

Small-scale forestry in the Italian Alps: From mass market to territorial marketing

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ABSTRACT

The paper analyses the industrial roundwood production trends in the Italian Alps in the last 50 years, pointing out the decreasing economic performance of local timber producers and the loss of competitiveness with respect to foreign markets. In spite of decision-makers and public opinion's general believes, timber production in the Italian mountainous areas is not a valuable alternative to the declining role of agriculture. In this context, an increasing economic role in maintaining an active management of forest resources is being played by Non Wood Forest Products and Services (NWFP&S) as niche products. Two development paths both referring to the NWFP&S markets development are presented and factors playing a key role in successful NWFP&S marketing are briefly discussed. Evidences are provided to show that income deriving from NWFPs and fuelwood selling is not only provided annually and in relative constant amount, but also that the level of profitability in this business sector is much higher than in timber production and marketing.

Key words: small-scale forestry, Italy, Alpine regions, NWFPs, territorial marketing

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INTRODUCTION

In Italy, in the Southern part of the Alps, a substantial decreasing level of timber production activity can be observed in the last two decades. This decline can be traced back to three main reasons: (a) fragmentation of the local timber supply due to the landownership pattern, the lack of horizontal integration and the general small-scale level both of harvesting and of sawmilling activities; (b) market globalisation with the shutting down of many small- and medium-size sawmills or their internationalisation, mainly to Eastern Europe; (c) the remarkable decrease of profitability in forest management domestic activities oriented to the production of industrial roundwood.

This third aspect has been investigated in detail by a recent study (Ciotti and Pettenella, 2006) that is summarised in the first part of the paper. The second part analyses the structural changes in forest management deriving from the breakdown of the domestic timber market. Two development paths, both referring to Non-Wood Forest Products and Services (NWFP&S) markets development, are presented. Finally, in the conclusions the factors playing a key role in successful NWFP&S marketing are briefly discussed.

THE DECLINE OF PROFITABILITY OF INDUSTRIAL ROUNDWOOD PRODUCTION

In the Southern part of the Alps, forests are traditionally managed with the purpose of high quality sawnlogs production. The main species are

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spruce, fir, beech and larch. Domestic market has been traditionally very open and exposed to the strong competition of Austrian export of sawnwood (Italy is the most important export market for Austria in this sector). Other exporters, such as Germany, Russia, Poland, Check Republic, Ukraine, etc. have been increasing their market penetration in Italy in recent years.

An analysis on domestic timber prices and production costs (referring to the period 1955-2005) has been carried out to understand the weakening position of the Italian producers. The area of Comelico, in the Northern part of Veneto Region, close to the Austrian border-line, was selected. There, structural factors such as ownership structure, forest management practices, investments in forest roads and other infrastructures' construction have not changed significantly in the last decades. In Comelico, well stocked forests, mainly spruce and larch, are traditionally intensively managed by ancient local communities ("Regole"). A network of 3-5 small sawmills (3-5,000 m³ of processed roundwood/year/sawmill) operates in the area.

The outcomes of 1,330 timber public auctions have been considered; those related to sanitary cuttings or timber damaged by storms have been excluded. As can be observed in Figure 1, in the 51-years-period considered by the survey, the weighted average real prices of one of the main specie (spruce) decreased from 276 to 52 €/m³, with a reduction of about 82%.

These results are coherent with the timber prices trends analysed in the nearby province of Trentino (Pettenella and Rodighiero, 1998) and with the outcomes of a more detailed, long term analysis carried out for a large single community forest in Val di Fiemme (Pettenella and Zorzi, 2000).

Also the average annual cost of labour, the most relevant variable in influencing profitability in forest management, has been taken into consideration in Comelico case-study, making reference to forest workers and to employees in the wood-working industry. The two variables (wood prices and cost of labour) have been used for defining an indicator that can be considered a good proxi of profitability: the number of working hours that can be paid by selling 1 m³ of wood.

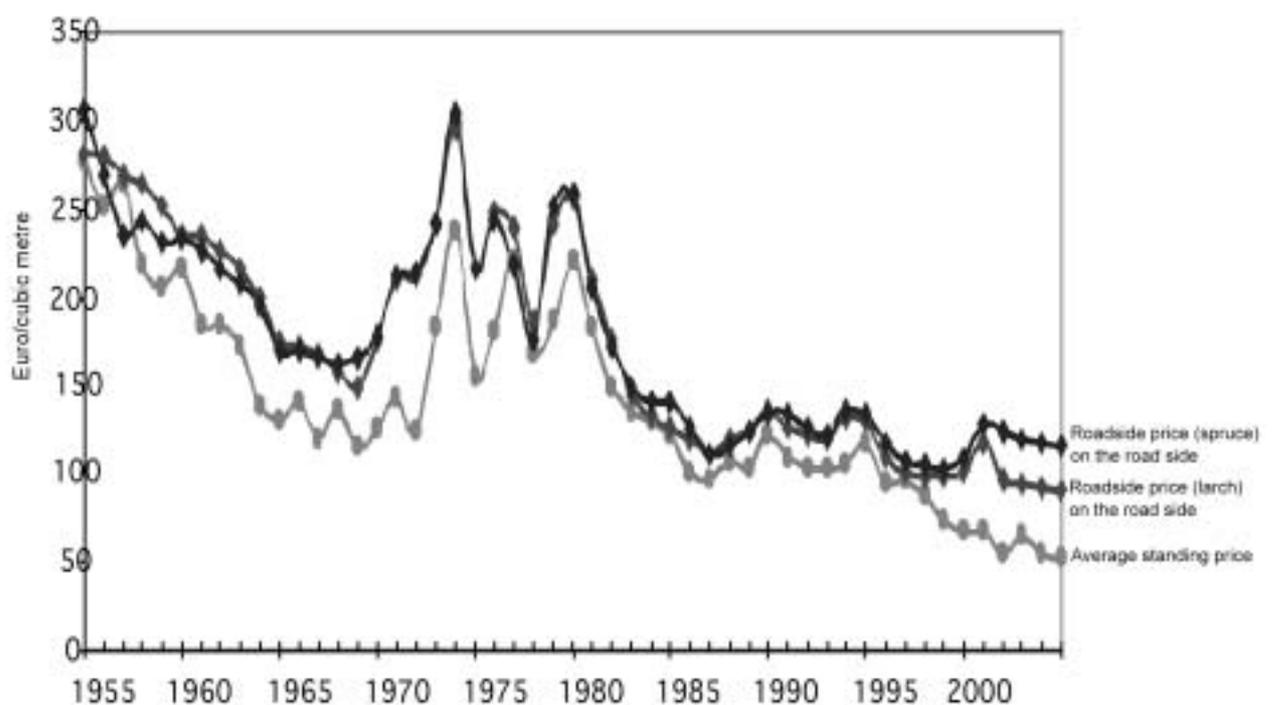


Figure 1 - Average real prices of conifer industrial roundwood in the Southern Alpine Region (1955-2005)
Source: Ciotti & Pettenella (2005)

As it can be seen from Figure 2, with 1 m³ of wood sold in 1955, the cost of 141 working hours of a forest worker was covered. In 2005 only 5.3 working hours are covered, with an indicator's decrease of 96%. If the price of wood is referred to the cost of industrial labour, the decrease is of 94% (which means from 76.4 to 3.82 working hours), similarly to what happened for the wood-working SMEs (from 72.3 to 4.1 hours).

Profitability is also influenced by other factors, namely labour productivity, capital costs, interest rates, etc. In the harvesting operations carried out in Comelico only forest workers productivity has changed in the period 1955-2005, due to the introduction of cable systems. However this innovation has increased the productivity of forest workers of no more than 20%, with no remarkable effects in the general trend presented in Figure 2.

The market conditions for industrial wood of the main broadleaved species of the region (beech) are even worse, as explained in Box 1. On the other side, Italy is experimenting a clear improvement of market conditions for fuelwood with an increasing demand mainly of broadleaves and small diameter logs. This trend is in contrast with the main management policy carried out in Southern Alpine forests – as well as in other Italian regions - in the last 50 years: a gradual conversion of broadleaves

coppices to mixed highforests, with increased rotation periods (i.e. for spruce even-aged highforest: from 110-120 years to 230-140 years). These more close-to-nature silvicultural systems are now well far to be economically sustainable.

Along with this evolving structural change of the timber market for mountain forests, there has been a shift of the focus in wood production from

Box 1 – Timber market for beech.

The Cansiglio forest is located on the border between Friuli Venezia Giulia and Veneto regions. It is a 6,000 ha uneven-aged mixed forest with beech as predominant species (see <http://www.tragol.it/Cansei/cansei.htm>). The forest has a long, well documented history getting back at the time of the Republic of Venice when it was managed to produce timber for the oars used by the arsenal. Recently, the main market for high quality beech logs was a local sawmill producing the Magnum ice-cream sticks, a good example of a high value chain. Few years ago the sawmill, as many other plants in the area, was shut down and production site moved to Romania. As a consequence, no facilities for kiln drying are longer available in the region and, notwithstanding a huge demand for beech dried sawnwood by the local furniture industries, wood in the Cansiglio forest is sold at a flat price of 30 €/m³ (standing tree price) and wood assortments are not differentiated (see Photo 1) having fuelwood and industrial wood the same price.

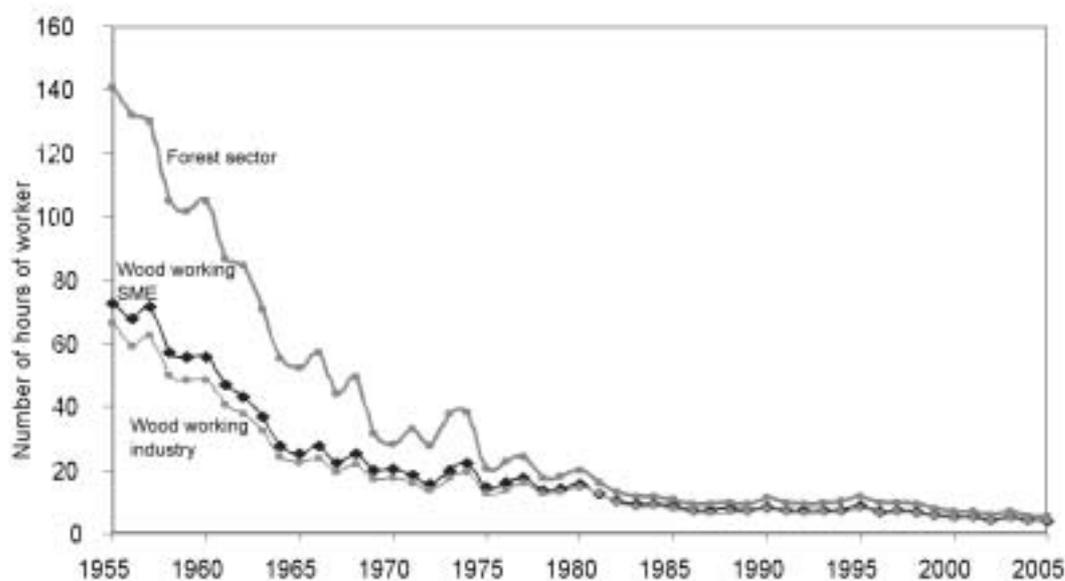


Figure 2 - Number of working hours in forest that can be covered by selling 1 m³ of wood (standing tree value).



Photo 1 – Beech industrial wood and fuel wood sold at undifferentiated price in the Cansiglio forest

mountains to plains, and from semi-natural forests to plantations. Already 65% of the domestic supply of industrial wood is coming from 80,000 ha of poplar plantations growing on the high productive farmland of the Po valley, while the remaining 10 M ha of mountain semi-natural forests are producing only 35% of the internal supply.

In order to maintain all the public, non marketable functions of Alpine forests, an increasing role is played by traditional and new NWFP&S marketing. There is a clear evidence that, also in the most productive forest areas traditionally managed for wood production, the sales of some recreational services (e.g. mushrooms collection permits) represent a much more relevant source of income for the forest managers than timber sales. It is therefore interesting to analyse why and how what used to be considered “secondary products” is often nowadays, and not only in the Alps but also in other Italian forested areas (Merlo and Croitoru, 2005), the primary source of revenue for forest managers and owners.

NWFP&S MARKETING DEVELOPMENT PATHS

For the NWFP&S suppliers in the Southern part of the Alps, it is almost impossible to operate in mass markets: Christmas trees from Denmark, foliage from Ireland, aromatic herbs from Albania, Finnish frozen or Croatian and Bosnian fresh mushrooms are all examples of products more competitive than those coming from the domestic Italian market.

Labor cost, scale economies and supply critical mass are competitive factors of foreign suppliers in the mass markets (Collier et al., 2004).

In such a situation, two strategies are possible for the Italian producers (Figure 3):

1. to transform mass products or services into specialized NWFP&S, niche or “cottage” products and services like food or drink specialities, normally with very high added values;
2. to transform mass or niche products or services into complementary products and services.

1. Specialized products and services: they are typically products and services well differentiated, often available in relatively limited quantities (e.g. specialities like truffles).

Segmentation and correct customer information are important instruments for the development of these NWFP&S markets, since they are typically targeted to very narrow customer groups.

While mass markets include mainly traditional products and services, many specialized products are “new” products or rediscovered traditional products, which were already almost forgotten or out of commercial use for a long time (Mantau et al., 2001).

Quality assurance, standardisation and certification are important instruments for product differentiation and give the possibility of premium prices.

As for timber, NWFPs can be certified and labelled according with sustainable forest management and chain of custody standards and certification systems, such as the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC), as well as according with other sets of standards such as those defined by IFOAM for organic wild products or by the European Commission for organic crops cultivation (Reg. 2092/91), by UNCTAD BioTrade Initiative for collection, transformation and commercialisation of biological resources, or by FLO for fair trade. In Italy, a small scale activity for fuelwood production has been recently FSC certified, while the aromatic essence from *Pinus mugo* has been certified under the PEFC rules.

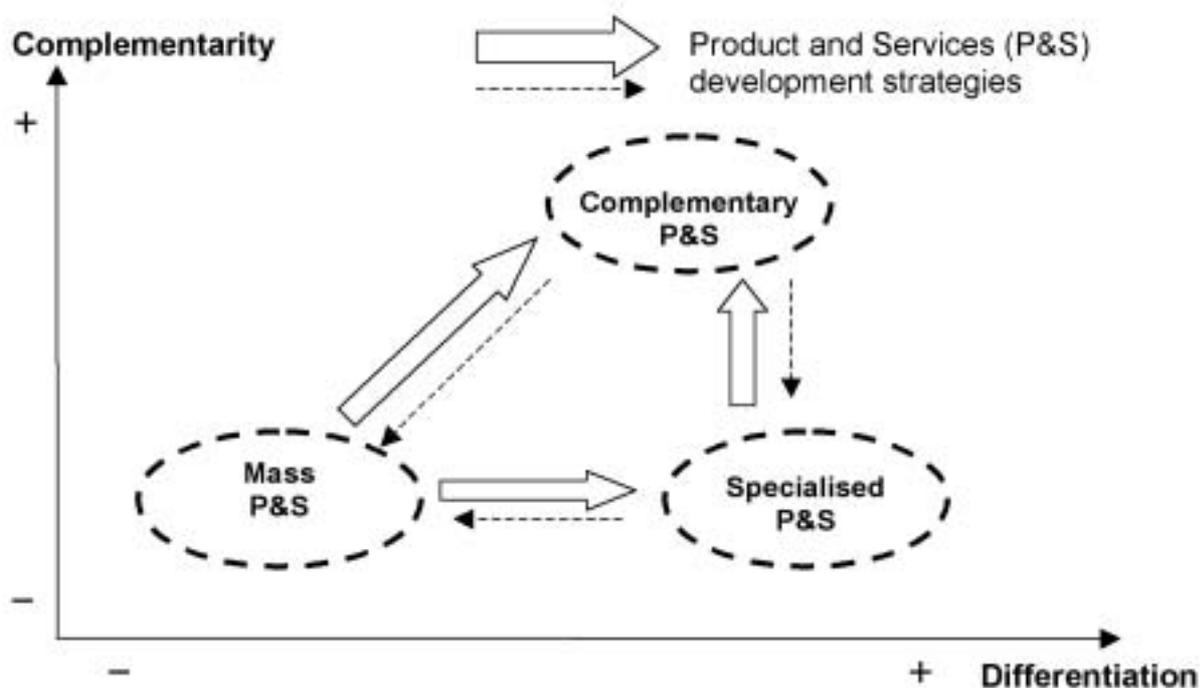


Figure 3 - NWFP&S marketing development strategies

For wild food products, which are more similar to agricultural products, quality and origin certification systems have been developed by the European Commission: Protected Designation of Origin, Protected Geographical Indication (PGI) and Traditional Speciality Guaranteed. A forest area producing mushrooms (*Boletus edulis*) has been certified as PGI, while some chestnut proveniences have been certified both under these schemes and as organic products according with the European Commission rules (Pettenella, 2001).

Certification systems have been developed also for some services (e.g. the Carbon certification standards for forest investments developed by SGS and DNV or the Sustainable Tourism Management standards developed by Rainforest Alliance). However, specialized non wood forest services remain a dilemma in this context, because it does not exist for them a proper identification mechanism. Imitation by competitors is a problem for many enterprises that are offering recreational and educational services. Often ideas are imitated, like forest adventure parks (www.junglerraiderpark.com), or topics of courses for environmental education.

2. Complementary products and services are those products that can be sold and used in strict association due to the synergies deriving from their conjoint marketing. Complementarity is connected to different linkages among products and services; in the markets there are diverse forms of links among products and enterprises. In NWFP&S marketing a fundamental link is the one among products and services that have a specific common territory. This is the field of interest of a new branch of marketing: the so-called “territorial marketing”. In the Southern part of the Alps, examples of homogeneous territory are the following:

- a valley, a watershed or a well-defined mountainous group (e.g. the Lanzo Valleys or the Ampezzo Dolomites);
- a National Park or other types of protected areas (e.g. the Gran Paradiso National Park);
- an area traditionally linked to a specific product or service (e.g. the Alba territory connected to white truffles);
- a forest in itself (e.g. the Cansiglio forest or the Tarvisio forest, respectively in Veneto and in Friuli regions).

The territory is the “common denominator” to create a consistent portfolio of products and services, to bundle marketing efforts for their coordinated promotion. Very common tools for linking various products and services are trails, roads or pathways (e.g. “Sentiero delle Dolomiti” – the Dolomiti trail; “Strada della castagna” – the chestnut road).

Analysing some cases studies of complementary products involving NWFP&S recently developed in Italy (Table 1) it is possible to define three main typologies of links connecting NWFP&S to other products and services within a same well defined territory (Figure 4):

- (a) the NWFP&S is a non-marketable service (e.g. concerts organised in forests, a cross-country skiing trail, an open air museum) with the aim to attract consumers that will enforce other economic activities or that will lead visitors to buy other local products; the costs for providing the non-marketable NWFP&S can be covered by public authorities or/and by the beneficiaries of associated goods sold in the territory;
- (b) the NWFP&S is a marketable good that takes advantage from being offered with synergies with other products and services of the same territory; advantages may derive from joint promotion and consequent higher volumes of sales, increased number of clients and profit level (e.g. mushrooms or berries picking permit sales);
- (c) the NWFP&S is a leading marketable good offered in a territory; other products and services from the same territory are complementing and supporting this leading good (e.g. a equipment rental service associated to a large adventure forest park).

One of the main advantage in creating a portfolio of coordinated products and services in a well-delimited territory is connected with promotion. As already mentioned, in Italy NWFP&S marketing is mainly involving SMEs with limited financial resources and competences in promotion techniques. For these small-scale enterprises it is normally very difficult to reach customers’ awareness while joint marketing creates synergies among different suppliers. Joint marketing is frequently a field of positive co-

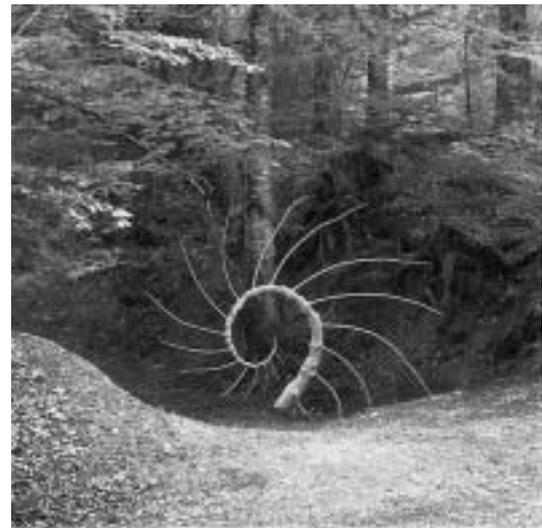


Photo 2 - Art in the forest: Arte Sella in Italy, open air museum (www.artesella.it)

operation between private operators and local public authorities. E-business and e-marketing have been very powerful instruments for reducing the marketing access difficulties for SMEs working in the sector. For example, a fresh truffle can be sold on line (www.albatartufi.com/) or a gift wrap of chestnut flour may be delivered in two days by plane to costumers all around Europe (www.esperya.com).

In some cases, it is even possible to use the already exiting customer bases for new or improved products and services or to use the same production and marketing chains for different kind of products. Sometimes, complementary services or products can help to diversify the nature of the main product, so that it can be targeted to new customer groups. Also by combining several complementary services it is possible to create totally innovative products.

Quite often, in territorial marketing strategies, NWFP&S are playing an interesting role as imago products. Even when they have a minor role in the portfolio, being the most environmentally-friendly products in the area, they are used as imago for presenting the whole territory. A good example is the “Days of the chestnuts” case in South Tyrol (Box 2).

Complementary products and services can be located on public or private lands. Sometimes the landowner and service provider can be the same

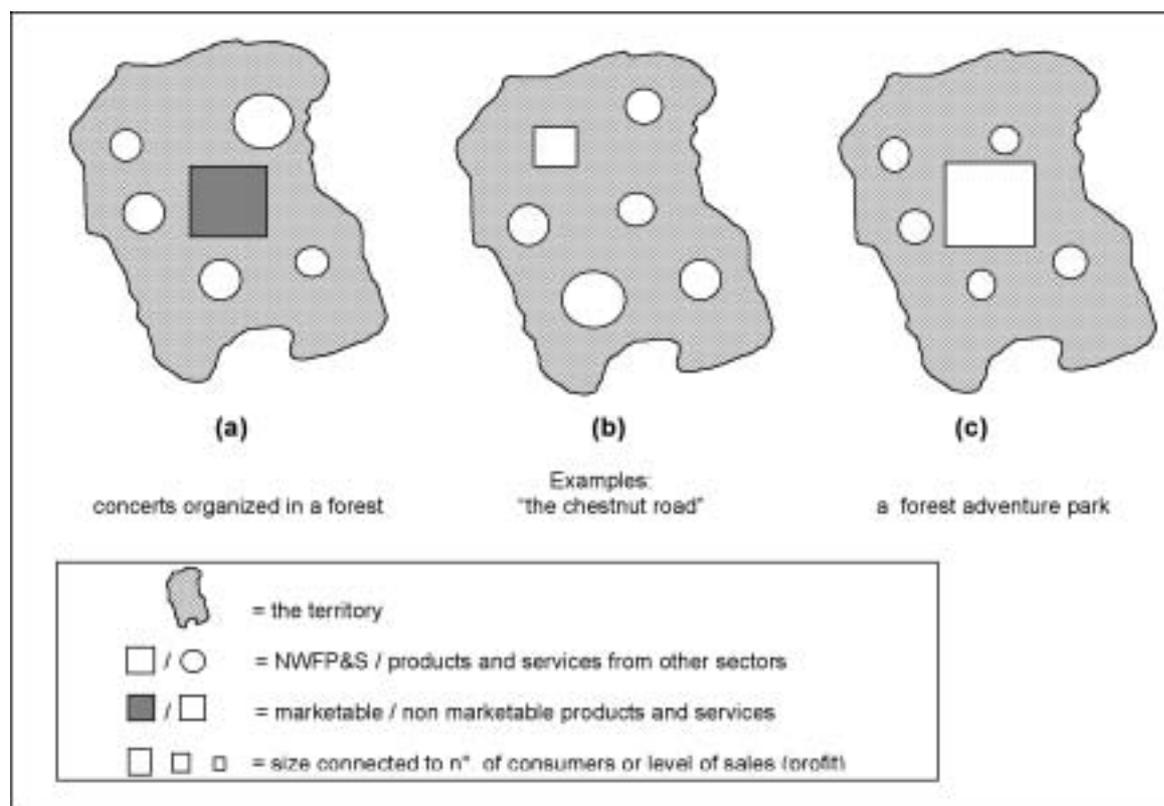


Figure 4 – Main typologies of links between NWFP&S and other products and services within the same territory

actor, but this is not always the case. Many tourism and recreational activities, for example, requires close and well- functioning co-operation between entrepreneurs and landowners. This highlights the role of management agreements, an important area of innovation in the forestry sector in Italy due both to the extensive process of forestland abandonment and to the lack of cooperative attitudes among the local economic actors.

Close and well functioning co-operation among different actors is essential for the success of any kind of complementary product or service. This is true especially in the case of small-scale forests landowners which operate in rural areas. In order to launch and maintain effectiveness co-operation, the role of networks e.g. associations and institutional actors is of fundamental importance. Without a good social capital, i.e. the attitude by the local actors to share their traditional knowledge as well as to coordinate their economic activities, any stable form of complementary NWFP&S marketing may hardly exist.

Box 2 – Days of chestnuts in South Tyrol
(<http://www.lana.net/>):

In the South Tyrol region chestnut maturity and the first wine of the year take place at the same time, in September and October, two months in which all the farm tourism facilities in mountain areas are underutilised. Every year different kind of chestnut fairs are celebrated. Tourists are attracted by Chestnut-trails and visits of farms to eat fresh roasted chestnuts, taste the new wine and other local specialities. Many old chestnut recipes are rediscovered and utilised during these days. Tourists can also learn everything about chestnuts from woodland to gastronomy on chestnut walks and different kinds of chestnut parties.

Figure 5 tries to summarise the main factors influencing the successful marketing of NWFP&S (Font and Tribe, 2000; Marshall et al., 2006). From the reviewed case-studies, product and service development and quality assurance seem to be the key-factors for marketing specialised NWFP&S, while the social capital, i.e. the capacity to cooperate among private and public actors, as well

Table 1 - Examples of complementarity involving NWFP&S

Product/service	Area	Flag product	Connecting idea	Network organization	Web link
(a) typology of links between NWFP&S and other P&S in a well-defined territory					
Route "Artenatura" (i.e. "nature and art") - temporary and permanent exposition of works of art mainly made with wood or plants and displayed along a path in the forest Sounds of the Dolomites - Festival of music, open-air concerts, in the Dolomite forests or in alpine huts	Vai di Sella (Trento province) Trentino Alto Adige region		Exposition of works of art in the forest Open-air concert	Arte Sella, international biennial exhibition of contemporary art Trentino joint-stock company	www.artesella.it www.isuonidelledolomiti.it
(b) typology of links between NWFP&S and other P&S in a well-defined territory					
Road of Borgotaro mushroom - "Gastronomic autumn" (special menus in the restaurants) - Mushroom – vintage car trophy - Tourist packets in collaboration with local SME association Honey road - exploratory boards about the area and the honey production activity - sale of typical products - thematic menus in the restaurants - Festival of honey	Borgotaro (Parma) Roeri area, mainly Cuneo, but also Aas province	Cep mushroom Honey	Road Road	Imbrant Mutual Aid Association AsProhiefs (Associazione Produttori Miele Piemonte) Association "Strada del miele del Roero"	www.stradadelmiele.it www.mielitalia.it/traspromiel/strada%20miele.htm
Road of Alba's White Truffle of Southern Piedmont - development (tourist, cultural, environmental, enogastronomic) of the area Exhibition-market of white truffle - guided tours in a truffle-ground and search demonstration - gastronomic stands also with other local products (oil, wine, delicatessen, ...)	Southern part of Piedmont region San Miniato hills, Municipality of Volterra, San Miniato and Pataia	Alba's White Truffle White Truffle	Road Week / Exhibition-market	Cuneo, Aas and Alessandria province sharing with Piedmont region Association of truffle-sellers of Cecina valley (Pisa province)	www.provincia.cuneo.it/turismo_1/embalobaltruffo_bianco.asp www.vollertruffo.com/appuntamenti/truffa.asp
Herbs and mushrooms festivals - guided tours in search of spontaneous herbs through meadows and woods - slide projection - street market of handicrafts - gastronomic stands - special menus in the restaurants "Erbe in fiore" (i.e. "Blossoming herbs") - lectures - tasting - guided tours to collect spontaneous and official herbs (herbs garden of Casola Valseno)	Form di Sopra (Udine) Emilia Romagna, Province of Ravenna	Spontaneous herbs Mushrooms Spontaneous herbs Truffles Chestnuts	Festival / weekend Festival / weekend Festival / Exhibition-market / holiday	Tourist Service Union of Form di Sopra Natural Park of "Dolomiti Friulane" "Terre di Faenza": area's society of Brisighella, Casola Valseno and Rolo Terme Municipalities (Consortium Limited Company)	www.famdisopra.org/index.php?pe=1002 www.pubblica.terrestriafianza.it/index.asp
Exhibition-market of truffle - special menus in the restaurants and gastronomic stands Chestnut festival Tourist packets including tours through some villages and the Garden of herbs, menus herbs- and typical products-based, etc.					

Product/service	Area	Flag product	Connecting idea	Network organization	Web link
"Briese" (i.e. Boletus edulis) festival - holiday (week or weekend) in occasion of the festival, includes: excursions, mushroom searching with expert mycologists, lunches and dinners mushroom and local products-based	Valle del Vanoi, Caonua, Canal San Bovo (Trento)	Cep mushroom ("briese")	Festival / holiday	Tourist Union of Valle del Vanoi	www.vanoi.it/03/percomo.html
Herbs and bath holiday packets - "baths in the greenery", excursions, hydrotherapy and herb baths	Trento Province	Spontaneous herbs	Holiday	various Tourism Companies of Trentino Region	www.trentino.tourisme/index.html?_lang=it
Tourist packets involving the "mugolio" (aromatic oil from Pinus mugio) - baths with P.mugio oil - compress with P.mugio oil	Val Sarentino (Bozarno)	Pinus mugio oil (PEFC certified)	Holiday	Eschgfeller family	http://www.eschgfeller.com
Chestnuts festival Cultural events (lectures, movies, photos exhibitions, etc.) Gastronomic festival with typical products chestnut-based but also: hazelnut-based, forest fruits-based, ceps-based, etc.	Parma Apeninnes, Municipality of Bore	Chestnut	Festival / weekend	Municipality of Bore	www.comune.bore.pr.it
Exhibition-market of truffle and underwood products "proletta" and underwood fruits festival National fair of white valuable truffle Exhibition-market of mushroom Chestnuts festival Market-festival of chestnuts	Marche region (Pesaro and Urbino province)	Truffle Underwood fruits Mushrooms	Exhibition-market / festival	Province of Pesaro and Urbino, Local Tourism Association	www.turismo.pesarourbino.it
Chestnuts festival In association with the "weekends in Montefeltro" Integrated weekends in occasion of: mushroom festival, honey festival, chestnuts festival and truffle festival.	Central Apeninnes	Chestnuts Chestnuts Mushrooms	Festivals / weekends of holiday	"Appennino" partnership project of territorial marketing, promoted by 13 Mountain Communities of Toscana, Emilia Romagna, Marche and Umbria regions	www.appennino.info
(c) typology of links between NWFP&S and other P&S in a well-defined territory					
Suspended routes among trees Various routes, differentiated according to the age of participants. And also: - businessmen stages/courses - organization of scholastic trips (with tours at the botanic route, etc.)	Sella Nevea (Friuli Venezia Giulia)		Adventure route	"Parco Avventura" Sella Nevea	www.sellanevea.parco.it
Adventure Park Suspended pathways between trees	Villeneuve (Val d'Aosta)		Adventure route	Rafting Adventure (associated with the French organisation Amazone Adventure)	www.raftingadventure.com/venezia/raffingadventure.com/venezia/raffingadventure.com/index_.it.html
Adventure Park Suspended pathways between trees and also: - stage for businesses - hotel accommodation	San Zeno di Montagna, Garda Lake		Adventure route	Park Jungle Adventure, with the sponsorship of the hotel-owners of San Zeno di Montagna	www.jungleadventure.it

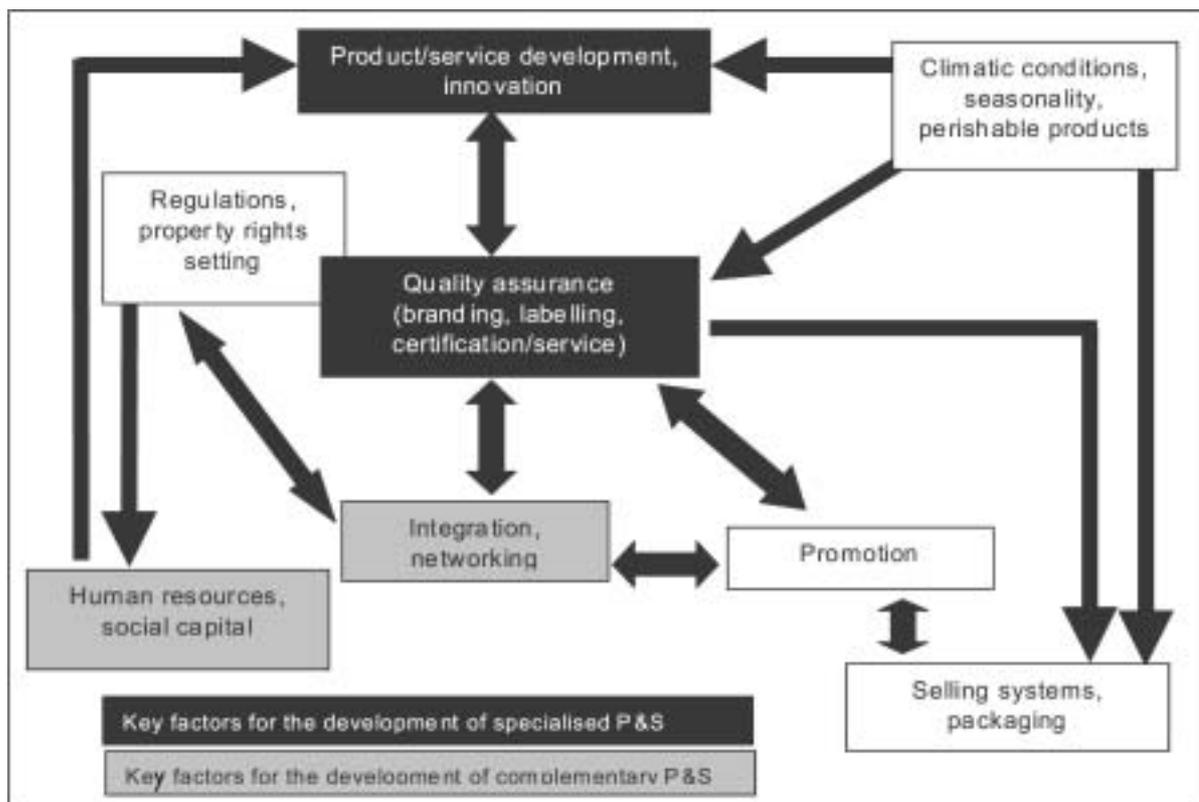


Figure 5 – Main factors for successful marketing of NWFP&S

as the presence of horizontal integrations and networking in a well characterised territory seem to be the most important factors in developing complementary NWFP&S.

CONCLUSIONS

Looking at the recent experiences of high-advanced examples of NWFP&S marketing in Southern part of the Alpine region, it appears that some forest managers and forest owners, by shifting from a timber-based activity to a NWFP&S-based activity, are changing their traditional product-oriented approach into a more customer-oriented one. This is an important development in the entrepreneurial capacity: NWFP&S marketing requires more efforts for market research to obtain precise information on customer needs and demands. The smaller the business and the smaller the customer group, the more important are both organizational aspects for production and distribution and market research and promotion (Collier et al., 2004; Font and Tribe, 2000; Mantau et al., 2001). Since normally SMEs in rural areas can not access this information by

themselves and have no critical mass of products or services to sell, external support, networking and integration are key factors for NWFP&S marketing. In this regard, assistance given by public institutions is in many cases essential, as well as the public acknowledgement of the positive role that an active NWFP&S economy can support in the sustainable management of forest resources.

Looking at the Italian experience in this sector, it is therefore possible to confirm the assumption made by Kotler et al. (1996) about the role in the marketing mix of the so called “4 Ps” (Price, Product, Place, Promotion), but also of the “2 Ps” added later (Public support and Political power). The Alpine one is a unique and fragile environment; innovation in forest resources management and use shall always be fully supported by the local community, the general public and the public authorities. This is also a precondition for a sustainable carrying out of economic activities, especially when these are based on techniques of territorial marketing, i.e. on the use, as a common denominator, of the image of the local natural and cultural traditional resources that are a collective patrimony.

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