts were made to supply the army with timber and fuelwood; and several new roads were opened, improving access to the forest at a higher altitude.

After the war, a dynamic wood trade was established with other Italian regions. Rational, intensive utilization of the forest resources was initiated, especially of the important wood reserves accumulated over the centuries in areas with difficult access. The *Comunità*, established four modern sawmills capable of producing the high-quality sawnwood that was then in great demand. These were gradually reorganized and amalgamated during the 1950s as a single sawmill which was run by the *Azienda segazione legnami*. Over the last ten years, the sawmill has been totally renovated and restructured, and modern equipment has been installed, with a high degree of automation, for a financial investment of more than US\$6 million.

The roundwood yard has a capacity of 8 000 to 9 000 m³. A computer-controlled production chain, equipped with metal detector (primarily to check for bullets embedded in the trees during the First World War), sizes and selects the quality of the woodblocks, which are then debarked. Two computer-controlled bandsaws operate with a daily working capacity of 200 to 250 m³. Even though a minor part of the wood harvested in the forest of the *Comunità* is sold as roundwood, as much as 35 000 m³ has been processed in a single year.

A careful marketing policy ensures that the high quality of the local spruce wood is properly safeguarded; the best boards are graded in four categories:

- PLUS, with no knots or any minor defect (1 percent)
- DOC, with few small knots and very minor defects (6 percent)
- FALEGNAMERIA, for carpentry (7 percent)
- FIEMME (36 percent)

The remaining 50 percent goes to the general market or for further processing. In the past few years an increasing amount of the lesser-quality sawnwood has been processed into finger-jointed, profile-chipped strips, plywood, solid wood panels and other intermediate products that are in high demand for doors and window frames, etc. The production of laminboard is also planned. PLUS and DOC are registered trade marks and, traditionally, as specified in the *Ordini dei boschi* in 1558, all wood bears the brand of the *Comunità*.

The *Azienda segazione legnami* is managed by a qualified professional. It employs 35 qualified workers, but this number is expected to increase as the secondary processing of sawnwood which has already reached 10 000 m³ of improved wood gradually develops. The global balance sheet of the sawmill enterprise is over US\$ 10 million; salaries account for 44 percent of this amount and amortization of investments for 21 percent.

Evolution of forest management

In the 1930s, the management of the *Comunità* forests underwent important changes; from successive or selective systems, silvicultural methods moved progressively towards clear-cutting stands of different sizes and later to strip-clearing and combined forms of harvesting that favour regeneration. After the Second World War the road network was much improved and it now covers some 350 km.

The forest road network is an integral part of the management process

During the last ten years, more favourable conditions have led to several changes in forest management philosophy and practice. An overly cautious management policy had led to extensive forest; areas becoming over-mature and to the accumulation of excessive standing volumes which depressed yields. An expert group was hired by the *Comunità* to investigate the problem and suggest remedies. A new comprehensive plan was drafted in 1987 giving clear directives for the future: management had to be more dynamic and silvicultural management more intensive, in order to ensure the harmonious development of the forest and to improve its stability; modern harvesting and transport techniques were needed, including new equipment and improved roads: and the valuable patrimony of the forests required more intensive and continuous care. These suggestions were accepted and are now being implemented by the *Azienda Agricola Forestale* which is responsible for the technical management of the whole patrimony - forests, pastures and meadows. The *Azienda* operates according to management plans which have been established for each of the nine forest districts and are revised every ten years.

These plans are now being updated R. bring them in line with the guiding principles in the General Plan adopted in 1987.

The Technical Forest Office is run by two professional foresters and one surveyor, assisted by nine forest rangers who supervise the direct control of the forests and the ongoing works and operations.

Under the revised management plans, the present overstocking situation is being remedied and the structure of the forests modified, keeping the general even-aged character, but dividing the forests into a mosaic of smaller stands. More dynamic and flexible silvicultural methods are being applied, in order to favour natural regeneration which, when necessary, will be supplemented by planting. Planting stock has always been grown from selected seed collected in local stands so that the precious genetic patrimony is safeguarded and biological diversity conserved.

Special attention is being given to the spacing and thinning of younger stands, which now cover about 1 200 ha, in order to encourage growth of the best trees, increase the stability of the stands and reduce wind and snow damage which, because of the high density, has been quite frequent in recent years.

The total annual increase in forest volume is estimated at 55 000 m³. The present annual allowed cut, including thinnings, is 45 000 m³, but this is likely to be increased at least to 50 000 m³ in order to reduce the overstock gradually. The rotation cycle varies from 100 to 160 years according to the elevation.

About 30 permanent and 100 seasonal workers are employed by the *Comunità* for different forest-related operations such as thinning, nursery maintenance, planting, management plan surveys, road maintenance and improvement.

A full-time guard controls fishing, which is reserved for the *vicini*. In the summer months, four additional guards are hired to control mushroom gathering, which is regulated by public and local statutes in order to avoid overharvesting by tourists.

Management of pastures and meadows

In past centuries, agropastoral activity was one of the economic and social pillars of the Val di Fiemme. Each family had one or two cows for milk and perhaps a few sheep or goats, and every family had rights and responsibilities with regard to this sector. In recent years, however, this activity has become progressively less important in the *Comunità* as the economic viability of small-scale animal husbandry has been dramatically reduced. Currently, there are some 580 milk cows owned by members of the *Comunità*, 900 beef cows and 200 goats and about 500 sheep are grazed on common land.

Log mensuration in the 1930s

Much of the physical infrastructure associated with pastoral activity - some 180 shelters once used by shepherds, hunters, etc. - has fallen into disuse and disrepair. In order to recover the economic potential of the areas once used for pastoral activity, a systematic programme to improve the extensive mountain meadows and the related infrastructures (*malghe*) is being gradually implemented, in order to promote nature tourism and, to a more limited extent, the reestablishment of specialized local animal husbandry, such as the production of high value local cheeses. The total cost of management and maintenance of the silvopastoral patrimony in 1994 was US\$1.1 million, 64 percent of which paid the salaries of employees and workers of different categories and levels.

Additional benefits to the community

In the past, the amount of revenues and services derived from the use of the common patrimony that accrued to the *vicini* was mainly linked to the *diritto di legnatico* the right to harvest wood. This right, which used to be exercised directly by each single *vicino* was gradually limited to the harvesting of fuelwood over the past few decades, this right to harvest fuelwood has been replaced by the distribution to each of the *vicini* of a portion of the annual income of the *Comunità*. The total amount distributed in 1994 was just over US\$1 million.

Of greater significance, however, for the general welfare of the *vicini* are the indirect benefits and services provided by the *Comunità*. In fact, it is the council of the *Comunità* that decides what portion of the income of the *Comunità* should be distributed as shares to individual *vicini* and what portion should be used for the general welfare. Towards the middle of the last century (1840-50), the main access road from the Adige valley to Fiemme was built entirely at the *Comunità*'s expense, thus ensuring a safe connection to external markets. In the early 1950s, a modern hospital was built for the whole valley, and the *Comunità* had a considerable financial share in the construction of a large electric power plant. Rest homes for old people were built or renovated and, in accordance with the old traditions and statutory provisions, special aid is granted to poor people and to the public at large who have been affected by calamities and accidents. Financial support is assured for education, through fellowships and the supply of special equipment to schools. Support is also given to several local associations, including the fire service, the music band, folklore groups, local sports teams, and so on.

The *Comunità*'s important role as an employer should also be mentioned; apart from employees and workers who are directly dependent on or linked to the *Comunità* the local

Chamber of Commerce lists over 140 enterprises employing about 380 workers that are active in Fiemme in the woodworking sector, including quite advanced secondary processing of furniture, musical instruments, carved objects, etc. Together with tourism (also based on natural resources), forestry and forest industries continue to be fundamental elements in the local economy.

History, tradition, forestry and economy all have their place in the *Magnifica Comunità di Fiemme* which, for centuries, has carefully managed its forests for the welfare of the *vicini* and has preserved and improved its common heritage for future generations.

[The modern sawmill at Ziano di Fiemme, Italy](#)

