

Common Land in Eastern Lombardy during the Nineteenth Century

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1. INTRODUCTION

The aim of this paper is to illustrate some of the characteristics of common land in eastern Lombardy during the nineteenth century. Based on an analysis of cadastral data (which clearly indicates the quality of the land) and notarial files (which include the deeds drafted by notaries along with sale prices), this paper classifies common land in terms of quality and fertility and makes it possible to observe the evolution of wood (used for timber), pasture (used to produce hay) and arable land (where peasants cultivated cereals such as wheat and maize, and also forages such as clover)¹.

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1. See the archives of the State of Milan, *Catasto Lombardo-Veneto* (Austrian cadastre); Archives of the State of Brescia, *Petizioni d'Estimo* (files concerning the sale of real estate in every village); *Archivio notarile di Brescia* and *Archivio Notarile di Salò* (notarial files concerning sales and rents); *Estimi e Catasti Napoleonici* (Napoleonic cadastre), *Catasto Austriaco* (Austrian cadastre), *Catasto del Regno d'Italia* (Italian cadastre); *Acque e strade* (files on the laws concerning water and roads and particularly the environmental problems linked to the rivers); *Imperial Regia Delegazione Provinciale* (files concerning the economy and the social and political problems in eastern Lombardy, and also the communications and instructions which the Austrian governments sent to the municipalities and

After a brief discussion of the types of land owned by municipalities in eastern Lombardy, this paper analyses: a) the methods used to maximise earnings derived from common land and the system used for the distribution of the products which were obtained (that is cereals, hay, fruits, vegetables, timber, charcoal etc.); b) the social problems linked to the decision by many communities to rent or sell their properties to pay the debts they had accrued during the Napoleonic period, and the problems linked to the new Austrian law of 1839 which established the compulsory sale of an important share of common land; c) the damage caused to the environment by the people (whether tenants or owners) who did not use common land in the Alpine valleys as a whole. Furthermore, the paper includes some tables showing the price of common land sold during the first half of the nineteenth century and data on the progressive reduction of the surface area and cadastral value of common land from the Napoleonic period to the end of the century.

The paper also explores the social and economic changes caused by the sale of common land and elucidates the importance of the collective use of land in eastern Lombardy, particularly in the Alpine valleys². The area under review is of particular geographical interest. There is great pedological variety in eastern Lombardy (studies made in the 1880s affirmed that there were almost 40 different types of soil)³; and the agricultural environment of the Alpine valleys at the time of this study had some unique characteristics, dominated as it was by woods and pastures which left limited space for cereals. In the Morainique vineyards, olive trees and orchards represented an important share of the cultivated area, while peasants grew cereals and forages on the plain, whether it was irrigated or not. This facilitates the analysis of different types of common land, agricultural systems and communities. It also enhances the comparative value of the paper, particularly with regard to studies concerning the rest of Lombardy and the Venetian region (that is, the areas most closely linked to eastern Lombardy in economic and social terms), and also in respect of those studies concerning other Italian regions (those having similar laws and

the provincial administration). The analysis concerns the present province of Brescia excluding the Camonica Valley (which did not belong to the province of Brescia between 1801 and 1860). The analyzed territory extended to almost 314,800 hectares. The population of this area was almost 310,000 in the Napoleonic period, rising to 475,000 at the end of the nineteenth century.

2. There is no recent research concerning common land in eastern Lombardy. Some limited pieces of information can be found in the following: SABATTI (1807: 100-107); PAGANI (1824); GERARDI (1858-61). There are other interesting contributions but their concern is with the common land market only (see note 10).

3. It is impossible to explain here all the different biological, chemical and physical characteristics of the soil in the analyzed area and their effects on agrarian productive systems. In any case it is evident that clay-based soils with silica favoured different cultivations from clay-based soils with limestone; besides that the presence of phosphate or calcium or magnesium evidently changes the fertility of the soil. For a study of soils in the province of Brescia and their exploitation in the nineteenth century see RAGAZZONI (1881).

unwritten rules) or other European countries where common land had the same social and economic relevance⁴. At the same time, thanks to the analysis of different environmental areas, this paper contributes to the recent debate concerning the effects of the collective use and management of natural resources. In fact, it deals specifically with a number of issues central to this debate, such as how municipalities guaranteed a fair deal for their inhabitants and why some laws which aimed to improve the yields of pastures, woods and less fertile arable land (that is land cultivated with cereals and forages) carried, in many cases, considerable economic and social costs⁵.

This paper also analyses the consequences of the substitution of the old rules regulating the use of common land. These changes were added to a new fiscal system and required complex coordination between public and private interests. The French and Austrian governments (from 1797-1814 and 1814-1859 respectively) favoured the sale of common land, but they underestimated the investment required by new landlords to make real improvement in plots of land. The result of this was that new laws contributed to an over-exploitation of common land. So this paper also contributes to the ongoing debate over the links between the aims of the state and the particular interests of local institutions and property rights. In addition, it provides new information regarding the impact of collective institutions in favour of, or opposed to, the economic development and/or protection of the environment⁶.

4. With regard to common land in the rest of the Lombardy and Venetian region see BARBACETTO (2008: 259-290); LAZZARINI (2009); VISCONTI (2002); SCARPA (1996) and the contributions quoted in note 7. For some examples concerning other Italian regions see ALFANI and RAO (2011); FAROLFI (1987); TOCCHINI (1961). Finally, for further important examples concerning other European countries see NEESON (1993); VIVIER (1998); LINARES LUJÁN (2006), and the contributions quoted in note 5.

5. With regard to the ongoing debate on common land and its effect on the economy of the villages where it was situated, and on the local environment, there exists a wide bibliography which is too large to quote here. However, it is important to see GIBSON, McKEAN and OSTROM (2000); DE MOOR, WARDE and SHAW-TAYLOR (2002); OSTROM (2002); DEMÉLAS and VIVIER (2003); BÉAUR (2006); LANA BERASAIN (2008); BARDAN and RAY (2008); PIERACCINI (2008).

6. With regard to the problem of coordinating and establishing priorities between the different aims of the state, local collective institutions and private property see BADEN and HARDIN (1977); RUNGE (1981); GARDNER, OSTROM and WALKER (1990); CORONA (1997); OSTROM (1990); AGRAWAL (2001); BRAVO (2001); CONTE (2002), OSTROM and HESS (2007), and the bibliographies contained therein. Concerning the rule and the relevance of the institutions in favour of the economic development and the protection of the environment see NORTH (1990); AGRAWAL (2007); CASARI (2007). See also the 5 volumes of the *International Journal of the Commons* published from 2007 to 2011.

2. THE EXPLOITATION OF COMMON LAND AND THE DISTRIBUTION OF ITS PRODUCE: HOW TO GUARANTEE A FAIR DEAL FOR THE COMMUNITY?

At the end of the eighteenth century, before the French invasion, eastern Lombardy belonged to the Republic of Venice, also known as the Serenissima. In Venetian law, common land was that which had no private owner (or it was impossible to trace the original one), or it was land granted to the municipalities by a legacy (but such cases were rare because legacies and all other free assignments were normally reserved for ecclesiastic institutions or kinship)⁷.

Common land usually had a low level of fertility and a low value. It was normally pasture and forest and was situated in the Alpine valleys or in the less fructiferous areas of the hills (such as the slopes not exposed to the sun or on very steep hills) and the plain (the moors, the swamps, river groves etc.). Forests yielded raw material for heating, cooking, building, forges (using vegetable coal) and tanneries (using tannin). Pastures provided food for cattle, but when common land took the form of moorland it yielded only shrubs such as heather. Municipalities normally owned little arable land because it was the first to be sold. Its quality was usually very low and crops in the shape of cereals and forages were limited. Furthermore, peasants were wary about the cultivation of potatoes and their diffusion was limited until the second half of the nineteenth century. Municipalities could also own real estate, which was strictly linked to the agricultural sector, such as hay lofts, cattle sheds, stock rooms and flour mills. It is evident that here the authorities provided some important services for the inhabitants of the village and this public function justified public ownership. Finally, there were some rare exceptions linked to certain situations, for example, the existence of municipal farms (that is, publicly-owned farms managed by the mayor and the municipal council because nobody wanted to buy them and take over the previous landlord's debt), or the strips of land on the side of public roads (whose produce belonged to the first people who gathered it).

Until 1727, the government of the Serenissima often sold common land to balance the budget. In certain cases governments chose to maintain common land, particularly if it was wooded and could be used to provide timber for the great Arsenal of Venice or for military defence (building block-houses). When common land was not sold, it was

7. In eastern Lombardy during the eighteenth and nineteenth centuries laws and customs used the words *beni comunali* which included all the properties of the municipalities, that is common land and other public real estate such as houses, mills, cattle sheds etc. Concerning the Venetian laws on common land see FERRARI DELLE SPADE (1918); PITTERI (1985); CACCIAVILLANI (1988 and 1990). See also BORELLI (1981); PEDERZANI (1992); PASA (1997).

given in usufruct to the municipalities, which were obliged to reforest a third of its surface area and plant at least twenty-five oak trees for every plot. When, in 1727, the government of the Serenissima suspended all sales, the people living in villages gained some important rights on existing common land: *erbatico* (the right to pick wild grass, healing herbs and sods), *legnatico* (the right to collect shrubs, firewood and waste timber, which could not be used to produce charcoal), *pascolo* (the right to put out to pasture their cattle, but there were limitations on sheep and goat grazing was forbidden), and *spigolatura* (all seeds remaining after the harvest in the fields could be collected by locals; gleaning). They also had the right to collect leaves (used to prepare bedding for cattle-*letto dei bestiami*), stones (used for building) and wild vegetables and fruits (without damaging shrubs and trees).

The municipalities had to guarantee a fair deal for the people living in the village, ensuring to all the right to enjoy the produce of common land. People received a quantity of firewood, hay and fruit (such as walnuts and chestnuts) depending on their needs, and the remaining produce was given to landlords living in the village (that is, those responsible for paying tax on common land). The authorities allowed people to use common land only during a specific period of the year. These rules were designed to avoid excessive exploitation of woods and pastures. However, it was very difficult to control and coordinate access to common land and to evaluate poor families' real needs. People sometimes cut wood, or used pasture for their cattle, outside of the most effective periods (that is the autumn or the start of the spring) and this hampered the growth of new trees and extended the time necessary for reproduction. Besides that, produce was sometimes divided incorrectly, so that the first to arrive could cut the coppice or the hay and receive more than the other inhabitants of the village who were not present when the harvest was being gathered.

The best way to ensure a bigger harvest for all the people was by increasing the yield of common land, but this was very difficult to achieve for many reasons. It was impossible, for example, to increase the dimension of cultivated common land. Before the Napoleonic reforms, common land was subject to exploitation in favour of people living in the municipality. The adoption in eastern Lombardy of the Napoleonic code weakened this custom, but it was not totally eliminated. Given that the people who actually worked the common land (particularly the tenant farmers) had to give a part of their produce to the inhabitants of the village, their investments were reduced and this held back an increase in yields. This problem was not so important if the tenant rented a pasture used by transhumant cattle-breeders (called *malghesi*) because in this case the tenant received the high rent paid by the *malghesi*, who bred cattle in the mountain valleys during the summer season and in the plain during the rest of the year. In this case it was in the tenant's

interest to take greater care of the pastures. In other cases the excess of these servitudes could reduce to zero the benefits to the tenant and so he did not invest to improve the quality of common land for the future, but, rather, over-exploited it. This caused a reduction in the production of hay and timber and, consequently, a drop in the value of common land and the reduction of rental value. So the excess of rights to the produce of common land reduced successively the earnings it yielded; the rent paid to the municipality decreased and there was less for the tenant and inhabitants of the villages. It was necessary to eliminate all easements and to find resources to compensate the neighbours for the losses involved, but this was almost impossible in a situation in which the local authorities received less money than before. Besides that, even when common land produced low yields it still provided an important source of food for those whose earnings were often below subsistence level. This explains why laws obliging or encouraging the public authorities to sell common land often provoked protests and sometimes riots.

The same problem existed in the villages where institutions called *vicinie* (sing. *vicinia*, from *vicino*, neighbour) owned lands. The law did not recognise this as common land, but its administration created the same problems as those faced by the municipalities, to which the government of the Serenissima granted real estate in usufruct. The members of the *vicinie* were all male and heads of their respective households in the village, and they had to establish the best way to allow the people living in the community to enjoy the produce of common land. For the *vicinie* the problem was more complicated than for the municipalities because there were three different types of membership of the *vicinie*, each of which had different rights. There were the *antichi originari* (people belonging to the ancient families that descended from the first inhabitants of the village), the *nuovi originari* (people belonging to the «new» families that had been living in the village for more than 50 years) and the *forestieri* (people belonging to the foreign families that had been living in the village for less than 50 years). Only the first and the second types of inhabitants had the right to use common land. The *antichi originari* was the only group which had rights over all common land, while the *nuovi originari*'s rights were limited to the land recently acquired by the *vicinie*⁸.

The *vicinie* sometimes owned more land than the municipalities. The Napoleonic cadastre (with data referring to 1811) shows that in Ghedi the local *vicinia* owned 2,127

8. There are many small contributions concerning the *vicinie* and their relevance for the communities where they had been in existence since the medieval age (when the *originari* had been living in the village for only 25 years). However, most of these studies only show the particular history of one *vicinia*. For the origin and rules of the *vicinie*, and an analysis of several cases see PODRECCA (1907); SELLA (1908); LUZZATTO (1909). For a general analysis see also GUIDETTI and STAHL (1976), and the Italian contributions quoted in note 4.

hectares (that is 36% of the *perticato comunale* or the total surface of all lands existing in the village), while the municipality only owned 333.5 hectares (6%). At the same time, in Montechiaro, the *vicinia* owned 1,901 hectares (25%) while the municipality held just 271 hectares (3.5%). When the *vicinie* owned an important share of the land in a village, the different rights existing among the members of the *vicinie* could also create problems concerning the use of the true common land. For example, the people excluded from the full use of the land belonging to the *vicinie* requested to have more rights on common land controlled by the municipalities. To solve the problem some *forestieri* were re-assigned to the *nuovi originari* during the second half of eighteenth century, sometimes paying for the privilege. Similarly, the *antichi originari* could maintain their privileges but had to pay an indemnity. By such means the municipalities collected funds, but the problem of distributing the produce was evidently more complex.

In 1806 the new Napoleonic law transformed the juridical status of all common land, which became part of the municipality's patrimony. All remaining feudal privileges and rules were abolished so that there were no differences between *nuovi originari* and *antichi originari* and, moreover, all land owned by the *vicinie* was assigned to the municipalities. This increased the volume of common land (for example, in Adro to 330 hectares, ninety-eight of which came from the properties of the local *vicinia* and represented 22.5% of the village land) and created many disputes between the municipalities and their inhabitants. In fact the *antichi originari* could avoid the re-allocation of their lands to the municipalities if they demonstrated that they had bought them from the Serenissima or during the wars caused by the invasion of the Napoleonic army. There were many appeals concerning the assignation of land to *antichi originari* until 1852 when a new Austrian cadastre came into force and assigned a landlord (who had to pay the taxes for his real estate) to every plot of land in eastern Lombardy. All these changes and reforms obviously complicated the administration of common land during the first half of the nineteenth century, and it was over-exploited as people were not sure that they would be able to enjoy the harvests of the following years. In addition, the reduction of the power of the *vicinie* contributed to a growth in the incorrect use of their land. When the new Austrian cadastre came into force in 1852, the lands owned by the ten *vicinie* on the plains and in the hills (whose surface was almost 4,940 hectares during the Napoleonic period) were all sold. This meant that in the second half of the nineteenth century there were few *vicinie* that owned plots of land. Finally, whereas the existing Austrian cadastre in western Lombardy during the second half of the eighteenth century (it went into force in 1760) allowed rentable use of common land because it moderately increased taxes, the new French and Austrian cadastres permitted a significant increase in taxes on land in eastern Lombardy. Added to this were the bureaucratic effects of the new Napoleonic code,

which promoted the sale of common land whose management had become more expensive for the municipalities⁹.

The negative impact of these administrative changes on the exploitation of common land becomes more evident when we consider the fiscal and economic choices made by the French and Austrian governments. They promulgated new laws to improve the budget of the municipalities and, at the same time, to increase yields from common land. The main principle was that a private landlord could secure higher productivity than a public landlord. Also, through the sale of common land the public authorities immediately received money and the prospect of further earnings from the taxes generated by the sale of future harvests, which were expected to be better than those obtained by the direct intervention of the municipalities or the *vicinie*. This also explains why an important share of the *beni nazionali* (lands owned by the state which had previously belonged to the abolished ecclesiastic institutions) was sold. The government put this land in the market to balance the budget and, thanks to the detailed information on the quality of land gathered by the new cadastre, it could increase total revenues. Even if taxes on real estate did not increase when the quality of the land or the yields improved, the public authorities had new revenue linked to the taxes concerning the sales of the greater quantity of timber, hay etc. Besides that, municipalities had to pay taxes on common land, so when taxes were superior to the earnings granted by real estate it was evident that municipalities preferred to sell. Those who traditionally exploited common land were compensated by the money that the municipalities saved after the sales, but they often received less than the value of that which they had lost, namely, the right to their share in the produce of common pastures and woods¹⁰.

The government obliged the municipalities to save more money and, consequently, they had to sell a part of their real estate. So the best plots of common land and other real estate linked to the agricultural sector were sold during the Napoleonic period. The sale particularly affected common arable land, whose surface in eastern Lombardy was almost

9. The new cadastres of the nineteenth century increased taxation in the provinces, which, before the Napoleonic period, belonged to the Republic of Venice (Brescia, Bergamo and Crema) or the Grisons (Sondrio). Concerning the cadastre and the taxation of real estate in Lombardy see LOCATELLI, TEDESCHI (2011). Concerning the consequences of the Austrian cadastre on common land in western Lombardy see COVA (1982); MAZZUCHELLI (1984).

10. On the new laws promulgated by French and Austrian governments see «Obbligati» (1820); «Sovrana risoluzione» (1839); PITTERI (2005). On the sale of the *beni nazionali* see COVA (1963). For more information on the distribution of land and the characteristics of the land market in eastern Lombardy during the first half of the nineteenth century see FOSSATI (1960: 77-88); CALINI IBBA (2000); TEDESCHI (2006 and 2008a). For a general analysis of the situation existing at the same time in the whole Lombardy region see JACINI (1857); ROMANI (1957); COVA (1977).

3,250 hectares at the start of the nineteenth century. This allowed municipalities to pay their debts, but reduced the volume and extension of their property so that their yields decreased significantly. Municipalities sold their best properties, particularly on the plain. For example, in the village of Travagliato, where at the start of the nineteenth century the municipality owned 50 hectares of lands (2 hectares were moorland, while the remaining 48 hectares belonged to the two municipal farms), common land was reduced to 0.5 hectares of moor at the half-way point of the nineteenth century. In the village of Fiesse, where the municipality owned 182.5 hectares (including a farm with the facilities to grow rice, a mill and some workshops) common land was reduced from 11.5% to 1.5% of the *perticato comunale*.

A further important reduction of the share of common lands in eastern Lombardy was caused by a new Austrian law of 1839, which obliged municipalities to sell all their land if it was not cultivated or not used as pasture or, in general, did not guarantee a good income; and after the sales realized in the Napoleonic years more municipalities were in possession of plots which had been over-exploited and produced less yield. This law emerged during the preparation of a new cadastral census when, on the 16th of May 1826, the government charged the *Congregazione provinciale* (the provincial administration) with drawing up a document concerning the juridical situation (property rights and usufruct) of common land. The result of the inquiry was that the real estate owned by the municipalities had a low productivity, and to solve the problem (that is to increase yields) the Austrian government passed a new law to foster sales. Public authorities thought that «privatization» was the best solution, but they forgot that in many cases low fertility was caused by poor soils (that is the pedology and edaphology) and scarce insolation, and under these circumstances it was better to finance the conservation of the existing woods and pastures. Besides that, they did not consider that the increase of yields was linked to improving the quality of common land. Without promoting investment in common land yields were unlikely to increase. As the improvement of yields was uncertain and had a high cost, new tenants made no investment and over-exploited common land to recover as quickly as possible the money they had invested.

Before analyzing the effect of the sales it is necessary to provide some information concerning the price of common land during the first half of the nineteenth century. An analysis of sale contracts shows a marked difference between fields situated in the same village and growing the same crops. The prices depended on several variables, such as prevailing economic trends (in negative circumstances the price obviously decreased), existing laws (after 1839 the price of common lands decreased), the credit market and settlement (if the purchasers could borrow more money paying a low interest rate, the price increased), the nature of the soil and the location of the real estate (in the valleys and hills

the level of exposure to the sun was critical) and the related quality of crops and yields (if they were high, the price obviously increased). Other factors included the presence of one or more mulberries (the presence of silkworms increased production and earnings), the existence of easements in favour of other land properties (they decreased production and also the price), and the distance from the farm to the market (which dictated the cost of the carriage and influenced the price). Further important aspects affecting the price were the relative scarcity of the land and its utility for manufactures (if we consider the fertility of soil, arable land was more expensive in the valleys than on the plain, and forests situated near forges were more expensive), the aims of purchasers (if they were very interested in common land, they were expected to pay more), and the contractual power of the municipalities (that is their opportunity or ability to sell common land without creating social conflict in the villages). Finally, as some common land was sold by auction, prices depended on the number of people participating in the sale and on bidding trends. Even if the sales analysis shows that the yield of land and the aims and contractual power of purchasers and municipalities particularly influenced the prices, it is very difficult to establish the real effects on land market prices of all these variables. In any case, it is evident that they could significantly change the final price and this also explains the great difference between the lowest price and the highest one.

TABLE 1
Prices of common land in the second half of the 1830s
(Austrian liras for one hectare)

	Lowest*	Highest*	Weighted mean*	Highest**	Weighted mean**
Plain					
Arable land ^o	120	1,100	730	2,460	1,610
Pastures	150	1,550	1,100	2,620	1,840
Wood	120	560	360	920	610
Hills					
Arable land ^o	300	1,150	1,240	2,300	1,480
Pastures	490	1,850	1,300	2,770	1,960
Wood	150	570	390	860	580
Valleys					
Arable land	460	2,180	1,450	3,270	2,180
Pastures	550	2,550	1,700	3,630	2,430
Wood	100	390	260	550	370

Sources: see notes 1 and 12. All prices are rounded up to 10 Austrian Liras. Data about common lands concern almost 300 sales. * Prices of common land (they were the lowest). ** Prices include the sales of private lands. ^o Non-irrigated land.

In the first half of the nineteenth century the price of common land everywhere was low because its yield was normally less than land which had an average quality. This was more evident for arable land, which had very low fertility compared to the best irrigated lands, while for pastures and forests the differences were less relevant (see Table 1). The same situation existed for common land during the second half of the nineteenth century, but since the analyzed sources give no data about prices, it is difficult to construct a detailed table giving evidence of the average prices in the different areas. However, it is possible to indicate that the price of common land was further reduced for a number of reasons: fiscal pressure on all real estate was increased; the average quality of unsold common land decreased due to incorrect practices by its tenants; there were important crises in the land market in the 1850s (linked to diseases in the vineyards and in the silkworm population and the consequent reduction of earnings) and in the 1880s (linked to the arrival in the Italian market of less expensive cereals coming from the USA which reduced the earnings of the farms); and the price of mulberries produced on arable land dropped by half during the 1850s and suffered another important cut during the 1880s. For all these reasons, at the end of the nineteenth century most types of common land had a value which was between one third and one half of that which had existed during the 1830s¹¹.

3. THE SALE OF COMMON LAND: A RATIONAL EXPLOITATION OF PROPERTY OR ENVIRONMENTAL DAMAGE?

The Austrian government did not reduce the tax on common land and consequently the risk of over-exploitation became a reality in many communities. At the same time, the widespread sale of the land reduced the income of those inhabitants who traditionally relied upon it to survive. In some Alpine villages, people did not agree with the government's policy and there were sporadic riots. So only a part of common land was sold, and the rest was rented to villagers. In other cases municipalities wanted to sell, but the low quality of common land reduced demand, and as prices decreased it made more economic sense to rent. In other cases the Austrian government obliged municipalities to secure free land or *destinate a fini comuni*, that is, plots owned privately but subject to servitudes, for new tenants who could now fully enjoy the produce of the land and so were stimulated to invest and increase yields. Although by this measure some villagers lost their rights to common land they received money as compensation. By these different ways the public

11. Concerning the condition of land in eastern Lombardy during the second half of the nineteenth century, and also about registered yields see TEDESCHI (2008c), including its bibliography.

authorities achieved their goal, a new class of tenants who could guarantee the best exploitation of common land. They also contributed to social peace, as part of the new revenue was given to those who were now prohibited from using common land. However, in many cases this did not happen. Common land was not correctly used, yields decreased and tenants could not pay the rents, and in the absence of new tenants interested in rental agreements, the municipalities had to sell common land.

Where municipalities owned an important share of land (they were sometimes the majority owners and their land often represented from 12.5% to 40% of the total cadastral value), the sales modified the distribution of real estate. The number of landlords increased, but it is difficult to indicate their profession or their means because in the notarial files and in the *petizioni d'estimo*¹² more than two-thirds of purchasers are simply indicated as *possidenti*, that is people owning at least one piece of real estate¹³. The new landlords were usually people working in manufacturing, such as in forges, or cattle breeders (particularly dairy cows) or peasants (particularly small landowners living in the valleys and in the hills). The craftsmen were petty entrepreneurs, interested in land producing timber or charcoal in order to generate income for investment. In fact, land ownership permitted individuals to borrow money through the contract of *livello*, in which the land represented a guarantee for the lender¹⁴. Cattle-breeders and peasants respectively in

12. The *Petizioni d'estimo* were papers handed to the Registrar who had to write in the cadastral registers all the transfers of property: the *Petizioni d'estimo* allow to know all conveyances of houses and land from 1813 to 1852.

13. Data concerning the sales of the common lands are in: *Petizioni d'Estimo*, bb. 145-148, 233-236, 239-241, 244-273, 282-291, 331, 337-343, 348, 412-413, 447-448, 451, 454, 457-458, 460-478, 481, 487-488, 490-495, 504-506, 518-521, 526-529, 533-558, 560-562, 588-589, 604, 608-611, 631-632, 651-652, 667-668, 678-679, 686-689, 694-700, 708-710; *Archivio notarile di Brescia*, ff. 11950-11953, 13946, 14542-14545, 14552-14560, 14670, 14677, 14679-14682, 14836, 14842, 14909, 14992-15009, 15014-15022, 15062, 15066, 15074, 15093-15101, 15239-15242, 15245, 15283, 15292-15295, 15353, 15370, 15429, 15444, 15719, 15882-15885; *Archivio Notarile di Salò*, ff. 2340, 2558, 2585-2586.

14. In eastern Lombardy the contract of *livello* secured a loan on land (or houses) and allowed craftsmen the funds to buy raw materials or tools. It was composed of two acts: first, the borrower sold the real estate to the lender and then the lender rented it back to the borrower, who retained the right to repurchase it at expiration of the term of the loan. The sale price was the loan amount, and the rent was the interest. The borrower retained the right to occupy the real estate, but the lender became its legal owner, thereby guaranteeing repayment of the loan. At the expiry of the term, the borrower could buy back the real estate, if he had the capital; otherwise, if the lender did not grant a respite, the real estate was sold, sometimes at auction. If the proceeds did not cover the debt, other assets of the borrower were used to repay the lenders. This contract represented a link between the real estate market, the credit market and manufacturing activities, because only craftsmen owning real estate were able to secure finance for their workshops. For more on this process in the Alpine valleys see TEDESCHI (2008b) and the bibliography therein, in particular PILUSO (2004); TEDESCHI (2004) which concerns the real estates market before the new cadastres came into force.

vested to buy pastures (to increase forage for their cattle) and small plots of arable land (to produce more cereals for their family). Only a small share of buyers were merchants, shopkeepers, bourgeoisie (notaries, lawyers, doctors etc.), nobles, priests and moral and ecclesiastical institutions (hospitals, congregations of charity, parishes, etc.). These people usually preferred to buy vineyards or orchards or very fertile arable lands, that is, real estate that was not common land. Most purchasers (more than 80%, and in the valleys the percentage was higher) lived in close proximity to the land they purchased. The few who came from further afield were usually interested only in the exploitation of forests because they wanted to sell the timber. This contributed to environmental problems linked to over-exploitation of woods. In fact, people living in the towns or in villages situated far from forests normally took less care of them than people living nearby.

The Austrian government also allowed the substitution of sales with emphyteusis (that is a very long rent, at least 20 years, which obliged the tenant to improve the yields of the leased land) or normal tenancies paid with cash (with the commitment to maintain the quality and yields of the leased land). This solution allowed municipalities to avoid low-price sales and at the same time allowed villagers to exploit common land even if they did not have enough money to become landlords. In the first half of the nineteenth century these alternative contracts represented 50% of the deeds concerning common land (and in some villages the percentage reached more than 75%). Later, the vineyard and silk-worm crises of the 1850s and the agrarian crisis of the 1880s increased sales, but in many municipalities situated in the valleys almost three-fifths of woods remained as common land until the end of the century and some municipalities were able to maintain the majority of their properties.

In any case the recourse to emphyteusis and fixed tenancies did not improve the new landlords' attitude towards the care of woods and pastures. As many people wanted to obtain an emphyteusis on common land or to become tenants, rents increased. Municipalities received more money, but most of the new emphyteutical tenants of forests cut down many trees without following rotation rules (that is they cut before the recommended time). In addition, the economic crises of the 1850s led to increased theft of timber and reduced the earnings of the emphyteutical tenants. So, when they finally could not pay the rent, they gave back some devalued forestry to the municipalities. At the same time those tenants who had signed short-term contracts created many problems. They were interested in immediate earnings without thought for the future. They eluded all controls and used the woods and pastures improperly. As only a minority of tenants could conserve or improve the quality and yields of the rented lands the overall effect of the leasing of common land was negative. The yield of woods and pastures progressively decreased and in the valleys the hydro-geological equilibrium of some slopes was compromised. In

the valleys of eastern Lombardy there were landslides, and while they did not kill people, they destroyed woods and pastures and obviously reduced the earnings linked to forestry and cattle breeding. At the same time, the changes (due to forestry) in the areas situated near the embankments of rivers on the plains were prone to flooding and subsequent destruction of crops.

In the second half of the nineteenth century the limited number of purchasers and the low quality of over-exploited land lowered prices and hence municipalities received less revenue than was the case some years earlier. Consequently there was less money for helping poor people who in any case had less land to exploit. Thus the socio-economic equilibrium existing in some Alpine villages was altered. Until the second half of the nineteenth century these villages had a low level of seasonal migration and few people were forced to choose permanent migration. However, at the end of the nineteenth century the number of people living in the Alpine villages where manufacturing did not exist or was limited was halved and some villages (which had not known the problem of permanent emigration for many centuries) lost a great proportion of their inhabitants and suffered a demographic decline of between 70% and 80%. This did not depend only on the sale of common land, but it is evident that the progressive decrease or the definitive loss of produce derived from common land was a factor in the increase of emigration from those villages whose inhabitants' lives were closely linked to the rent of common land and to the sales of timber, hay, walnuts and chestnuts. Thus, while the Alpine villages, where there was manufacturing and which were well connected to Brescia (and the other industrial areas developing in the plain of the Eastern Lombardy) could maintain, or slightly increase, their population, the villages that were too closely linked to the exploitation of land lost a great share of their inhabitants.

The reduction of the profits generated by common land was also linked to legal disputes concerning the rights of the *antichi originari*. Some *vicinie* maintained their lands (that is they did not transfer them to municipalities) and continued to grant privileges to the *antichi originari*. In 1806 municipalities gained recourse to the law to seize lands which were assigned to the *antichi originari*. When claimants won and obtained a share of the income, the per capita produce of the land decreased and generated over-exploitation, which progressively decreased crop production. Besides that other negative effects were provoked by the *antichi originari*, who used the land improperly, overworking it without any care for the effects on production, with predictable results; yields progressively decreased during the proceeding years and in the valleys earnings soon yielded less than the costs of managing the pastures and woods. So, during the second half of the century both private and common pastures and woods diminished by more than 10% of their original size, while the extension of the *incolti produttivi* (that is the pastures and woods free

from human intervention) increased by 80% and represented more than one-sixth of the total surface area of pastures and woods. This meant that in many cases the new laws concerning common land did not result in the improvement that the public authorities had hoped for.

The depopulation of some valleys and the decrease in yields were not the only negative effects; there were also problems concerning the stability of the soil, which was made worse by a new Italian law of 1877 concerning the exploitation of forestry. This law allowed for the exploitation of woods without limit, and so tenants profited by cutting trees to supply saw-mills and tanneries (using wood to obtain the tannin). At the same time they could increase their cultivated land and pastures. In the first case the new land, even if it had a low quality soil, could partially profit from the increasing yield of crops guaranteed by new hybrid seeds and chemistry fertilizers. In the second case new pastures were used by transhumant cattle-breeders who produced cheese. The importance of this cheese in the dairy market grew in the last decade of the nineteenth century. Tenants were more interested in new pastures in the valleys because they had lost a great part of their traditional pastures in the hills and on the plain (now used by the new farms created on the plain which added bovine cattle breeding to the production of cereals and forages). When the new landlords or tenants did not correctly use common land, or if they decided to change the principal cultivation without considering all the possible effects on future crops and the environment, the sale or rent of common land caused some important environmental damage. This was often superior to the loss of earnings caused by inefficient collective use of the land and required long periods for amortization, as in the case of landslides (which affected many slopes in the high valleys) and water-floods (the most serious and damaging one happened in the Trompia Valley in August 1850)¹⁵.

Concerning forestry, the reduction of common woodland increased the exploitation of the remaining woods, which often represented the majority of the forest in the valleys. At the same time, timber was sold mainly by people interested in a rapid return on their investment, so in many cases the forest was exploited without respect for periods of replanting. The minimal rotation rule (that is to cut a tree after eight years and, for the more valuable trees, after twelve years or more) was not respected, and the woods were stripped more than the environment could tolerate. As a consequence, where the number of trees decreased greatly (or where the coppice substituted larger trees) there was an increased

15. For the reasons explaining the different evolution of the villages in the Alpine valleys at the end of the nineteenth century see TEDESCHI (2002); MOCARELLI (2002). For the economy of the Alpine valleys in eastern Lombardy during the nineteenth century see TEDESCHI (2001); MARCHESI (2003), which also has some data about damages and costs related to flooding and landslides.

frequency of landslides and/or floods. This happened because poor people required money to live, and most were not aware of the adverse effects on the environment linked to the incorrect use of common land. Their priority was survival and the future effects of their choices were a secondary concern. Besides that the development of *alpicoltura* and *silvicoltura* (that is the study of methods to improve yields of Alpine pastures and woods while respecting the environment) only emerged in the early years of the twentieth century. New laws reducing the rights of landlords and promoting correct use of forests were passed only when the damage caused to the environment was evident and when it became clear that the social and economic cost of the damage was higher than the advantage of a private and free (but not rational) exploitation of the land¹⁶.

TABLE 2

Distribution of common land in the cadastral data (% of total for eastern Lombardy)

		Napoleonic (1811)	Austrian (1852)	Italian (1897)
Hills and Plain	Surface	8.5	2.50	1.50
	Cadastral Value	2.0	0.75	0.25
Valleys	Surface	70.0	60.00	50.00
	Cadastral Value	35.0	20.00	10.00

Source: see note 1.

Pastures were also over-exploited and the consequent decrease in the production of hay complicated life for small cattle-breeders, who had to reduce the level of cattle-rearing or pay a new rent to use other pastures. At the same time the rent for pasture was reduced and the municipalities and new landlords suffered a loss of income that was required to investment in improvements of pastureland. Only at the start of the twentieth century did the pastures of the Alpine valleys begin to recover their previous levels of yield. The cadastral value of common land (including the *incolti produttivi*) decreased from almost 35% of the total registered in the valleys during the Napoleonic period to 20% in the Austrian cadastre (65% in the villages situated in the high valleys are included) and close to 10% at the end of century. This means that the cadastral value of common land in the valleys

16. The significant reduction of Alpine woods in the second half of the nineteenth century was not a problem concerning Eastern Lombardy only; many Alpine woods lost a lot of their surface, particularly those situated in the lowest valleys. For the problems and the social and economic costs linked to the incorrect exploitation of forests in this period see FUSINA (1862-1864); ROSA (1870); MARCHIORI (1883); SANSÀ (1997); AGNOLETTI (2002). A wide bibliography exists regarding the links between agrarian contracts (which established the method used for the division of produce) and the costs of investment to improve agricultural yields. For some examples concerning European agriculture in the nineteenth century see the articles published in *Continuity and Change*, 2006, 2, pp. 209-312 and also CARMONA and SIMPSON (1999); TEDESCHI (2008a); GARRIDO and CALATAYUD (2011).

decreased more than its surface area. Even though sales increased in the last decades of the nineteenth century, the extension of common land represented almost 50% of the land registered in the new Italian cadastre (and the percentage normally increased in the municipalities of the higher valleys), while it represented 60% in the middle of the century and almost 70% during the Napoleonic period (see Table 2).

Common land in the hills had a different evolution. At the start of the nineteenth century some municipalities owned an important share of cadastral property. In the hills around the towns the share fluctuated from 25% to 40%, while in the Franciacorta and in the Morainiques hills near Lake Garda (that is the lands including the best vineyards), the share was reduced from 25% to 10%. However, the cadastral value of common land only represented from 2% to 4% of the total. In fact common land did not usually include vineyards, olive trees or orchards and there was little arable land. In the hills, common land was normally composed of thicket and brushwood. There were some exceptions represented by small plots of arable land with some vines or trees, and these were sold or rented to the inhabitants of the villages or to local manufacturers. Some municipalities preferred the first option, others the second one. So during the first half of the nineteenth century common land in the hills was halved and sometimes reduced by as much as 60%. The only exception was the municipality of Ome, which increased its commons and reached 15% of the local land. In this case there were no protests and riots over the sales, and the consequences of the Austrian law of 1839 were not as negative as in the valleys. This did not depend on the quality of the common land (which was no better than in the valleys), but was linked to the different market for real estate in the hills and the higher earnings of the inhabitants. Meadows and woods were located near the town of Brescia and other villages in which great farms, manufacturing enterprises and silk-factories had developed, so hay and timber had a ready market. Besides that, for new landlords the improvement of common land did not require great investment and therefore the effective reduction of the surface dedicated to pastures and forests was less than 2%. Finally, the people living in the hills could work on farms which produced cereals, wine and mulberry leaves used for silkworm-breeding, so there were fewer poor people and there was little opposition against the decisions of the municipalities.

In the central and western plains, the irrigated and most fertile area of eastern Lombardy, municipalities owned a small share of land; in the eastern plain, where there was dry land of low quality, common land could represent a share from 8% to 20% of the *per-ticato comunale*. Here common land was composed of moorland and groves near the embankment of rivers (and so periodically subjected to overflowing), swamps situated near the *fontanili* (the resurgent springs existing at the border between the permeable soil of the high plain and the clay soil of the low plain), newly reclaimed land of low quality, and

humid fields unsuitable for the cultivation of cereals and/or clover. There was very little land producing good yields in cereals and this explains why its cadastral value only represented between 0.5% and 1.5% of the total. During the first half of the nineteenth century the municipalities preferred to sell their land and this increased the number of landlords on the plain. The exception was Bagnolo, where the municipality increased its land from two to nineteen hectares, and also obtained the land of the local *vicinia* (74 hectares). But in general terms in the central and western plains, common land decreased from 3% to less than 0.5%, while in the eastern plain it decreased from 12.5% to 2%. Besides that, as the remaining common land was of low quality, its cadastral value decreased from 1.5% to 0.75%, and if we include the data from the hills the reduction was from 2% to 0.75% (see Table 2). The municipalities normally had no problem with the poor people in the fertile central and western plains because the produce of the common land in these areas represented a small value of the total income produced by the farms and so few people considered them essential for their livelihoods. There were some problems in those municipalities which were situated in the less fertile eastern plains, where an important share of common land was linked to the local *vicinie*. In these cases sales only began after the assignation of the land which had belonged to the *vicinie*. Problems were linked to the price because the members of the *vicinie* asked for a discount for the inhabitants of the village, while municipalities (and obviously all the people living in the village but without rights to the produce of common land) wanted to profit from increased demand (that is they wanted to sell by auction and hoped that outsiders would drive up the bidding). Finally, on the plain crops and yields increased. There was some land of low quality and some evident hydro-geological problem near the rivers, but in general the volume of arable land (and consequently the work for peasants) increased. Pastures and woods decreased respectively by 40% and 20% during the second half of the nineteenth century, but in the same period the *incolti produttivi* decreased by 75% to less than 1,500 hectares. After the great agrarian crisis of the 1880s, efficient farms using new agrarian machines and fertilizers offered work to people who had lost their rights to common land and this eased the negative effects of the decisions of the municipalities.

Common land on the plains and in the hills was reduced from almost 12,750 hectares, as indicated in the Napoleonic cadastre, to the 3,750 hectares shown in the Austrian cadastre. In the second half of the century sales went on and in the Italian cadastre the total surface of common land on the plains and in the hills was almost 2,250 hectares. So the property of the municipalities in eastern Lombardy, which represented 8.5% of total surface in the last years of the Napoleonic period, was reduced to 2.5% in less than fifty years and at the end of the nineteenth century it had decreased to 1.5% (see Table 2). This meant that common land now represented only 17.5% of that at the start of the nineteenth century; that is, almost five-sixths of common land had been sold. Consequently, in many

villages situated on the plain or in the hills common land disappeared and there was only some common pasture and woods. The town of Brescia also sold almost all its property, which was mostly represented by the woods situated in the hills around the town. Common land had a surface of almost 1,790 hectares at the start of the nineteenth century but only 940 hectares at the start of the 1850s, and less than two hectares at the end of the century.

However, the sale did not have the effects which the authorities hoped. Both in the hills and on the plain the production did not increase because the improvement of common land needed great investment and many buyers did not have the required finance or motivation. In fact some people often bought land simply to have a security for loans which were used for other agricultural purposes, or in other economic sectors (such as small-scale manufacturing). In the valleys, only in the last decade of the nineteenth century did the new hybrid seeds and chemistry fertilizers allow small farmers (with limited financing) to improve the production of cereals and forages on previously common land. Finally, concerning the woods on the plain, there were less problems than in the valleys because there was no damage caused by excessive cutting of the trees situated on slopes. However, the excessive destruction of the forests near the rivers caused economic losses. People had no more timber and no new crops in cereals because it was too expensive to cultivate them. The quality of soil was low and in many cases these areas were subject to natural overflowing, so it was impossible to use this land to produce cereals and people could only cultivate low quality forages, which provided lower earnings than the woods.

4. CONCLUSION

In eastern Lombardy during the nineteenth century common land was sold and the principal goal of municipalities and governments was to generate revenue through sales and increased yields. At the end of the nineteenth century, when most common land had been sold or rented out, these aims had patently not been achieved. Furthermore, in some villages the social and economic costs were very high (between 50% and 80% of inhabitants were forced to emigrate) and, as new landlords over-exploited land previously held in common, there was some environmental damage. The public authorities underestimated the social and economic utility of common land and the rules organizing its exploitation. Municipalities and the *vicinie* perfectly understood the quality of land which they owned and during the preceding centuries they had learned how to regulate and coordinate different interests and were able to exploit them better than private landlords. They could not guarantee the best yields because they had to consider servitudes and the needs of poor people, which meant that they only obtained produce from low quality land in which more

people operated. So the difference between real yields and the best possible yields (the goal which governments wanted to achieve) was the price that municipalities paid to keep the social peace and to maintain low-producing pastures and woods. Besides this, municipalities divided amongst their inhabitants the costs linked to the maintenance of common land. This involved a redistribution of resources because poor people received more than they contributed to the community, while wealthier inhabitants received less than they paid to the municipality in the form of taxes.

With the widespread sale of land this system ended and to ensure the subsistence of poor people the municipalities had to substitute the produce of common land with subsidies, but they did not have sufficient funds to do so. It had been hoped that the price paid by purchasers of common land could be used to balance the budget and to increase income to help the poor, this did not happen, however, because the new landlords did not increase production. So in the municipalities, where a great part of income depended on agriculture and forestry, poor people had to emigrate. If they stayed they could not enjoy the produce of common land and they did not receive any subsidies from the municipalities. Finally, new landlords did not invest a lot of money to improve yields. The low quality soil required significant investment and a long period to recover the cost. This also favoured over-exploitation of the land remaining in the hands of municipalities (which was rented). So in some cases the choices made by new landlords and tenants of the remaining common land caused important environmental damage.

Many problems were in fact related to the inappropriate use of common lands. The municipalities and the *vicinie* experienced many difficulties in regulating access and avoiding over-exploitation, which damaged successive harvests. When the village communities regulated the stable access to common land for the neighbours, the fear of exclusion from future earnings for the people who caused damage to the land, obliged all inhabitants to respect the rules, and in any case, most villagers (excluding the wretched) took care to protect the produce. On the contrary, a single landlord, not living in the village or nearby, could profit from his rights (particularly during the second half of the nineteenth century) by adopting a strategy which generated a rapid pay-off for his investment but simultaneously created environmental dangers. So the limited control of the municipalities and the *vicinie* was substituted by the complete lack of control of the state. Only technical progress (improving yields) and new laws limiting the power of landlords could restore the situation. If we consider how common land and the system of distribution of its produce reduced environmental risks and helped people to survive, it becomes clear that the collective use of property was less expensive than private ownership. This was more evident in the high Alpine valleys and where the average earnings were low and the investments needed to increase yields were very expensive. In these cases the gains related

to the exploitation of land did not increase and so neither did the income of municipalities. At the same time many people could not enjoy the produce of common land and did not receive alternative subsidies by the municipalities, so they had to emigrate to find work in Brescia and other industrial areas of eastern Lombardy. There were, on the contrary, few problems in the hills and on the plain, where the environmental risks and the actual costs linked to landslides and floods were inferior. Furthermore, in these areas there were new employment opportunities for people who had lost their rights to common land.

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