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Anna Maria Stagno, Josu Narbarte Hernández, Carlos Tejerizo García\*

# The social dimension of commons between practices and jurisdiction. Case studies from southern Europe (17th-21st c.)

### 1. Introduction

In December 2018 the United Nations adopted the Declaration on the Rights of Peasants (UNDROP) after 10 years of negotiation over a previous text presented by the world organization La Vía Campesina. This declaration can be considered a crucial landmark in the long history of peasant struggles against the setbacks of globalization and the extension of liberalism, which threatened the way of life of thousands of rural communities around the world (Bryceson, Kay, Mooji 2000; Van Der Ploeg 2018). Moreover, this declaration supposed a direct recognition of the contribution of peasantry and rural economies for the achievement of a sustainable world. As we can read from the preamble of the Declaration:

Recognizing also the past, present and future contributions of peasants and other people working in rural areas in all regions of the world to development and to conserving and improving biodiversity, which constitute the basis of food and agricultural production throughout the world, and their contribution in ensuring the right to adequate food and food security which are fundamental to attaining the internationally agreed development goals.

This contribution is even more visible during the current COVID pandemic. As international organizations such as FAO¹ or La Vía Campesina have pointed out, it is precisely in those areas where peasant economies are more developed that

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<sup>&</sup>lt;sup>1</sup> Food and Agriculture Organization of the United Nations (April 28<sup>th</sup> 2020), COVID-19 and rural poverty: supporting and protecting the rural poor in times of pandemic; http://www.fao.org/reduce-rural-poverty/resources/resources-detail/en/c/1273387/.

the virus has had less incidence and also the general support of society has been more effective<sup>2</sup>. Furthermore, the success of international forums like the International Land Coalition (ILC) or the Indigenous Conserved Community Areas Consortium (ICCAs) testify the centrality of sharing resources to promoting sustainable development. Contemporarily we may underline that there is an increasing interest in collective management at the national level (e.g., the Italian Law on *Domini Collettivi*, 168/2017), whereas there is a need to develop these politics at a European level. In summary, the sustainable future of rural areas and the key role of local dimensions in future policies are at the centre of the debate<sup>3</sup>. Notwithstanding this, the current rural world and rural communities are at stake. Although many scholars strongly suggest that the extension of peasant economies is crucial for the development of a more equal and sustainable world, there is also a revitalization of the neoliberal ideologies and global corporations which stand against it (Bernstein *et al.* 2018; Bryceson 2000; Van Der Ploeg 2018). The current situation of peasant struggles in India is an exemplification of this assertion<sup>4</sup>.

The common lands managed by these peasant communities have long been at the centre of this conundrum. Since the analyses of E. Ostrom in the 1990s and the 2000s, the Common Pool Resources have been pointed out as an alternative way of considering the organization of power and land management within rural communities (Ostrom 1990; 2006). The institutional works of Ostrom and. from an historical perspective, of Tine De Moor (et al. 2002), as well as other approaches – such as the social micro-historical perspective (Moreno, Raggio 1992) and the historical ecology (Rackham 1976) which we will tackle later generated a stimulating scientific field around the analyses of the rural commons (Ingold 2011). At the same time, and from an archaeological point of view, the increasing interest for the study of mountain areas – also thanks to the advances in environmental archaeology (Galop, Catto 2014) - triggered researchers to stress and reinforce the dialogue between archaeology and history around rural societies with important focus on rural commons (Viader, Rendu 2014; Tigrino 2017; Costello, Svensson 2018; cf. Brogiolo in this volume) and of which recent colloquiums and this volume are a clear example<sup>5</sup>. It is not surprising: commons

<sup>&</sup>lt;sup>2</sup> https://viacampesina.org/es/estiempodetransformar-los-vientos-de-cambio-son-mas-urgentes-el-covid-19-lxs-campesinxs-lxs-trabajadorxs-agricolas-y-otros-grupos-vulnerables/.

<sup>&</sup>lt;sup>3</sup> Two EU-funded projects have achieved important results in this regard: MEMOLA (*Mediterranean Mountainous Landscapes: an historical approach to cultural heritage based on traditional agrosystems*, Pl, J. Mª Martín Civantos) enhanced the importance of preserving traditional practices, while HERCULES (*Sustainable futures for Europe's HERitage in CULtural landscapES*, Pl Tobias Plieninger) stressed the importance of the involvement of local communities.

<sup>&</sup>lt;sup>4</sup> "Violent clashes as Indian farmers storm Delhi's Red Fort", Hannah Ellis-Petersen and Aakash Hassan, *The Guardian*, 26/01/2021 (https://www.theguardian.com/world/2021/jan/26/violent-clashes-as-indian-farmers-storm-delhis-red-fort) [Date accessed: 26/01/2021].

<sup>&</sup>lt;sup>5</sup> Cf. the workshops on the *Archaeology of commons* held in Genova in 2017 and Oviedo in 2020.

are a 'cross-road topic'. Social historians, for example, have deeply explored the reasons for their success through time, showing their importance in the preservation of rural societies (De Moor *et al.* 2002; De Moor 2015). These views/perspectives/results have also been supported by anthropological research in the field (Agrawal 2001). Historical ecologists and geographers have investigated the positive externalities of common land management for the preservation of cultural landscapes (Rotherham 2013), and their role in the historical process of biodiversification (Rackham 1976 and 1986; Cevasco 2007). However, the mechanisms that allowed collective management to thrive, still need to be fully explored, as well as the role played by material changes in the maintenance or disappearance of such management.

In this paper, we would like to contribute to this discussion focusing on the social dimension of commons and of the practices of their management, approaching them from a jurisdictional point of view. We would like to consider them, altogether with their functional-economic meaning and ways to produce outcomes and to control and activate environmental resources (sensu Moreno 1990), also in their social dimension as tools to activate rights and social relationships. Following the micro-historical perspective, which underlined the need to maintain the double meaning of 'facts' as juridical and productive practices in the investigation of the ancient regime societies, and thus the coincidence of action and rights (Raggio 2001; Raggio, Torre 2004; Stagno, Tigrino 2012), we focus on the meaning of practices as action of possession, that is to say, tools to claim possession and jurisdiction. This approach shows the centrality of conflicts in the constant negotiation around access rights to commons resources between the different actors involved (cf. Moreno, Raggio 1992; Raggio 2007). Moreover, it considers the institutionalisation of commons and the formalisation of the rules around their management not as central elements to understand their functioning, but as part of the continuous dialogue through which commons were constantly built and redefined. This also allows to consider conflicts as elements that regulated mechanisms of inclusion and exclusion to access rights to the commons (Stagno 2018b). This has in fact been acknowledged as key topic to understand the success of certain collective institutions (De Keyzer 2018; see Gould in this monograph).

# 2. A methodology for the study of the commons: landscapes of rights and practices

As already stated, the advances in environmental archaeology, in history of agriculture and in historical ecology today allow to highly qualify and characterise practices and environmental resources. Those researchers took it upon themselves to reconstruct local and synchronic categories used by the social

local actors and to adopt them for the interpretation of their field or for archival evidence. In this way, a variety of uses and practices central in rural economies were brought to light, while for decennia, they had been hidden by the adoption of external and already existent categories, mainly derived from other contexts and periods, such as cadastral categories usually adopted to interpret past evidence. In fact, it is important to acknowledge that these types of categories were defined during the 19th c., within the framework of the construction of a centralised taxation and, thus, aimed at standardise and simplify the conceptualization of the land use, with fiscal aims. Furthermore, they also reflect a productivistic interpretation of the exploitation of environmental resources, a process that is well represented in, for example, the introduction of the dichotomy between cultivated and uncultivated lands (Moreno 1990). On the contrary, regressive analyses and the combined use of field and documentary sources allowed to reconstruct the local categories used to define and qualify resources, making visible those multiple practices carried out in the same parcel within a cycle of uses. These works allowed to clearly demonstrate the key role, before the 19th c. forestry laws, of the use of controlled fire (Sigaut 1975), pastoral use of tree covered areas and permanent fields (Rackham 1976; Grove, Rackham 2001; Moreno 1990) and temporary cultivations (Moreno 1990; Cevasco 2007; Viader, Rendu 2014). They also enabled the reconstruction of local empirical naturalistic and technical knowledge, which had been allowed to control, activate, produce and reproduce environmental resources through precise agro-forestry-pastoral practices and systems.

These studies, among others, showed also that cultivated and uncultivated lands (until the establishment of intensive agricultures during the 19<sup>th</sup> and mainly the 20<sup>th</sup> c.) were not opposite situations but complementary stages, related to the need to constantly maintain and reproduce environmental resources and fertility<sup>6</sup>. Departing from these milestones and applying the perspective of the archaeology of environmental resources (Moreno *et al.* 2010), we have explored the possibilities opened by the consideration of the different meaning of environmental resources management practices as possession acts, and thus the possibility to identify different stages of appropriation (Stagno, Tigrino 2012; Stagno 2015). Tim Ingold, discussing *the temporality of the landscape*, underlines that "the landscape is constituted as an enduring record -and testimony to- the lives and works of past generations who have dwelt within it, and in so doing, have left there something to themselves" (Ingold 1993, p. 154). Ingold's "dwelling per-

<sup>&</sup>lt;sup>6</sup> On the dialogue and circulation around naturalistic knowledge see AMBROSOLI 1992. Those practices were far to be un-rational and unproductive as assumed in the agronomic literature of the late 18<sup>th</sup> c., or spontaneous as imagined by fokloric studies which hid under the category of "traditional" the historical dimension of the local naturalistic knowledge It is interesting to note that the emersion of the technical empirical knowledge around production cycle occurred during the same period between 1970s and 1990s (MANNONI, GIANNICHEDDA 1996).

spective" fits very well with the jurisdictional dimension of production of locality proposed by micro-historians (Torre 2011) that we aim to adopt in the investigation and in the interpretation of the archaeological record. Testimonials produced during jurisdictional conflicts describe action with different weight in the language of possession7: the construction of huts and enclosures, the movement of cattle, the different ways of managing woodland/forests, temporary cultivations etc. are not only different practices and environmental resources, but also diverse ways to appropriate and occupy the space, with different temporalities (permanent, temporary, periodic, etc.), hence implying different meaning as tools to claim possession and jurisdiction. The stratification of these actions, altogether with the possibility to testify (through documentation) the continued use ab immemorabili, were equally important in the construction of access rights and in the continuous processes of their legitimization through conflicts and negotiations. All these actions implied specific tasks and left traces, which can be archaeologically investigated. This evidence might be guite visible on the landscape, as for example when dealing with stone enclosures, sheds or huts. However, some of them are less visible and more subtle, as it happens with some 'ecofacts' such as the presence of specific plant referred to certain practices in the present vegetation cover (indicator species, cf. Rackham 1976; Cevasco 2007), or the buried evidence of past practices, which archaeobotany and geoarchaeology could identify in a high level of precision (e.g. Molinari, Montanari 2016).

Landscapes could be thus considered as the stratified evidence of practices and rights, as well as of memories and local knowledge, hence archaeological evidence makes it possible to read not only changes in uses, but also stratified acts of possession in the landscape, through which social relationships were materialised. Keeping together artefacts and eco-facts, the evidence preserved in the surface allows to build a diachronic (or stratigraphic) reading of the landscape, which suggests not only changes in use, but also in the access rights to resources and spaces.

In this way, it is possible to reconstruct the dynamics of the constant negotiation around spaces, their uses, and their ownership between different actors, such as individuals, local social groups, seigneurial, colonial, imperial or state powers. In this paper, we will focus on the investigations of two of historic common-land areas of the Basque country from Araba (Zalduondo) and from Gipuzkoa (Zestoa and Errezil), characterised by the evidence of ancient wooded meadow pastures (fig. 1). This kind of historic landscapes, well preserved in the

<sup>&</sup>lt;sup>7</sup> The right to use a place was contastly claimed through the use, whose testimonial transcription, without objection constituted a legitimation of the right of use (RAGGIO, TORRE 2004).

 $<sup>^{\</sup>rm 8}$  For complementary reflections about the meaning of the landscapes, and in a perspective of deep history cf. Rippon in this volume.

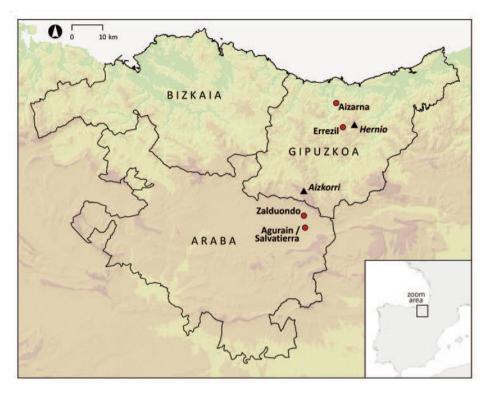


Fig. 1. Location of the discussed sites.

historical dehesas of central Spain, represented the most widespread system to manage tree covered areas in all Western European mountains at least until the end of the 19th c., but have now almost disappeared, together with the multiple uses connected to them (Grove, Rackham 2001; Rotherham 2013; Agnoletti, Emanueli 2016). However, their presence is still visible due to the presence of ancient pollarded and shredded trees, or ring(s) of stems, inside coppiced woodlands. We will investigate changes within environmental resources management practices (from wooded pastures to woodlands) and their relationship with changes in the uses of the seasonal settlements (locally named *majadas* or saroiak) still visible inside wood-lands and we will explore the meaning of those changes in term of access rights and shared or individual uses of resources. For its part, the investigation in Gipuzkoa will focus on seles, spaces inside commonlands reserved to specific uses where the connection between huts and wooded pastures is particular evident. The study will show changes of function of "seles" over centuries and their disappearance during the 19th c., altogether with changes in their ownership.

Araba and Gipuzkoa are differentiated by the fact that in Araba most part of commons documented at the beginning of the 19th c. are still preserved, while in Gipuzkoa – with the exception of the Aizkorri and Aralar plateaux – only a small part of them are preserved as Montes de Utilidad Pública. This difference is a sign of the different processes occurred between the 18th and the 19th c. when the alienation of common-lands started to be promoted and finally institutionalised with the law of Desamortización Civil by Pascual Madoz (Ministerio de Hacienda) in 1855. Both these provinces fell under the 'foral laws' and thus could be exempted from the privatisation. However, while almost all the councils of the hamlets and villages of Álava asked from the exemption due to the status of commons as Montes de Utilidad Pública (Balboa López 1999) in order to be translated as shrubs of public utility (Buesa Saltó 2013), the same did not happen in Gipuzkoa, resulting in a widely privatisation of common-lands by mid-19th c. These differences force to reflect on the articulation of general trends and processes regarding the modern transformation of common-lands, and to explore local differences under the similar general conditions which may allow to interpret how the changes took place.

From a methodological point of view, even though the perspective of the investigation is similar in both cases, the strategies adopted are different: in Araba we will particularly focus on the archaeological evidence and its interpretation, while for Gipuzkoa we will stress the comparison between archival sources related to conflicts on the access rights to commons, and field evidence, showing to what extent it is possible to find similar trends in a wider area. Proceeding step by step will bring, eventually, to further reflect on the meaning of the investigated changes within the framework of a more generalised transformation process documented around Europe, and to reflect on the possible reasons for those detected differences.

# 2.1. Montes altos between wooded pastures and seasonal settlements

In Araba, investigations were carried out within the framework of a project devoted to the archaeological study of common-lands<sup>9</sup>. Research has allowed to reconstruct the historic organisation of common-lands and to understand the articulation between *monte bajos* ('low mountains') and *montes altos* (uplands) as used by the villages of the Alavese plain, as emerges from archival documentation (fig. 2), and to document these high and low mountains in the long term (Aragón Ruano 2003; 2009; Barandiarán 2000).

<sup>&</sup>lt;sup>9</sup> The study was carried out in the framework of the project ARCHIMEDE (FP7-MC IEF, GA 630095) which focused on a study area of around 80 km² and includes a part of the eastern Alavese plain and a large extension of the Aizkorri high plateau (cf. STAGNO *et al.* 2020 for the presentation of the investigation and further references). The Alavese plain was selected because it has a dense historiographic tradition on settlement and landscape formation dynamics (QUIRÓS CASTILLO 2012; 2016).

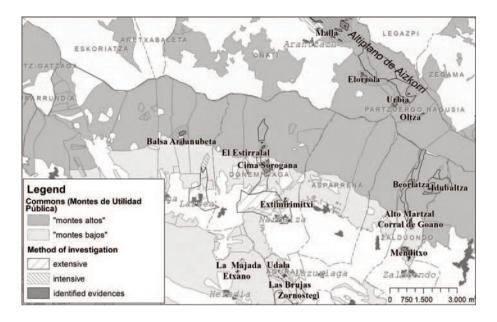


Fig. 2. Alava plain y Aizkorri plateux organization in "Montes altos" and "Montes bajos"; location of the identified evidences and investigation methods (after STAGNO et al. 2020 modified)

The montes bajos, located near permanent settlements, were historically characterised by the presence of wooded pastures where old places of temporary agriculture are easily recognisable. The *montes altos* are also characterised by the presence of wooded pastures, but the traces of temporary cultivation are very rare. However, several phases of charcoal production and, in the case of the mounts of Zalduondo, also pastoral structures (sheds) are documented, the latter of which occur in the absence of domestic spaces. These differences suggest different ways of using mountain resources. The areas placed closer to the settlements must have been used within the framework of local short distance transhumance, in which the livestock was not kept in the pastures, but brought back daily to the village sheds. It was in these low mountains that temporary cultivation was carried out. In these areas, the presence of shed structures, without the evidence of domestic structures, placed at higher altitudes, indicates an overnight permanence of livestock in the pastures, but is not necessarily associated to shepherds' presence. Here, in different periods of the year, livestock from the villages of the Alavese plain was brought to the pastures, alternating phases of grazing nearby the hamlet (during the winter) and short-distance transhumance (during part of the summer). Such absence can be explained by the situation of these pasture areas, placed at no more than 5 km from the town of Salvatierra/Agurain, which suggest that the shepherds would commonly go back

home for the night, leaving the livestock on the pastures<sup>10</sup>. This articulation of sheds was widespread in the mountains of southern Europe (for some compared examples, cf. Stagno 2018b) and, in this case, it was seasonally integrated with forms of transhumant husbandry in the high mountains of Aizkorri (at Oltza and Urbia), where, as we shall see, domestic spaces have been identified. If the analysis of documentary sources has permitted to clarify how the use of pastures varied according to the season and the kind of livestock (Stagno 2019, with reference to the Statutes of Luzuriaga), archaeological research has permitted to appreciate substantial differences in the management forms of spaces and environmental resources<sup>11</sup>.

Archaeological survey has come to a characterisation of these spaces not only from the point of view of their principal pastoral use, but within the wider context of the various forms of resource management, addressing changes and transformations that would not have been visible otherwise.

In other occasions, the role of temporary cultivation in the construction of the low mountains' possession and jurisdictions (Stagno 2017), as well as the relationship between the changes of in the pastoral uses of Aizkorri and in the access rights to the spaces (Stagno 2018a; Stagno *et al.* 2020; Stagno, Tejerizo in press) has been explored. In this paper, we would like to address in depth the discussion about *montes altos* where ancient wooded pastures connected to seasonal settlements without domestic uses have been identified, in order to focus on the relationship between changes within practices and access rights to environmental resources.

It is interesting to notice that evidence of settlements hypothetically related to seasonal use were identified only in the common-lands of the municipality of Zalduondo (cf. fig. 2)<sup>12</sup>. Specifically, we will explore the evidence from two abandoned settlements (Beorlatza; Idubaltzanburu) and a pluri-stratified shed still in use at Goano. These structures are located at *circa* 1000 m asl. Beorlatza and Idubaltzanburu structures were documented inside present coppiced woodlands of oaks and beeches. In these wood-lands, the presence of of charcoal kiln sites suggests that, in the past, these saw an exploitation of these woodlands linked to charcoal production (especially in Beorlatza, where there is a high con-

<sup>&</sup>lt;sup>10</sup> With many differences, also related to access rights, a similar organisation of grazing activities, until 1980's was documented for the neighbouring area of Enztia (BARANDIARÁN 2000).

<sup>&</sup>lt;sup>11</sup> Domestic structures related to pastoral uses have been documented in the Aizkorri Plateau (at Urbia, Oltza and Malla), where the existence of a dense network of seasonal pluristratified settlements is evident. The archaeologically documented discontinuities of this network suggest changes in the ownership of use rights in these spaces, at least since medieval times (STAGNO 2018b; STAGNO, TEJERIZO in press).

<sup>&</sup>lt;sup>12</sup> It is interesting to note that in the Alava plain, Zalduondo is the only municipality which historically coincides with the village and has its own jurisdiction since the 15<sup>th</sup> c., while in the other cases, the municipality of Salvatierra-Agurain gathers hamlets and villages with their own jurisdiction (for further discussion, PASTOR 2011; STAGNO 2017; 2019).

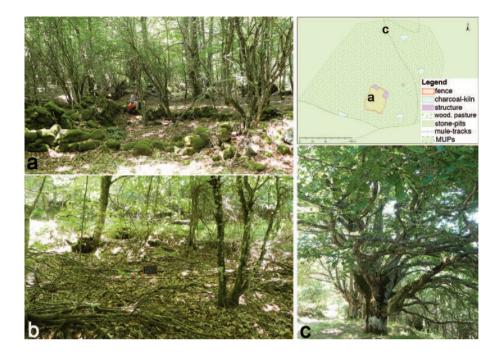


Fig. 3. Beorlatza, investigated area with the typologies of the identified evidences.

centration of kilns)<sup>13</sup>. In addition, the presence of exemplars of pluri-centenarian pollarded beeches and oaks (in Idubaltzanburu), as well as just oaks (in Beorlatza) inside these woodlands, suggests that before the growth of the present-day coppiced woodlands, these areas were wooded pastures. On the contrary, at Goano the wooded pasture with pluri-centenarian oaks is still well preserved and in use without evidence of conversion in coppiced woodland.

At *Beorlatza*, a large pastoral enclosure has been identified in a plain along the slope surrounded by pollarded oaks of about 300-400 years old, placed inside a mixed forest of coppiced oaks and beeches growing, occasionally, even inside the enclosure (fig. 3)<sup>14</sup>. Many charcoal kilns have been identified in the

<sup>&</sup>lt;sup>13</sup> Wooded pastures are still visible at Elorrola in the Aizkorri plateaux ("the sel where white hawthorn are" (elorri, white hawthorn + ola, sel), there a wooded pasture of beeches is documented where a long period of charcoal production was conciliated with the pastoral uses and continued also at the beginning of the <sup>20th</sup> when the charcoal production was intensificated as the increasing number of charcoal-kilns sites well testify (cf. STAGNO *et al.* 2020).

<sup>14</sup> At Beorlatza, the University of Santiago of Compostela carried out core for dendrochronological analyses in the most imponent pollarded oak of the area. Analyses showed that the oak can be dated back to the 15<sup>th</sup> c. Investigation, directed by prof. Ignacio García were carried out in the framework of the Marie Curie ITN Forest Resources for Iberian Empires: Ecology and Globalization in the Age of Discovery (http://forseadiscovery.eu/).

same place. Inside the enclosure two collapsed small quadrangular structures were documented. The archaeological shovel tests carried out in them did not provide evidence of domestic uses and suggested a continuative use of the space since the construction until the abandonment, due to the limited depth of the construction level. The analyses of the enclosure showed that small structures have been added to the previous one. The absence of domestic evidence suggest that the enclosure was used to stable cattle or animals but without the permanence of a shepherd. According to documentary sources, in 1709 – hence constituting a term ante quem, the place name Beorlatza is associated to the presence of a livestock pen inside an oakwood, also providing evidence of the presence of the wooded pasture<sup>15</sup>. The presence of coppiced beeches inside the enclosure suggest that it was abandoned when the wooded pasture of oaks was converted in a coppiced woodland, and, as already mentioned, probably exploited for charcoal production, as proven by the high number of charcoal kilns sites. Due to the optimal conservation of these charcoal kilns, to their visibility and the young age of the scarce trees growing inside them, it can be supposed that such replacement took place during the 19th or early-20th century. The thinness of the levels related to charcoal production suggest that this kind of exploitation was of short duration.

At Idubaltzanburu, in a small plateau along the slope, an area with a high concentration of ceramic materials and a large dispersion of lithic materials was documented, suggesting the presence of buried structures (fig. 4). For a partially collapsed but well visible structure, two phases of use are clearly recognisable: on the upper end (crests) of the walls of a previous structure, another structure was built with a rectangular (ground) plan, the dimensions of which suggest it was used as an enclosure. The site is just outside a present coppiced beech woodland associated to charcoal kiln sites, where the presence of ancient pollarded beeches suggest the existence of a previous wooded pasture. A shovel test carried out in the area with a higher concentration of ceramic materials (sector 12300) has retrieved several fragments of fire and table pottery, dated between the 15th and 17th centuries, as well as a significant number of tiles. No ceramics of later chronology were collected. These materials could be hypothetically related to the oldest structure, suggesting a phase of domestic use for it. The site is nearby one of the historical mule-tracks which connected Zalduondo (and the Alava plain) with Aizkorri plateaux and Gipuzkoa<sup>16</sup>. The reuse of the

<sup>&</sup>lt;sup>15</sup> "majada dentro de un robledal" (Archivo Histórico Municipal de Zalduondo, 10, 3). The meaning of the place-name suggest a pastoral use: The sel [ola+tza] where mares [behor] are stabled. The rural bylaws of Zalduondo (1760-1778), as well as those of Luzuriaga, establish differentiated spaces where and periods during which animals could graze (AYERBE 2010).

<sup>&</sup>lt;sup>16</sup> Cf. Albergues just outside of Zalduondo are also mentioned in the rural bylaws of Zalduondo (AYERBE 2010).

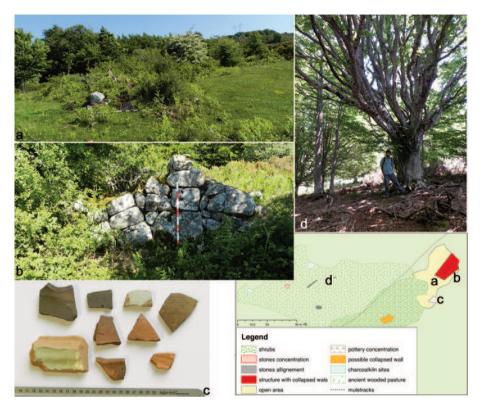


Fig. 4. Loma *Idubaltzanburu*, investigated area with the typologies of the identified evidences (ceramics fragments are from the test pit carried out in the area of ceramic concentration).

structure as an enclosure corresponds to the end of the domestic use of the area and could be linked to the pastoral uses of the wooded pasture (whose chronology is to be reconstructed), while the conversion in coppiced woodland (and thus the interruption of the pastoral use of the area) could be dated back to the beginning of the 20th c.

At *Goano* (800 m asl) a well preserved oak wooded pasture, close to a wide area of pasture grasslands, has been identified (fig. 5). Here, a livestock pen still partially in use was documented. The analysis of its walls has permitted to recognise at least 3 phases of the structure. The characteristics of the older gate suggest that the first phase could be dated to the 17<sup>th</sup> c., while the subsequent phases did not provide any chronological elements. Nowadays, the structure belongs to the Municipality of Zalduondo and is used to shelter the village's cattle left in the pastures overnight. Probably, this was also its function in the past. In the area charcoal kiln sites were not documented.

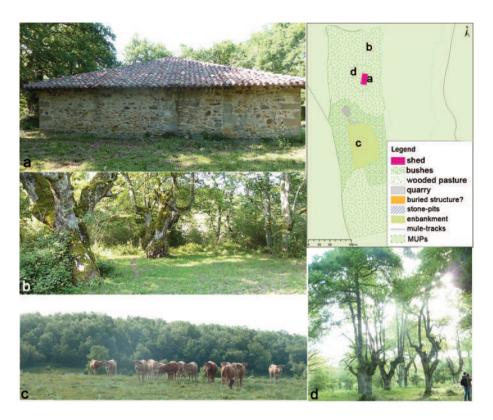


Fig. 5. Corral del Goano, investigated area with the typologies of the identified evidences.

# 2.2. Saroiak in mount Hernio (Gipuzkoa)

Unlike Araba, the territory of Gipuzkoa is defined by a virtual absence of preserved common lands. At present, most of its mountain areas are owned by various private landholders, who use them primarily for industry-oriented monospecific conifer plantations (Michel 2006). The main reason for this situation seems to have been the general privatisation of the commons that took place in the early-19<sup>th</sup> century, within the framework of the French occupation during the War of Independence (Otaegui 1991). However, this was but the last step of a long historical process of conflict and negotiation around the common resources, which set the basis for profound changes in the rights of access and use of common resources over the whole Modern period.

One of the elements that best permits to follow these changes are *saroiak* (in Basque) or *seles* (in Spanish), a very extended kind of geographic entity in the whole Basque Country (Zaldua 2015). They are defined as delimited circular

Element	Social practice	Chronology
Slab alineation	Parcel division	Modern
Birch (Betula pendula)	Parcel division	Undetermined
Blackthorn (Prunus spinosa)	Parcel division	Undetermined
Hawthorn (Crataegus monogyna)	Parcel division	Undetermined
Ash (Fraxinus excelsior)	Parcel division	Undetermined
Dry-stone enclosure	Husbandry (livestock shelter)	Modern
Hut	Husbandry (stockbreeder shelter)	Modern
Coppiced beech (Fagus sylvatica)	Husbandry / Forestry (charcoal fabrication)	Modern
Terrace	Permanent/temporary cultivation	Modern
Farmstead	Permanent habitation	Modern
Limekiln	Lime production (agriculture)	Modern
Dry-stone wall	Parcel division	Modern
Ditch	Irrigation / Drainage (agriculture)	Modern
Conifer plantation (Pinus radiata)	Forest plantation	Contemporary
Path	Forest plantation	Contemporary

Tab. 1. Elements related to historical social practices in the saroiak of mount Hernio.

spaces inside the common lands of a village or valley community, whose use is privatively held by either the community itself or a particular, often laic or ecclesial elites. Medieval texts generally describe them as key elements inside local systems of seasonal husbandry, although their property, uses and management were notably diversified during the Modern period (Etxezarraga, Aragón 2020). Hence, *saroiak* were often involved in the strategies of appropriation and management of mountain resources set in place by social actors at the local scale, which are reflected in episodes of conflict and negotiation over several centuries. Eventually, this fact enhanced a considerable production of documentation around *saroiak*, which can be related to the material traces still existing in the landscape (tab. 1).

A recent research project has contributed to assess the evolution of use and access rights in the *saroiak* of mount Hernio (Gipuzkoa). Placed at the centre of the province, this range marks the limit between several municipalities of the valleys of Urola and Oria. Even if, today, most of its surface is privately managed, evidence suggests that the historical management of its mountain resources involved certain forms of collective action both within and between local communities. In particular, archival records from the 15<sup>th</sup> to 18<sup>th</sup> century address the existence of a number of *saroiak* distributed along this mountain range, with a similar accessibility from the villages of Aizarna (included in the

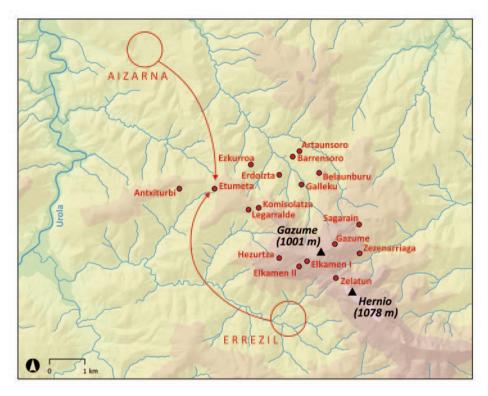


Fig. 6. Location of the common saroiak discussed in the text (dots) in relation to the villages of Aizarna and Errezil (circles) and the physical framework of the Hernio and Gazume mountain summits (triangles).

jurisdiction of Zestoa), to the north, and Errezil, to the south. All of them are recognisable at present, due to the persistence of their toponyms (fig. 6). However, due to the different developments they witnessed over the last five centuries, the spatial layout and current land use of these *saroiak* vary greatly between the ones found on lower slopes (below 500 asl) and those located around the summit (above 800 asl).

The oldest documented reference to these spaces dates from 1452, when an arbitration award dictated by representatives of both communities established a system of rules for their common management<sup>17</sup>. The text describes these spaces as wooded pastures basically allocated to husbandry activities, within the framework of a local transhumance system. Cattle from both communities was allowed to "graze and drink and shelter" within them, whereas foreign livestock was banned. Pigs were tolerated only when acorns were available to

<sup>&</sup>lt;sup>17</sup> Municipal Archive of Zestoa, C.5.II.2.2.

feed them; both communities would have to reach an annual agreement to enter the same number of heads. In contrast, forestry activities were considerably limited, with oaks being particularly protected to preserve the wooded pastures in and around saroiak. Stockbreeders from Zestoa and Errezil were allowed to cut wood from the surrounding commons for the construction of fences and huts, but not inside the *saroiak*, so as not to disturb the cattle during their repose. Only one exception was contemplated: the Elkamen *saroi*, where the neighbours of Errezil used to cut wood for domestic uses. The general prohibition of cutting wood inside the *saroiak* was further confirmed in a municipal ordinance of Zestoa in 1483<sup>18</sup>.

Over the four centuries that followed this arbitration, the situation of the saroiak of Hernio was regularly revised<sup>19</sup>. Each revision included a verification of the state of the woods and, if necessary, the reposition of limit markers - milestones, either central or perimetral, and biomarkers, like blackthorn (Prunus spinosa). These periodical acts of possession, performed in common by the magistrates of both communities, had the function of legitimating the statu quo, especially when the access to the mountain resources was contested. In 1538, for example, the municipality of Zestoa engaged in a lawsuit against several neighbours that had cut beeches and oaks in the common saroiak without permission<sup>20</sup>. Concurrently, the neighbour community of Aia was accused of having moved the limestones of the Sagarain saroi, so as to reduce its perimeter. The conflict was solved with a new measurement and public delimitation, which included a restatement of the privative right that the communities of Zestoa and Errezil collectively held for all uses of the saroiak<sup>21</sup>. A new process took place in 1547 against Juan de Arzallus, whose temporary cultivation made in the commons of Errezil had invaded the area of the Legarralde saroi<sup>22</sup>.

In other cases, conflicts occurred between the involved communities themselves. Most commonly, these conflicts were a tool to adjust the collective management of the resources included in the *saroiak*. For example, when the council of Errezil "mistakenly" sold a load of charcoal from the Galleku *saroi* in 1547, protestation from the council of Zestoa led to the signature of an agreement compensating the latter with an equivalent amount of charcoal from the rest of common *saroiak*<sup>23</sup>. But conflicts could also be related to possessory acts, like in 1613, when representatives of Errezil protested against the magistrates of

<sup>&</sup>lt;sup>18</sup> García Fernández 1997: arts. 53, 54 & 55.

<sup>&</sup>lt;sup>19</sup> In 1512, 1531, 1547, 1595, 1613 and 1730. Municipal Archive of Zestoa, C.5.I.1.5; C.5.I.2.3.

<sup>&</sup>lt;sup>20</sup> Municipal Archive of Zestoa, E.7.II.17.12.

<sup>&</sup>lt;sup>21</sup> Municipal Archive of Zestoa, C.5.I.1.6.

<sup>&</sup>lt;sup>22</sup> Municipal Archive of Zestoa, C.5.I.1.8.

<sup>&</sup>lt;sup>23</sup> Municipal Archive of Zestoa, C.5.II.2.2.

Zestoa for having revised the common *saroiak* hoisting their wands of office, which could be understood as a jurisdictional claim over the surrounding lands, included in the jurisdiction of Errezil<sup>24</sup>.

Documentary records therefore reflect the use of these saroiak as wooded pastures associated to an overnight permanence of livestock in the mountains, possibly linked to a system of local transhumance. The material traces of these uses can be observed in the present-day landscape, especially limit markers milestones and biomarkers, such as blackthorn, hawthorn, birches or ashes -, which reflect the relevance of regular possessory acts as a tool to legitimate the access and use rights of the involved communities. Similarly, within a system focussing primarily on seasonal husbandry, traces of temporary appropriations – dry-stone enclosures for the livestock, huts to shelter the stockbreeders or small terraces for temporary cultivation - are commonly found in the former saroiak. However, these elements are generally circumscribed to the areas placed close to the mountain's summit, located roughly above 800 m asl, like in Hezurtza, Elkamen I and II, Zelatun, Zezenarriaga, Sagarain or Gazume (fig. 7), and are less visible on the medium slopes (500-800 m asl), where only a few elements are conserved in the she of Legarralde, Komisolatza, Galleku and Belaunburu (fig. 8).

In contrast, these kinds of traces are virtually absent from the lower slopes of mount Hernio (below 500 m asl), where most of the former saroiak have been transformed into privatively owned and managed farmsteads. The main landcovers in these areas are therefore related to permanent settlements (dispersed houses and sheds) with their agricultural landholdings, such as gardens, fields and meadows still in use. The material traces of access and use forms are also related to this permanent appropriation, including dry-stone walls as field boundaries, terraces and irrigation or drainage ditches for permanent cultivation, and specialised structures like limekilns for the production of lime, commonly used as an agricultural amendment (Narbarte-Hernandez et al. 2021) (fig. 9). The chronology of these structures varies from early to late Modern. Artaunsoro and Barrensoro, for example, are known to have been sold by the council of Zestoa as early as 1503; by 1562, both had been transformed into farmsteads owned by the noble lineage of Zarautz, who rented them to local peasants (Aragón 2015). Similarly, the council of Zestoa promoted the construction of a new farm in the Ezkurroa saroi in 163625. In this case, the council ceded the management but retained the new farmstead's property: starting in 1712, collected rents were reported in the municipal account books<sup>26</sup>. Finally, there is no documentary evi-

<sup>&</sup>lt;sup>24</sup> Ibidem.

<sup>&</sup>lt;sup>25</sup> Municipal Archive of Zestoa, A.1.3, 24/02/1636.

<sup>&</sup>lt;sup>26</sup> Municipal Archive of Zestoa, C.2.1.

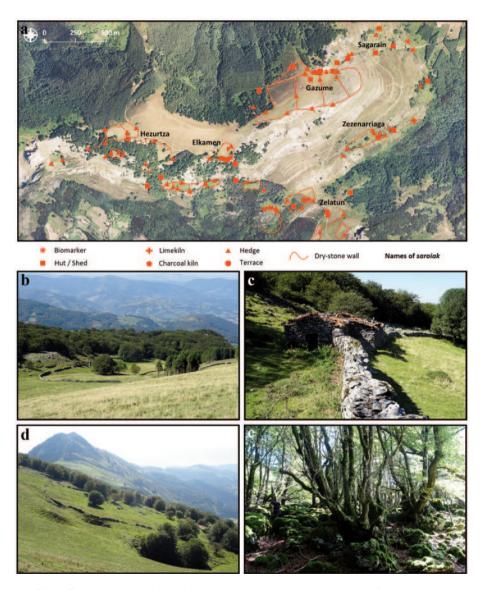


Fig. 7. Elements related to historical social practices in the upper saroiak of mount Hernio.

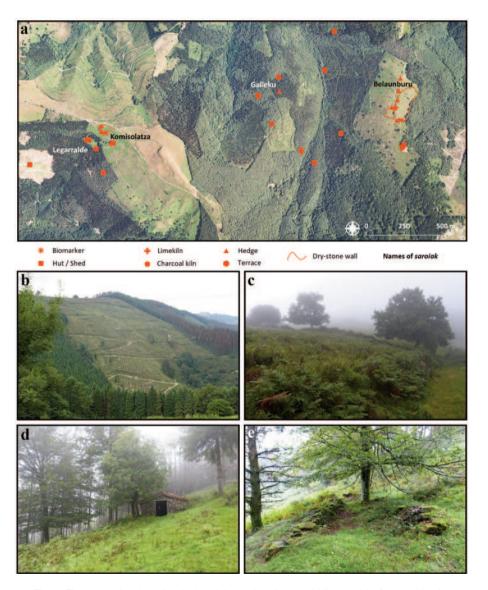


Fig. 8. Elements related to historical social practices in the middle *saroiak* of mount Hernio.

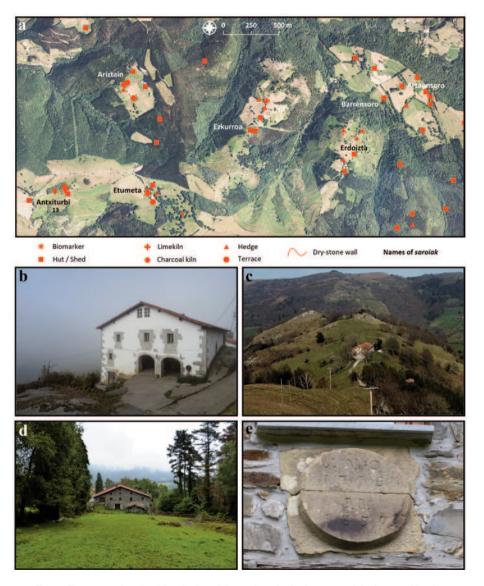


Fig. 9. Elements related to historical social practices in the lower *saroiak* of mount Hernio.

dence of the construction of the Erdoizta farmstead, although the building's façade exhibits an epigraphic inscription with the text «AÑO 1715/1851», clearly the dates of construction and reformation. Coherently, the house's oldest mentions are contained in two boundary revisions from 1743 and 1773 $^{27}$ .

At present, the neighbours of Zestoa and Errezil have no memory of the past existence of these saroiak commonly managed by both communities. Even in the areas where pastoral uses have been preserved, or where the traces of past pastoral uses are visible, the particular juridical situation of these spaces has been completely cancelled by the privatisation of common lands, which occurred in the late-18th and early-19th century. In 1788, both communities agreed to divide the twelve saroiak that were still held in common (excluding those which had already been transformed into farmsteads), so that each part would obtain privative management rights on its respective halves<sup>28</sup>. This decision was part of a larger trend towards the disarticulation of collective properties, especially during the 1808-1814 wartime, when the French military authorities allowed the alienation of common lands as a way to ensure the payment of the debts generated to local corporation by the military occupation. Once the war was over, the restored provincial government of Gipuzkoa requested that each municipality elaborate a list of the commons handed over during wartime. The reports prepared by the councils of Zestoa and Errezil reflect a general privatisation of their common lands, including their parts of the twelve former saroiak and the farmsteads that had remained in the councils' hands, like Etumeta and Ezkurroa<sup>29</sup>, Although a finer analysis would be required to confirm this fact, the division of these areas into very small parcels, sometimes of only a few meter-length, along with the local provenance of many of the buyers, suggest that the former commons were acquired, in many cases, by the same peasants who had hitherto exploited them.

Once privatised, the access and right uses of these areas changed completely, even when the actual forms of exploitation did not necessarily change in all cases. Management changed especially on the medium slopes of the mountain (500-800 m asl), where the new owners introduced, around the mid-19<sup>th</sup> century, massive plantations of pines (*Pinus radiata*), aimed at feeding the demands of the rising paper industry. These plantations, still the predominant landcover in this area, are linked to an intensive forestry model, which implies the aperture of paths for the introduction of heavy machinery or massive clearances that regularly expose the slopes to meteorologic erosion. Consequently, the traces of earlier uses have been erased to a great extent, being confined to small surviving

<sup>&</sup>lt;sup>27</sup> Municipal Archive of Zestoa, C.5.I.2.15; C.5.I.2.17; C.5.I.2.19.

<sup>&</sup>lt;sup>28</sup> Municipal Archive of Zestoa, C.5.II.2.2; C.5.I.3.4.

<sup>&</sup>lt;sup>29</sup> General Archive of Gipuzkoa, JDIM, 1/17/80.

patches of abandoned and degraded wooded pastures. In contrast, the former saroiak placed upwards (>800 m asl) were not suitable for conifer plantations due to their altitude and accidented topography, and have continued to be exploited as extensive wooded pastures areas until present, which has in turn resulted in a better preservation of the material traces of past uses.

## 3. Conclusions

The discussed case studies both in Araba as well as in Gipuzkoa during the 18th c. show a similar situation: seasonal settlements were related to pastoral activities and specifically connected to the use of wooded pastures. However, successive transformations clearly show that this seemingly similar situation concealed many differences within the ownership of spaces and changes regarding the access rights to spaces and resources. One of the most relevant transformations implies the conversion of several *saroiak* of mount Hernio into farmsteads, privately managed by tenant peasants. The different examples show that this process was manifold: some of the new farmsteads, like Artaunsoro and Barrensoro, were controlled by local seigneurial powers, while the councils of Zestoa and Errezil held the ownesship in other cases, like Ezkurroa, Etumeta and Erdoizta.

A second transformation implied the conversion of wooded pastures into coppiced woodlands. In the case of Beorlatza and Idubaltzanburu, this process is linked to the exploitation of woodlands for charcoal production, maybe at the beginning of the 20th c. In Hernio, the presence of coppiced woods in areas like Hezurtza or Elkamen can also be related to the process of privatisation of the *saroiak*, with equal purposes. In all these cases, an individualisation of the uses related to the charcoal production is documented, both when the commons were privatised, as well as when the ownership remained to the community, as in the case(s) of Zalduondo. On the contrary, the case of Goano seems to indicate a continuity of use that appears to be closely connected to the collective ownership of the shed and its use.

The conversion of wooded pastures in coppiced woodlands associated to the intensification of the charcoal production is a situation well documented also in other areas of southern Europe (Serrano Álvarez 2014; Stagno *et al.* 2018) and fits very well within the attempt to make mountain areas 'productive', as promoted by modern administrative states during the 19<sup>th</sup> and the beginning of the 20<sup>th</sup> c.

The forestry regime introduced along the 19th c. in all European states forms part of a wider process of standardisation of the forms of exploitation of environmental resources promoted by the modern administrative states as part of their

consolidation process. The increasing attention to the productivity of the land was associated to the need to define owners and uses due to fiscal purposes, materialised by the construction (introduction) of cartographic cadastres. The promotion of mono-cultural uses and of private property to the detriment of multiple uses and collective ownership had a key role in this process, supported by the agronomic theories of the late 18th c., which considered multiple uses and collective forms of uses irrational and even unproductive. When promoting 'rational' monocultural uses, they transferred a dichotomic articulation of the forms of exploitation (no longer management) of the land: cultivated/uncultivated; wooded areas or open areas (Moreno 1990). The idea driving these reforms was that by providing rational and productive forms of exploitation to the rural and mountain areas, it would have been possible to live there by the only means of agroforestry-pastoral activities, no matter their environmental consequences. These should have been then compensated by scientific and technological advance, as, for example, the introduction of (chemical) fertilisers. The promotion of husbandry sedentarisation – and, therefore, the disappearance of the transhumant ones – is one of the most evident consequences of these processes, as its role of 'transfer of fertility' was disregarded, thanks to the diffusion of chemical forms of fertilisation. In this context, the disappearance of multiple uses, not only pastoral uses of tree covered areas, but also temporary cultivations - due to the conversion of previous wooded pastures (inside common-lands) in either permanent fields or woodlands - brought to a simplification of the landscape and its features, even if the evidence of previous uses is still visible in the surface, as we tried to describe.

What the long process of abandonment and depopulation of rural areas between the 19th and the 20th c. showed – and it is quite visible in Álava – was that this assumption was completely wrong<sup>30</sup>. It is not surprising, as analytical studies demonstrated that rural and mountain societies were characterised by integrated and complex economies until the 18th century (Panjek *et al.* 2017). In fact, even in those places where a seemingly economic sustainability was reached, as in Gipuzkoa, it is not possible to speak in terms of success. The mountain land-scape of Hernio, as it is in much of the Atlantic sectors of the Basque Country, clearly reflects the negative consequences of the 'productivisation'. In these areas, privately-managed conifer plantations, aimed at the paper industry, have become not only the predominant landcover, but also the principal source of income for many farmers. The economic and environmental un-sustainability of this kind of single-income economy is well testified by the loss of biodiversity as a result of the need to continuously expand the allochthonous monospecific plantations, the increasing erosion provoked by the introduction of heavy ma-

<sup>&</sup>lt;sup>30</sup> Even if it drove rationalisation of 19<sup>th</sup> c. and modernisation of 20<sup>th</sup> c. included those promoted by the European Communitarian Agricultural Policy.

chinery, or the negative effect of plagues<sup>31</sup>. At the present the *Servicio de Montes of the Diputación Foral* of Gipuzkoa is working to re-incorporate in the *Montes de Utilidad Pública* all the privatised *saroyak* to avoid the negative environmental consequences of the monocultures.

What it is less visible is that together with these changes in the land-uses, a more important transformation was brought about: the definitive separation between facts and rights, as the access rights were no longer built through action whose possession and jurisdictional value was also acknowledged by central institutions (Raggio 2007), but testified by papers and maps and dependent from central institutions. The introduction of the forestry laws reduced the autonomy of the local social groups in the management of their resources, as the uses were no more locally regulated and negotiated (e.g. through conflicts, customary uses, local by-laws, the evidence of the uses *ab immemorabili*), the permission for cuts, charcoal kiln ignition, etc. had, instead, to be asked to the forestry authorities<sup>32</sup>. The diffusion of charcoal kiln-sites inside common-lands became not only an evidence of a change in the environmental resources management, but also of changes in the relationship between institutions and local social groups occurring between the 19<sup>th</sup> and the 20<sup>th</sup> c.

The definition of boundaries between properties and the priority given to the absolute property (both private or public) is the most evident process of what was defined as "the expropriation of local communities' capacity to produce rights and jurisdiction", that were based on the actions and on their intimately social and historical (as continuative for a long past) dimension<sup>33</sup>.

Archaeology, considering the material effects of these changes, allows to reflect on the relational implications of transformations within ways of sharing re-

<sup>&</sup>lt;sup>31</sup> In 2017, the expansion of the fungus *Mycrosphaerella Dearnessii* affected large surfaces of pine plantations (*Pinus radiata*), resulting in a price crisis and a fast deforestation. In the following years, pine was rapidly replaced with eucalypts (*Eucalyptus* spp.) as the main plantation species, which has aggravated many of the aforementioned problems (*ELOSEGI IRURTIA et al.* 2020).

<sup>&</sup>lt;sup>32</sup> In Spain, the Ordenanzas de Montes of Javier de Burgos were enacted in 1833. In 1901 the Divisiones Hidrológico-Forestales (RD, June 7th, 1901) were created, within a significant ensemble of forestry reforms. These were in effect as an independent specialised service until 1952 (PÉREZ-SOBA DIEZ DEL CORRAL 2013; MONTIEL MOLINA 2003).

<sup>&</sup>lt;sup>33</sup> Cf. Moreno 1992. The 19<sup>th</sup> century was defined as the "century of the erasure of the common lands" (Grossi 1977). Cf. in particular Angelo Torre (2011), who underlined that the process of separation between actions and rights resulted in the folklorisation of the local societies promoted by the sovereign justice, due to the fact that rituals and ceremonies lost their jurisdictional meaning, and became a perpetuation of a past, without a function in the present. While in the ancien régime possession and jurisdiction were constantly negotiated and claimed through actions, since the 18<sup>th</sup> c., due to the need to promote a fiscal control on the land (made possible through cartographic and detailed cadasters), the state started to promote itself as guarantor of property, through fiscality (papers without actions).

sources and spaces. As the Gipuzkoan case studies showed, shared access rights implicated a constant alternation between conflicts and negotiation that was materialised in uses (and usurpations) that, for this reason, had an highly relational (social) dimension. These relational dimensions, which archaeology could bring to light, are what the productivist categories of land-uses concealed. In this perspective, in Álava, the abandonment is evident in Beorlatza and Idubaltzanburu, where the shared use of resources did not continue. On the contrary, at Goano, where both shared uses (both of the shed and pastures, and of the wood collection), continued to this day signs of abandonment are not visible. This suggests a relationship between the lack of abandonment and the continuity of shared uses (tab. 2), more than the presence or absence of common-lands. It is not surprising, as it been already documented that abandonment follows and does not precede the end of the shared uses of resources (Stagno 2019).

To conclude, the process of separation between the environmental, social-jurisdictional and economic meaning of the environmental resources management occurred between the 19th and 20th c., with the promotion of monocultures and private property, was not a unidirectional process. Its affirmation (as in the case of Gipuzkoa) depended by local contexts. Archaeology could provide a valued means of investigation to study these transformations in all their complexity, while linking the environmental and social implications of material changes in practices.

Site	present land-use	Present owner- ship	level of abandonment	past land use	Historic owner- ship	past uses kind of use	distance from the permanent settlement	
Beorlatza	land, wood cut	common- lands	Partially in use	-Wooded- pasture	common to the	collective and individual (tenancy)		
Idubaltza nburu			Partially in use		Wooded-pasture  Comm to the	community of	collective and individual	
Goano	Wooded- pasture		In use			Zaiduondo	collective and individual	
Hezurtza	Wooded pasture	Private	In use			Common	Individual	2 km (Errezil) / 7 km (Aizarna)
Elkamen I			In use					1,5 km (Errezil) / 7,5 km (Aizarna)
Elkamen II			In use		ties of Zestoa and Errezil	(tenancy)	1,5 km (Errezil) / 7,7 km (Aizarna)	
Gazume			In use				2,5 km (Errezil) / 7,7 km (Aizarna)	

Site	Present land-use	Present owner- ship	Level of abandonment	Past land use	Historic owner- ship	Past uses kind of use	Distance from the permanent settlement
Zelatun			In use		Common to the communities of Zestoa and Errezil  Common to the communities of Zestoa and Errezil  Common to the communities of Zestoa and Errezil  Example 1		1,5 km (Errezil) / 8,5 km (Aizarna)
Sagarain	Wooded pasture		In use				3 km (Errezil) / 8 km (Aizarna)
Zezenar- riaga			In use				3 km (Errezil) / 8,4 km (Aizarna)
Belaun- buru	Industrial conifer plantation		Abandoned				3,5 km (Errezil) / 6 km (Aizarna)
Galleku			In use				4 km (Errezil) / 5,8 km (Aizarna)
Komiso- latza	Sec- ondary woodland	Private	Abandoned	Wooded- pasture			3,5 km (Errezil) / 5,5 km (Aizarna)
Legar- ralde	Industrial conifer plantation		In use				3,5 km (Errezil) / 5,5 km (Aizarna)
Erdoizta	Farm- stead, -agricultur- al land- holding		In use				4 km (Errezil) / 5,2 km (Aizarna)
Ezkurroa			In use				4,5 (Errezil) / 4,5 (Aizarna)
Artaunso- ro			In use			5 km (Errezil) / 5 km (Aizarna)	
Barren- soro		land- olding	In use				5 km (Errezil) / 5 km (Aizarna)
Etumeta			Partially in use				4,3 km (Errezil) / 4,4 km (Aizarna)
Antxiturbi		In use				5 km (Errezil) / 4 km (Aizarna)	

Tab. 2 comparison between shared uses, ownership and level of abandonment in the discussed case studies.

#### Abstract

In this paper, we would like to contribute to the current discussion around commons focusing on the social dimension of commons and of the practices of their management, approaching them from a jurisdictional point of view. We will discuss two case studies in the Basque Country where ancient wooded pastures were documented and where we studied the changes in the landscapes during the last centuries. The aim is to show how archaeology, considering the material effects of these changes, allows to reflect on the relational implications of transformations within ways of sharing resources and spaces, and in their environmental effects.

**Keywords:** archaeology of environmental resources, landscapes of practices, landscapes of rights, marginalisation, local complexity

Questo articolo vuole contribuire all'attuale discussione concernente i demani collettivi, focalizzando l'attenzione sulla dimensione sociale e le pratiche di gestione, affrontando l'argomento da un punto di vista giurisdizionale. Si discuteranno due case studio nei Paesi Baschi dove sono stati documentati antichi pascoli alberati e di cui sono stati studiati i cambiamenti del paesaggio negli ultimi secoli. L'obiettivo è mostrare come l'archeologia, considerando gli effetti materiali di questi cambiamenti, permetta di riflettere sulle implicazioni relazionali delle trasformazioni nei modi di condivisione delle risorse e degli spazi, così come dei loro effetti ambientali.

**Parole chiave:** archeologia delle risorse ambientali, paesaggi di pratiche, paesaggi di diritti, marginalizzazione, complessità locale.

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