

# AFFORESTATION OF COMMON LAND IN THE CLASSICAL KARST: RELATIONS BETWEEN THE AUTHORITIES, THE LOCAL POPULATION, AND THE ECONOMIC CONSEQUENCES OF AFFORESTATION

# POGOZDOVANJE SKUPNIH ZEMLJIŠČ NA KRASU: ODNOSI MED OBLASTMI IN LOKALNIM PREBIVALSTVOM TER EKONOMSKE POSLEDICE POGOZDOVANJA

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Abstract UDC 630\*233:33(497.472)"18/19" Nikita Peresin Meden: Afforestation of common land in the Classical Karst: relations between the authorities, the local population, and the economic consequences of afforestation

The findings of environmental history are in the service of ecology and represent an important contribution to the understanding of the sustainable management of land. The aim of this article is to shed light on the relations between the local population and the authorities regarding the afforestation of common land in Komen in the second half of the 19th century and the beginning of the 20th century, placing them in a broader Mediterranean context. The local population was not opposed to afforestation per se, but to the prohibition of usufruct on afforested land, which had major economic consequences for the local population. Authorities did not always take into consideration the annual agricultural processes, local customs, and natural resource needs in their afforestation decisions. The prohibition of usufruct was followed by a shortage of fodder and firewood, which led to forest violations to satisfy demands. Thus, afforestation has undermined the basis of agriculture. In addition, already afforested land remained under common ownership for a relatively long time.

**Key words:** common land, Karst, afforestation, Mediterranean, environmental history.

Izvleček UDK 630\*233:33(497.472)"18/19" Nikita Peresin Meden: Pogozdovanje skupnih zemljišč na Krasu: odnosi med oblastmi in lokalnim prebivalstvom ter ekonomske posledice pogozdovanja

Ugotovitve okoljske zgodovine delujejo v službi ekologije in predstavljajo pomemben prispevek k razumevanju trajnostnega upravljanja prostorov. Prispevek osvetli odnos med lokalnim prebivalstvom in oblastjo na temo pogozdovanja skupnih zemljišč v Komnu v drugi polovici 19. in v začetku 20. stoletja ter slednje postavi v širši sredozemski kontekst. Lokalno prebivalstvo ni bilo uprto proti samem pogozdovanju, temveč proti prepovedi užitkov na pogozdenih zemljiščih, ki je imela velike ekonomske posledice za lokalno prebivalstvo. Oblast pri pogozdovalnih odločbah ni vedno upoštevala letnega kmetijskega procesa, lokalnih navad in potreb po naravnih virih. Prepovedi užitkov je sledilo pomanjkanje krme in drv, ki se je odrazilo v gozdnih prekrških. Pogozdovanje je tako spodvrglo osnovo kmetovanja. Poleg tega pa so pogozdena zemljišča relativno dolgo časa ostala v skupni lasti.

**Ključne besede**: skupna zemlja, Kras, pogozdovanje, Mediteran, okoljska zgodovina

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# 1. INTRODUCTION

Karst's rocky landscape above the bay of Trieste, has undergone radical changes in the course of history, in terms of: vegetation, demography, and intensity and forms of agricultural use, common at the time in the Mediterranean area. In fact, most of the Mediterranean landscape was characterised by the same climatic and vegetation features (Castri & Mooney, 1973; Dallman, 1998). Throughout the modern period, pressure on Karst's natural resources, mainly timber, increased, and the area gradually turned into a rocky landscape of rolling hills and barren plains. Modernisation and demographic growth increased the pressure on land throughout the Mediterranean area, resulting in the extension of cultivation to less fertile land (common land) and an increase in the use of uncultivated "wild" areas (Grove & Rackham, 2003).

Travellers<sup>2</sup> in the 19th century were often dismayed by the apparent destruction of forests of Mediterranean countries. They often exaggerated as they did not distinguish between cutting down trees and destroying forests. Enlightenment period attitudes to land use and increasing government interference resulted in aggravated pressures on common lands, which were considered uneconomic. The idea was that farming and forestry should be separated. The savannah, agro-silvo-pastoral system, was understood as forest degraded by pasturage and woodcutting (Grove & Rackham, 2003; Pinto Correia, 1993). The decreasing extent of forests,<sup>3</sup> along with the development of forestry science and technology, gave birth to the idea of afforestation of Karst with black pine (Panjek, 2006).4 Since the Enlightenment period, literature has pointed to the excessive woodcutting and pasturage by the Karst population as one of the reasons for the socalled deforestation<sup>5</sup> of the Mediterranean area, and of Karst (Culiberg, 2008; Gams, 1991a), conditioning the intention of planned pasturage by the forestry profession and the authorities.6 The 19th century afforestation of Karst is considered to be the earliest example of largescale afforestation<sup>7</sup> in the context of the Mediterranean

area. As we will see in this article, the population of Karst needed the forest to obtain firewood, to make poles for the vineyards, wood for agricultural implements, for the maintenance of buildings, for sale, and for livestock pasture (Perko, 2018). As in the Mediterranean region, the pattern and intensity of forest use was also conditioned by population growth, land privatisation, improved transport and a period of good market value for poor quality trees (Grove & Rackham, 2003). Lower percentage of forest in Karst was also a result of development of the surrounding cities (Trieste, Venice, Gorizia) and their need for wood (Panjek, 2006).

In the revival of the barren Karst landscape, two important issues and ultimately problems arose relating to the methods of afforestation and the cooperation of the main actors. Similar conflicts between local populations (i.e. commoners), landowners, foresters and governments have been documented in: France, Italy, Spain, Cyprus, Greece and Turkey (Grove & Rackham, 2003). In this article, we will pay special attention to the reflections on the afforestation of the Karst landscape in the second half of the 19th into the beginning of 20th century. The main purpose of the paper is to shed light on the attitude of the local population towards afforestation methods imposed by the authorities, and the attitude of the authorities towards cooperation with the population. At the same time, we can critically evaluate the management of the common land using Komen as an example. Since a large percentage of the population underwent radical changes after the abolition of feudalism in 1848, we consequently learn about the economic and social dynamics in the way of life of the local population of Komen at the end of the 19th and in the beginning of 20th century. The goal of this paper is to better understand how different individuals and authorities exercised their rights on common land.

The agrarian crisis<sup>8</sup> that followed the abolition of the feudal system (in 1848) led to even greater social differentiation of rural classes. For those who owned very little

<sup>&</sup>lt;sup>2</sup> See: Panjek, 2006; Shaw, 2008..

<sup>&</sup>lt;sup>3</sup> In the middle of the 19th century, the proportion of forests in the Karst fell to 7.3 percent (Panjek, 2006; Šebenik & Bončina, 2004; Valenčič, 1970; Zorn et al., 2015).

<sup>&</sup>lt;sup>4</sup> Geographers and foresters agree that the non-native black pine was not the optimal choice for planting (Culiberg, 1994; Gams & Gabrovec, 1999; Gašperšič & Winkler, 1986;; Jurc, 1993; Kranjc, 1999; Perko 2016).

The theory of the total and relentless destruction of Mediterranean vegetation is not upheld (Grove & Rackham, 2003). About deforestation see also: Gams, 1991b; Gams & Gabrovec, 1999; Kranjc, 2012; Panjek, 2006, 2015, 2018; Remec, 2021; Šercelj, 1996; Zorn et al., 2015.

<sup>&</sup>lt;sup>6</sup> Regarding the natural conditions, see: Ciglič et al., 2012; Grove & Rackham, 2003; Kladnik et al., 2008; Rajšp & Trpin, 1997.

Plantation forestry is a northern idea that does not transfer well to the Mediterranean landscape (Burges, 1968). After all, afforestation is economically counterproductive, as it brings the lowest return, only around 4% per year (Granda, 2023).

<sup>&</sup>lt;sup>8</sup> On the agrarian crisis in the second half of the 19th century see: Lazarević, 2009; Studen, 2021...

(or almost no) land of their own, rights to the use of common land became of greater, if not vital, importance. Before 1848, the common land was usually the legal property of the landlord, while the administrative function was divided between the landlord and the members of the village community (Slovene: srenja, soseska; German: Nachbarschaft), headed by a mayor. After that, the common land was the usually managed by village community or sometimes municipality under the supervision of the district and provincial authorities. The provisional municipal patent (March 18, 1849) did not clearly define the relationship between the new political municipality and the village community, so there was great confusion. In many cases, common land was attributed to the old village communities. Not infrequently, however, the common land was attributed to the political municipality.9 With the municipal right (Slovene: občinska pravica) and possession of certain usufructs (Slovene: užitki), commoners were allowed to graze livestock and cut firewood on the common land (Premrl, 2018). The afforestation of Karst was inextricably linked to usufructs, as they were forbidden on the afforested land. This significantly reduced the scope of rights from which the population obtained vital goods (especially wood and fodder) yet they received no compensation for their loss (Perko, 2016).

In this article, we will focus on the importance of usufructs on common land selected for afforestation as this reflects local attitudes. We also learn about the importance of sustainable forest management in the context of traditional practises. It must be emphasised that the goal of afforestation was not economic benefit. It was known from the beginning that the rocky substrate, the small amount of soil, the exposure to unfavourable weather conditions meant that vegetation in the Karst region had a longer growing season making profit difficult (Remec, 2021 after Brock, 2014). This is also brought to our attention by the Swiss writer George Baumberger, who noted that in the early 20th century (1902) despite afforestation10: "For miles around there is nothing to be seen but grey washed-out rocks, here and there a pitiful pine and junipers' bush, or a tuft of burnt grass" (Panjek, 2015). Under the influence of the 'successes' in the Karst region, afforestation was carried out along the entire Adriatic coast (Beltram, 1946; Grove & Rackham, 2003). This study will show that it is difficult to speak of afforestation successes when we put the Komen micro-study under the historical microscope, revealing both the local characteristics and the conditions that prevailed throughout the Karst area and even Mediterranean area.

# 2. SOURCES AND METHODOLOGY

Research based on archival sources from the second half of the 19th century and the beginning of the 20th century, as well as on scientific literature. The most important sources come from the regional archives in Koper (Slovene: Pokrajinski arhiv Koper - PAK), more precisely from the fond of the District governorship of Sežana (No. 633, Slovene: Okrajno glavarstvo v Sežani). From here we have evaluated documents from the Karst region on the subject of afforestation (1880 - 1889): Requests from the Komen mayor's office for the usufructs on the afforested common land sent to district governorship (1881 - 1882), letter from the district governorship requesting that the local community prepare the land intended for afforestation (1883), and an exchange of letters between the Komen mayor's office and the district governorship concerning the afforestation of the common area Pod Brdom (1894 - 1898). As we will see, the cartographic

material also played an important role in this study. In order to obtain a more complete chronological overview of the afforestation process in Komen, we examined documents: on orders for fruit and forest trees (1903, 1912), tenders for the improvement of karst pastures (1912) and criminal records on forestry offences (1914), dating back to the first years of the 20th century to the First World War, an event that interrupted afforestation. In the context of the need to update the topic with the current situation, an important source of information was the web portal PISO, which was used to identify the parcel numbers referred to in the correspondence. Among various newspapers, we looked at some of the issues of Ročni kažipot po Goriškem in Gradiščanskem, reporting on the administrative, demographic and economic situation at that time, as well as Novice kmetijskih, rokodelnih in narodskih reči. The selection of the latter was helped

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<sup>&</sup>lt;sup>9</sup> See: Blaznik, 1970.

<sup>&</sup>lt;sup>10</sup> Not only Karst was afforested, but also the Vipava valley and the regions of Tolminsko and Bovško. Parallels pertaining to Karst can be drawn with the Mediterranean area for example with afforestation of pines and eucalyptus in: Spain, Sardinia, Portugal and Cyprus (also India). Here two monocultures were used in afforestation at the end of the 19th century (Grove & Rackham, 2003; Remec, 2021).

by the book Gozd in gozdarstvo v Bleiweisovih novicah 1843-1902 (Perko, 2013). When reviewing the scientific literature, we should highlight Slovenian authors such as Aleksander Panjek (2006, 2015), Franc Perko (2013, 2016), Ivan Gams (1991a, b) and Meta Remec (2021), and Alfred T. Grove and Oliver Racham (2003) among foreign ones. An article by Meta Remec discussing the attitude of the Karst population towards the regulations in both the first and second phases of afforestation concludes that the afforestation laws did not meet the needs of the local population. In this section, we go a step further by using a micro-study to examine when and why local populations reacted negatively to the afforestation regulations and how they expressed these attitudes. In addition, we look at the dynamics of the relationship between the community and the district authorities using correspondence on the subject of afforestation of a particular common plot as an example. Another key feature of our study is the focus on the role, management, and use of the common land that was afforested during the first phase.

The study reflects a bottom-up approach, in terms

of microhistory, that can aid in our understanding of a broader historical theme and place, in our case Karst and the Mediterranean. It illustrates how microhistory not only explains but also builds upon and deepens the insights of macrohistory. According to Giovanni Levi, macrohistory represents only part of the whole of the past, and is incomplete without also looking at the activities and actions of people in small local areas (Levi, 1995). Moreover, historical studies that consider the views of the local population in the context of research on national development activities (e.g. afforestation) are rare in more generalised historiography. Another area in which the study brings new insights is environmental history. Showing the impact of humans on the natural landscape and the area designated for afforestation, and illustrating the interaction of anthropogenic and natural influences through practical examples. Environmental history combines natural and social sciences and history (Sörlin & Warde, 2007). Such an interdisciplinary approach is necessary when studying the history of the Karst changing landscape because nature, perhaps even more than elsewhere, has dictated its own survival strategies.

#### 3. RESULTS

Until the land relief (1848), the village community of Komen (Orig.: srenja) was part of the manor of Reifenberg (today Branik).11 The development of the political (cadastral) municipality of Komen is recorded after 1850. In 1894 it comprised the tax municipalities of Komen (with villages Preserje, Divči and Jablanec), Mali Dol, Sveto, Tomačevca and Volčji Grad. From 1849, Komen was placed under the district governorship of Sežana and within the latter, under the judicial district of Komen (Slovene: sodni okraj; Fakin Bajec, 2011, 2015; Gabršček, 1894). The district governorship was the lower unit of provincial political administration, subordinate to the provincial government and superior to the smallest political authorities - the municipalities. In 1880, tax municipality of Komen had 787 residents, and ten years later 812. In 1894 the cadastral municipality of Komen had a population of 2,263 people (Rutar, 1892). Until the First World War, Komen was part of the Province of Gorizia-Gradisca.

At the time of afforestation Austrian forest regulations dating to before 1809 were still the actual legislation. Any disturbances or damage to forests were forbidden by law (PAK, fond 633, box 144). First phase of afforestation, which lasted until the First World War, was mainly carried out on common land. Although the first plantings were attempted before the mid-19th century, it was not until the 1880s that individual provincial afforestation laws were issued (Perko, 2016). In general, they prohibited all usufructs on the lands selected for afforestation. In 1887 the Provincial Commission for the afforestation of Karst in Gorizia prohibited all usufructs on the plots that were already planted and those that were yet to be planted. The ban meant that the commoners were forbidden to "pasture the livestock, cut wood, collect feathers or leaves or any other usufruct" on the land. The penalty was up to 100 guldens or up to 14 days' imprisonment.12 They had to apply to the district governorship for special permission for usufructs (PAK 633, 265).

<sup>&</sup>lt;sup>11</sup> The Lords of Reifenberg died out in 1371, and their manor was held in pledge until 1649, when the Lanthieri family became the owner of the manor and remained so until World War I (Smole, 1982; Stopar, 2006; Vidmar et al., 1994). On the territory of the manor see: Rutar, 1893. On the noble family Kobenzl see: Južnič, 2013; Pavlin, 2022.

<sup>&</sup>lt;sup>12</sup> The authorities did not use all means in the fight for afforestation. Laws regarding afforestation in general provided for the possibility of expropriation of the landowner, but it was thought that such a punishment would arouse resistance to afforestation among the population (Rubbia, 1912).

In following paragraphs, we present the reactions to afforestation in Komen from the 1850s to the 1880s. Among foresters, <sup>13</sup> authorities and the local population, afforestation of the Karst region aroused many questions, doubts and even conflicts. In 1851, an anonymous resident of Komen presented his positive view on afforestation in the *Novice kmetijskih*, rokodelnih in narodskih reči newspaper. After he emphasised the importance of seedling nurseries, he reported that the locals had been inconsistent both in preparing land for planting trees and in securing municipal nurseries. A correspondent local reported that there were many opponents of tree planting in the Karst area.<sup>14</sup>

In the middle of the century another opposing letter by Franc Bunc from Komen was found in Novice. Bunc believed that the agrarian and social plight of the local population was the consequence of the afforestation. He was concerned about how they were going to meet their needs for pastures and timber when such a large part of the common land was to be afforested and closed to any other use. He stressed that the local population of Karst was struggling to make ends meet and that the authorities should compensate them for the deprivation of their usufructs, at least for a few years. The Kranjska kmetijska družba (English: Agricultural Society of Carniola) assured Bunc and others that were like-minded, that the authorities did not intend to plant trees on the entire Karst area at once and deprive them of the usufructs they so desperately needed.15

More than ten years later (in 1866), Janez Milič, the regional head (Slovene: *predelni voditelj*) for the Afforestation of Karst in Trieste, wrote to the municipalities of the Karst region expressing his dissatisfaction with the way the land selected for afforestation was managed. Among other things, he ordered that stones should be picked up and put in place on the afforested common land (PAK 633, 177).

In 1881, the commoners from Vojščica (neighbouring municipality) asked the district governorship for the usufruct of grass and firewood in the common forests set aside for afforestation. Before afforestation began, the commoners wanted to harvest the grass and also clear and reduce trees, as the land was not economically profitable (PAK 633, 205).

In the following year the economic council<sup>16</sup> of Sveto asked for the abandonment of the municipal seedlings nursery, which did not bring in any income. They

asked if it could be changed in such a way that it would benefit the entire municipality. The district governorship granted the request, stating that the nursery was indeed neglected (PAK 633, 211).

We encounter a letter from the Komen mayor's office (there is also an identical letter from Škrbina) referring to the prohibition of woodcutting in the forests from April 15 to October 15, according to the Code of Laws of March 4, 1882. They asked for permission to cut trees (Latin: *fraxinus*; Slovene: *jesen*) before October 15, as it was an old custom to do so earlier (from August 20 to September 30), as the wood had a much longer life span. If the trees had been cut later, the leaves needed for cattle bedding would have fallen off and they would have been forced to reduce the number of animals (PAK 633, 211).

In 1881 and 1882, the mayor's office of Komen requested permission from the district governorship to harvest grass on no less than nine common plots where it was prohibited due to afforestation. These plots were located in the tax municipalities of Tomačevica, Mali Dol and Volčji Grad (PAK 633, 211).

In 1883, the district governorship ordered that one thousand holes be dug in the Komen municipality within half a month. Four days before the deadline, they informed the district that they would not be able to dig all the holes in time. They cited field work, housework, and bad weather as reasons for incompletion, and asked for an extension of the deadline (PAK 633, 222).

The focus of our study is the correspondence between the district governorship in Sežana and the mayor's office in Komen (mayor Josip Kovačič) regarding the afforestation of the common land area called Pod Brdom (at that time parcel nos. 414/3, 255/1, 2 and 3).17 The letters of correspondence date back to the period between 1894 and 1898. Nearby (to the east) was the land area of Pod Sv. Lovrencom (then parcel nos. 256 /1, 2 and 3), i.e. a common pasture where they had a common water reservoir called Fontana. The following Figures 2, 3 and 4 show the study area at different times. Figure 2 shows the area Pod Brdom in 1821. The marked parcel no. 414 was still complete in 1821, but by the end of the century it had already been divided into parcels no. 414/1, 2 and 3. Figure 3, which is part of the correspondence, also shows the state nurseries, which were located on the common land with parcel no. 756/4. The marked areas are: the pine plantation (Orig.: Nadel holz bestaud), area for seed collecting (Orig.: Saatschule) and the nursery (Orig.: Heister

<sup>&</sup>lt;sup>13</sup> In 1851, the forestry commissioner Anton Ahčin is mentioned for the Komen area (Novice 1851, 14–15).

<sup>&</sup>lt;sup>14</sup> Novice kmetijskih, rokodelnih in narodskih reči 1851, 14–15.

<sup>&</sup>lt;sup>15</sup> Novice kmetijskih, rokodelnih in narodskih reči 1853, 32.

<sup>&</sup>lt;sup>16</sup> Slovene: gospodarski svet. That was an assembly of srenja, set up as needed within the municipal administration.

<sup>&</sup>lt;sup>17</sup> According to the 1892 inventory of municipal estates in Komen, parcels 255/1-4, 414/1,3 and 4 were classified as municipal pasture. Parcel number 414/2 was classified as forest (ARS 56, 2857, 443).



Figure 1: Cirje Forest (Photo: Nikita Peresin Meden, August 2022).

*Baumschule).* The land containing parcel no. 414/1 (Figs. 3 and 4) was reportedly devastated at this time and the tree plantings uprooted.

In 1894, forestry technicians<sup>18</sup> noticed that the trees in the area of Pod Brdom did not grow well due to the 'hanging position' and the associated soil erosion, which occurred mainly when it rained. Another reason for the poor growth of the trees was the poor care of the trees by the local population. The district governorship therefore decided to order the protection of the forest lands under the following instructions, which testify to the burden that was put upon the local population: 1. Strict prohibition of wood and grass cutting and pasturage without the permission of the district; 2. Afforestation of promising parts of the land with pines or spruces (in the same month). Cutting down or clearing old trees during the coming winter; 3. Erecting a fence to protect against livestock intrusion; 4. Putting up signs and declaring that these lands are under forest protection. The mayor's office had previously asked the district for permission to graze the land, to which it responded that a decision would be made after the land was planted and a report made. In the same year (1894), the land with parcel numbers 414/3 and 256/1 was also designated for afforestation, and the following year permission was requested to cut the trees. We note that acacia trees had already been cut on these

parcels, without the knowledge of the Mayor's Office and also without the permission of the district. In his letter, the mayor emphasised that the trees were municipal property, indicating that the people had the right to decide for themselves on the management of the common land (PAK 633, 275).

The district governorship was informed about the unlawful woodcutting in the Pod Brdom area as well, and in 1895 summoned four accused residents of Komen (Josip Kovačič, Jakob Pipan, Jakob Makovec, and Janez Malič) to a hearing, who unanimously claimed that they had done no harm to the forest, as they had merely cleared the trees of dry and unnecessary branches. The mayor of Komen sided with the accused as he was actually an offender also (Josip Kovačič; PAK 633, 275). In 1895, a divisional plan was submitted to the Gorizia provincial committee, which provided for the division of the common land in the municipality of Komen. Plots nos. 414/1, 414/3 and part of plot 414/4 were removed from the divisional plan (AS 56, 2856, 442).

The district governorship had repeatedly ordered the community to reforest and/or fence off the Pod Brdo area. In 1896, for example, the mayor's office replied that they did not have the wood or the time to build a wall around the land. In the same year, the district ordered that the afforested pasture of Pod Sv. Lovrencom, adjacent to the

<sup>&</sup>lt;sup>18</sup> The document does not mention the so-called technical forestry staff by name, but the composition of the Commission for the Afforestation of the Karst (1894) can be taken from the Ročni kažipot. Besides the president, Count Coronini Cronberg Fr., the district governors of Gorizia and Gradisca, the forest advisor and forest supervisor in Trieste Rossipal Anton, the forest supervisor in Gorizia Pucich Josip, the provincial deputy and lawyer dr. Abram Josip, and three landowners and commissioners for the political districts of Sežana, Gorizia and Gradisca are also mentioned. In the forestry department of the district governorship od Gorizia, the forestry inspector Rubbia Konrad and the forester Turnay Edvard. In the Management of State Forests and Domains for Carinthia, Carniola, Primorska and Dalmatia, the forest supervisor Beyer Mihael, the forester Viljem Meyer, three forest wardens, two forest assistants and one forest worker are mentioned under the forestry department (Gabršček, 1894).

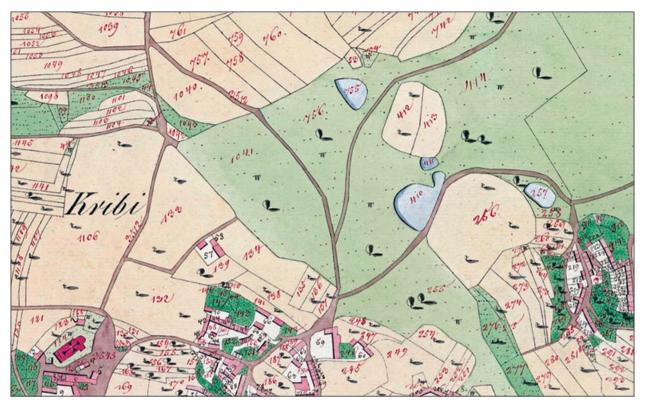


Figure 2: Land area Pod Brdom according to cadastre of Franz Josepf I (year 1821; ASTS, Catasto Franceschino, 130).

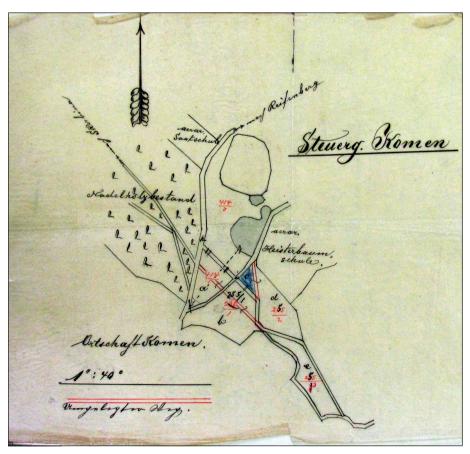


Figure 3: Land area Pod Brdom in 1894 (PAK 633, 275).

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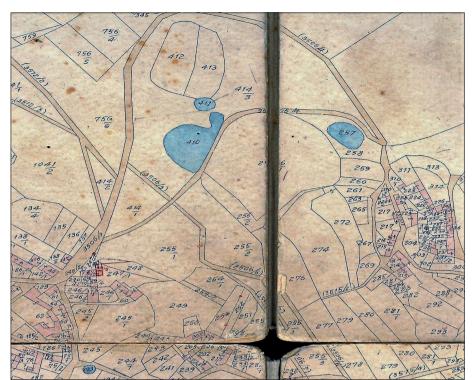


Figure 4: Land area Pod Brdom at the beginning of the 20th century (PAK 80.1.1, 5).

land of Pod Brdom, should be surrounded with a stone wall by the end of the year. In their answer, the mayor's office also gave reasons why they would not be successful. Firstly because of unfavourable weather, making work in the fields difficult. Also when the weather was good, they had to make up for the work in the fields; Secondly bad weather, and especially during storms, made it impossible to do any outside work; Thirdly the budget did not specify the scope of the work and the amount of money needed, which moreover, had to be approved by the municipal committee. For this reason, "people could not be persuaded to do it". Even before the beginning of spring of the following year (1897), they announced that all the land Pod Brdom and Pod Sv. Lovrencom, previously protected by a temporary wooden fence made of pines and spruces, had already been enclosed with a stone wall. At the end of 1897, the district governorship again ordered that the land of Pod Brdom should be walled off and planted on. Again, the community did not dig holes or plant trees because they thought it was not the right time. The district governorship extended the deadline for planting, but with the caveat that the mayor could be held personally liable for the proper execution of the work by a certain date (PAK 633, 275).

Between 1881 and 1882 alone, 67 requests for extraordinary usufruct of the afforested area were submitted to the district governorship in Sežana. Later there were fewer applications, for example 25 between 1885 and 1886 and only 12 between 1911 and 1912, but it should be remembered that some places in the Karst region also came under the district governorates of Gorizia or Gradisca<sup>19</sup> and made similar applications there. That means that there must have been even more requests in the Karst region in total.

Today the land area Pod Brdom consists of parcels nos. 414/19, 255/2, 3 and 9. The correspondence also mentions the area Pod Sv. Lovrencom (today parcel No. 256/1 and 2) and parcel no. 414/1, which today is divided into parcels nos. 414/15 and 17. This area is part of the Cirje forest, which was declared a natural monument in 1992 and consists of parcels nos. 255/2, 3 and 9, 414/17 and 19 and 256/1. The Pod Brdom area was in municipal ownership at the end of the 19th century, but today it is owned and managed by the Komen - Divči - Preserje agrarian community (Bogataj, 2021). While the two adjacent plots of land in the area of Pod Sv. Lovrencom is owned by the local church.<sup>20</sup>

<sup>&</sup>lt;sup>19</sup> The municipality of Opatje selo for example belonged to the district governorship of Gorizia. While the municipality of Sagrado (the judicial district of Gradisca) and the judicial district of Monfalcone, which included the municipalities of Duino, Doberdo' del Lago and Monfalcone, fell under district governorship of Gradisca. In the Ročni kažipot the municipalities are called županije (Gabršček, 1893).

<sup>&</sup>lt;sup>20</sup> Web site: E-sodstvo: https://evlozisce.sodisce.si/evlozisce/javni\_izpisi/list.html

#### 4. DISCUSSION

In the introduction we had already establish the general factors that contributed to excessive use of the common land. It is worth mentioning that at the end of the 19th century there was an active population growth, which must have played an important role when we discuss pressure on common natural resources. We presented reactions to afforestation in Komen which give us important input on situation from the local's point of view. Although the earliest source represents a positive position on afforestation, it did not reflect the mentality of the majority. Regional head for the Afforestation of Karst in Trieste ordered in 1866 ordered that stones should be picked up and put in place on the afforested common land, although pasturage and woodcutting there were prohibited. By clearing all bushes and stones, combined with wind and rain, ideal conditions for soil erosion were created. The latter played a key role in the further existence and growth of the trees.

The 1880s provincial afforestation laws prohibited all usufructs on the lands selected for afforestation, thereby significantly reducing the amount of land from which the local population obtained essential goods, especially firewood and fodder. The prohibition was clear, but the punishment for the offence was rather vaguely defined. Letters from the 1880s testify to the economic and social situation in the Komen municipality and its immediate surroundings, which was reflected in the attitude of the population towards the afforestation orders. Throughout the Karst area, a distinction is made between harvesting and cutting (Slovene: kositi, žeti) the grass on common afforested land. Harvesting was done with a sickle, cutting with a scythe. Communities mostly asked for permission to harvest grass, which means that it was not a larger area of grass, but tufts of grass collected around stones and dry stone walls, mostly by women. It is understood that the need for animal feed was great when they asked for a usufruct, where the profit was relatively small. The economic council of Sveto asked for permission to change the purpose of the neglected municipal seedlings nursery. The reasons for the neglect are not stated in the archival document, but in light of other cases in the Karst region, it can be assumed that the reason for this unprofitable condition was a lack of knowledge and/or interest in the proper care of the seedlings. It is also possible that planting was done on unsuitable soil, for example, on a site that was too rocky and prone to wind and erosion. This request shows a desire to use the common land more wisely. The letters from Komen in Škrbina reveal a request for permission to cut down trees before it was allowed by the forest law. The reason for this law was to prevent overuse of the forest during the most intense growing season. The authority and foresters who drafted the law were not aware of or did not consider traditional practices related to sustainable forest management, or they would have put the prohibition in the forests in a different light. Since the use of forests permeated the lives of most people, it can be said that the authorities were unaware of the way of life in the countryside, which depended on natural factors. The tendencies of the authorities and foresters were directed against the traditional forms of forest resource management.21 Also of great significance is Komen's request for permission to harvest grass on nine common plots where this was forbidden due to afforestation. The requests show the important role of usufructs on afforested common lands in the domestic economy of Karst. It can be concluded that the way afforestation was carried out in the first phase did not meet the needs of the local population. The prohibitions on the usufructs on common land affected the commoners, who depended on it. And this was the case even thou the Kast area experienced an economic upturn in the second half of the 19th century, due to the accelerated development of Trieste which increased the possibilities for Karst's local population to earn a non-agricultural income.

In 1883, the district governorship ordered that one thousand holes be dug in the Komen municipality within half a month. It is obvious that the authorities did not pay attention to the annual agricultural process in terms of the deadline for digging. The local population was willing to cooperate as long as the afforestation did not interfere with or even disrupt agricultural work and as long as it did not significantly restrict their rights on the common land. Most of the commoners were in favour of afforestation because they were aware that some areas could be improved. However, they were concerned about the prohibitions on use, because, although the authorities emphasised that they had selected barren areas for afforestation, this was not the case. The problem was that the common land designated for afforestation was linked to existing agriculture, especially livestock farming, which produced marketable highs in milk and dairy products. Without these common areas, farmers simply could not farm. The old conflict between pasture and forest, which was very much at stake until the end of extensive livestock farming, was emerging. The common land was not only a necessary function of forestry (firewood and dry branches), but also of livestock farming (grass, pasturage, leaves).

Correspondence between the district governorship in Sežana and the mayor's office in Komen illustrates the relations between the local population and the authori-

<sup>&</sup>lt;sup>21</sup> About that see: Panjek, 2015.

ties regarding the afforestation of the common land area called Pod Brdom. We found that the area must have been afforested prior to 1894, but the grove was not maintained thereafter and was exploited without permission from the district governorship, in violation of the law. The first order (1894) of the district authority to improve the growth of trees is proof that they were not aware of the basic laws of erosion as they ordered the felling or clearing of the old trees on the land. The district governorship had repeatedly ordered the community to reforest and/or fence off the Pod Brdo area. It is obvious that the local population preferred to work on their own land, which financially supported them. The obligations imposed by the district authorities in relation to afforestation made their lives difficult. In the letter, they explained that this work and the associated costs had been planned by the local administration for the following year. So they had made a decision that was not theirs, because the afforestation work was usually ordered by the district governor. Can this be called disobedience of the local population and also of the local authority in Komen towards the district authority?

Local population usually had a good reason why they did not obey the orders to afforest the plots. In one case presented there was drought in the area during this period, and a strong storm at that time of year would have destroyed all the young pines and spruces. They knew the laws of the occurrence of gusty karst wind (burja) and when and where wind blew the strongest. Therefore, it made sense for them to wait to plant. Of course, we must also consider the possibility that they were just trying to delay planting, which they did not agree with. Given the repeated orders for planting on the same plot, it is possible that sometimes only certain areas of the plot were to be planted, but this is not mentioned in the sources. The interplay of anthropogenic and natural influences in the area of Pod Brdom is obvious, with the local population of Komen and the authorities having to balance their interests in this land.

While letters to the district governorship ended with the appointment of the mayor's office and the signature of the mayor, all of decisions (e.g., the request for usufruct) were approved by the municipal committee (Slovene: občinski odbor), who tried to maintain a balance between sustainable use of the common land and the needs of the community members. It is fair to say that the letters to the district authorities represented the opinion of the majority of the local population. We have noted that the local population of Komen opposed afforestation orders that did not meet their needs. While Remec (2021) argues that the Karst people "spasmodically resisted" the process of afforestation, we take this thesis one step further by analys-

ing specific examples. On the basis of numerous orders of tree seedlings at the beginning of the 20th century (PAK 633, 302, 358) and advocacy of improvement of pastures in a competition (Gorica, 22 May 1912; PAK 633, 358), it is clear that the local population, and also the Karst population in general, were not opponents of afforestation, but only opponents of the violation of their rights to common or private land. They were not indifferent to the condition of common forests and pastures, especially those that were beneficial to them. Understandably, they put the care of the afforested land, from which they usually had no benefit but only labour, in second place.

In the Komen area, as in the rest of the Karst area, the commoners asked for permission to graze, cut grass, collect leaves, cut bushes or trees. The numerous requests for usufructs for the areas destined for afforestation show that these areas were of great importance for the local economy. The local population of Komen lacked both pasture and timber during this period, as evidenced by the criminal records of forestry offences between 1914 and 1915 (PAK 633, 394).<sup>22</sup> This scarcity, which led to violations of forest laws, can be considered one of the consequences of afforestation. We conclude that afforestation is precisely the reason why the common land of Pod Brdom was not divided into private property, as there was probably neither a reason nor an interest to do so. The prohibition of use did not lead to the commoners to see an economic opportunity in the division of this land. Moreover, the land designated for afforestation was usually of lower quality. The area was characterised by a steep slope that caused soil erosion when it rained, and by strong winds that could be fatal to young trees. These features are considered additional reasons against privatisation. The Pod Sv. Lovrencom area was categorised as pasture and those were usually the last to be subdivided into private ownership.<sup>23</sup> Although the common land to be afforested was owned by the municipality, the district authorities made all administrative decisions and forwarded them to the mayor's office, which had to take them into account or defend itself in the event of failure to carry out its duties. The orchestrated administration kept the municipality from dividing its land among the commoners. The mayor's office stubbornly resisted orders that did not meet the wishes and needs of the local population. This shows the desire for autonomous decision-making over common land. One of the reasons for the assertive attitude of the local population is certainly the judicial, fiscal and administrative function of Komen. Another reason could be the scattered economic activities, which were not based mainly on the primary sector. Agriculture served more to supply households, as more and

 $<sup>^{22}</sup>$  Between 1887 and 1911, 567 offences were prosecuted in the Karst region, including 370 cases of unauthor

<sup>&</sup>lt;sup>23</sup> On the distribution of common land for individual use or as private property, see: Britovšek, 1964; Peresin Meden, 2017, 2019.

more residents were engaged in trade, handicrafts, and tourism.<sup>24</sup> The expanded integrated peasant economy<sup>25</sup> allowed for greater independence from the land and thus from the authorities associated with the land. Moreover, it

can be seen that the district authorities increasingly took over the administrative function on the common land and the municipal administration was increasingly limited to following orders.

#### 5. CONCLUSION

With the purpose of shedding light on the relationship between the authorities and the local population of Komen on the subject of afforestation, we have already seen in the 1850s the concern of the population about the prohibition of usufruct of afforested land and the related shortage of pasturage and wood, which undoubtedly affected their interest in fulfilling the afforestation tasks ordered by the district authorities. In general, the afforestation methods did not correspond to the needs of the local population, the geomorphology of the surface and the climatic conditions. We found that the authorities did not always take into account traditional practices related to mindful management and local needs for natural resources. On the other hand, the local population defied orders that were not in line with their needs. The rather extensive collection of requests for usufructs and other letters from Komen confirms that they respected the authority of the district governorship. However, in some cases the mayor's office and with it the people did not show the usual obedience to the governor, i.e. when compared with other similar documents of the Karst region mayoralties at that time. The process of afforestation was rebellious against traditional forms of forest resource management and was not in line with the needs of the local population, resulting in defiance of afforestation orders and violations of forest laws prohibiting woodcutting. The sources show that the local population of Komen was keen to make greater economic use of the land designated for afforestation, tree nurseries and pastures, and was also interested in the selected planting of trees. It means that they did

not perceive the forestry policy of that time as economic, rational, or the most appropriate for the local economy.

We used the case of Komen to find out what impact the afforestation provisions had on the life of the Karst population, comparing the study in some aspects with the wider Karst area. Like Giovanni Levi (1995), our study concludes that the local population of Komen had their own "rational strategy" in afforestation, which was oriented towards the transformation and use of the natural world and adaptation to authority. The scarcity of animal fodder and firewood and the status-quo of common land ownership appeared to be consequences of afforestation in the case of the Komen micro-study. The local population knew the natural characteristics of the land and what the optimal use was. The district authorities, who managed the afforested common land, were not aware of this. The more precise role of the forestry staff remains an open question for the time being. The correspondence represents a bureaucratic red tape on the subject of afforestation of land which in some cases was not even suitable for planting. The local population was far more affected by the prohibition of all usufructs than by the afforestation tasks. Afforestation needs to be studied at micro-levels, because only here can the specificities and drawbacks be revealed. The commercialisation of agriculture has often prevented the authorities from carrying out conservation efforts, which have the disadvantage of being very time-consuming making it difficult for the local population to see the benefits. Especially when no real profit was involved, but on the contrary, the commoners were confronted with great economic loss.

### **SUMMARY**

Prispevek se poglobi v odnos med lokalnim prebivalstvom in (prvostopenjsko) politično-upravno oblastjo na temo pogozdovanja v drugi polovici 19. in v začetku 20. stoletja na primeru Komna na Krasu. Študija temelji na analizi in interpretaciji arhivskih dokumentov in zem-

ljevidov, povečini hranjenih v fondu Okrajnega glavarstva v Sežani (PAK). Srčiko raziskave predstavlja korespondenca med komenskim županstvom in okrajnim glavarstvom v Sežani glede pogozdovanja občinskega zemljiškega območja Pod Brdom. Po dokumentaciji in lokaciji par-

<sup>&</sup>lt;sup>24</sup> By 1894, Komen also had a post office, a notary, an armoury, a doctor, a watchmaker, a steam mill, a blacksmith, a grain threshing station, two canteens/butcheries, and a canteen/shop (called štacuna) (Gabršček, 1894). See: Fakin Bajec, 2019; Gabršček, 1911.

<sup>&</sup>lt;sup>25</sup> About the concept of "integrated peasant economy" see: Panjek et al., 2017.

celnih številk in aktualizaciji študije smo dognali, da se korespondenca nanaša na današnji gozd Cirje. Temelji za sodelovanje so bili že v začetku postavljeni na majavih tleh, saj je bil cilj pogozdovanja vse prej kot ekonomski. Kljub temu prebivalstvo ni bilo uprto proti samemu pogozdovanju, temveč proti kršenju njihovih užitkov na skupni zemlji, ki je bila v prvi fazi predmet pogozditve. Kljubovali so ukazom okrajne oblasti, ki niso bili v skladu z njihovimi potrebami. Okrajna oblast ni vedno upoštevala delovnega procesa na podeželju, ljudskih tradicij, lokalnih potreb po naravnih virih in ni bila seznanjena z vsemi okoliščinami na teh zemljiščih. Lokalno prebivalstvo je imelo lastno racionalno strategijo pri pogozdovanju, ki je bila usmerjena k preoblikovanju in uporabi naravnega sveta ter prilagajanju avtoriteti. Viri pričajo, da so strmeli k večjemu ekonomskemu izkoristku zemljišč, ki so bila določena za pogozditev, drevesnic, pašnikov ter zainteresirani tudi za premišljeno zasaditev dreves. Prepovedi užitkov je sledilo pomanjkanje krme in drv, ki se je odrazilo v gozdnih prekrških. Poleg tega so pogozdena zemljišča relativno dolgo časa ostala v skupni lasti, kar je bilo pogojeno z zakonom in interesom. Ta zemljišča so izločili iz načrtov za razdelitev skupne zemlje v privatno last.

The article discusses the relationship between the local population and the (first-level) political-administrative authorities on the topic of afforestation in the second half of the 19th century and the beginning of the 20th century, in the example of Komen in the Karst. The study is based on the analysis and interpretation of archival documents and maps, mostly kept in the collection of the District

Governorship in Sežana (PAK). The core of the research is represented by the correspondence between the mayor's office in Komen and the District Governorship in Sežana regarding the afforestation of the common land area Pod Brdom. We located the parcel numbers and actualize the study and found that the correspondence refers to the present-day Cirje forest. We realised that the foundations for the engagement of the local population were on shaky ground from the start, as the goal of the afforestation was anything but economic. Nevertheless, the population was not opposed to afforestation per se, but to the violation of their usufructs on the common land that was the subject of afforestation in the first phase. They defied the orders of the district authorities, which were not in line with their needs. The district authorities did not always take into account the working process in the fields, the folk traditions, the local needs for natural resources, and were not aware of all the circumstances on these lands. The local population had its own rational strategy in afforestation, which was aimed at reshaping and using the natural world and adapting to authority. Sources show that they were keen to maximise the economic use of the land designated for afforestation, nurseries and pastures, and were also interested in the thoughtful planting of trees. The ban on usufructs was followed by a shortage of fodder and firewood, which was reflected in forest offences. Furthermore, afforested land remained in common ownership for a relatively long period of time, due to law and interest. These lands were excluded from the plans for the division of common land into private property.

#### REFERENCES

#### **Archival sources:**

- ASTS Archivio di Stato di Trieste, Catasto Franceschino, Mappe del Cat. Franc., Distretto di Rifembergo, Comune di Comen, box 130.
- SI AS Arhiv Republike Slovenije, 56 Komisija za agrarne operacije, archival units 2856, 2857, boxes 442, 443.
- SI PAK Pokrajinski arhiv Koper, Okrajno sodišče Sežana (fond 80), 1.1., 5.
- SI PAK Pokrajinski arhiv Koper, Okrajno glavarstvo v Sežani (fond 633), boxes 144, 177, 205, 211, 222, 265, 275, 302, 358, 394.

#### **Internet resources:**

E-sodstvo.Elektronska zemljiška knjiga: Redni izpis/zgodovinski izpisek/katastrska občina Komen. https:// evlozisce.sodisce.si/evlozisce/javni\_izpisi/list.html [Accessed 16 February 2023].

#### Literature:

- A. B. (partially anonymous), 1851. Glas iz Krasa za obdelanje Krasa. Novice kmetijskih, rokodelnih in narodskih reči, 14 15, 9, 02.04.1851, 09.04.1851.
- Beltram, V., 1946. Pogozdovanje Krasa ni problem. Gozdarski vestnik: 9–18, 29–39, 72.
- Blaznik, P., 1970. Kolektivna kmečka posest. In: Blaznik, P., Grafenauer, B., Vilfan, S. (Eds.), Gospodarska in družbena zgodovina Slovencev, Zgodovina agrarnih panog: 1. zvezek: Agrarno gospodarstvo. Državna založba Slovenije, Ljubljana, pp. 149–160.

Bogataj, N., 2021. Slovenske srenje kot izročilo in priložnost.

- Ministrstvo za kmetijstvo, gozdarstvo in prehrano, Ljubljana, 283 pp.
- Brock, E., 2014. New Patterns in Old Places. Forest History for the Global Present. In: Andrew C. I. (Ed.), The Oxford Handbook of Environmental History. Oxford University Press, New York, pp. 154–177.
- Bunc, F., 1853. Besedica o Krasu s kratkim opisom Komenske fare. Novice kmetijskih, rokodelnih in narodskih reči, 32, 20.04.1853.
- Burges, N. A., 1968. In: Tutin, T. G., Heywood, V. H., Burges, N. A., Moore, D. M., Valentine, D. H., Walters, S. M., Webb, D. A. (Eds), Flora Europaea: Rosaceae to Umbelliferae. Cambridge University Press, Cambridge, pp. 304–305.
- Castri, F., Mooney, A. H., 1973. Mediterranean Type Ecosystems: Origin and Structure. Ecological Studies7. Springer Berlin, Heidelberg, 408 pp.
- Ciglič, R., Hrvatin, M., Komac, B., Perko, D., 2012. Kras kot kazalnik za določanje manj primernih območij za kmetijstvo. Acta Geographica Slovenica, 52 (1): pp. 61–98.
- Culiberg, M., 1994. Dezertifikacija in reforestacija slovenskega Krasa. Poročilo o raziskovanju paleolitika, neolitika in eneolitika v Sloveniji, 22: pp. 201–217.
- Culiberg, M., 2008. Vegetacija Krasa v preteklosti. In: Hrvatin. M. (Ed.), Kras: trajnostni razvoj kraške pokrajine. Založba ZRC SAZU, Ljubljana, pp. 100–101.
- Dallman, R. P., 1998. Plant Life in the World's Mediterranean Climates: California, Chile, South Africa, Australia, and the Mediterranean Basin. University of California Press, Barkley; California Native Plant Society, Sacramento, 257 pp.
- Fakin Bajec, J., 2015. Komen kraški Pariz: interpretacija krajevne zgodovine na podlagi ustnih in časopisnih virov iz prve polovice 20. stoletja. Kronika: časopis za slovensko krajevno zgodovino (Iz zgodovine Krasa), 63 (3): pp. 607–626.
- Fakin Bajec, J., 2019. Vpliv urbanega razvoja Trsta na življenje kraškega kmeta konec 19. in v prvi polovici 20. stoletja. Kronika (Iz zgodovine Trsta), 67 (3): pp. 629–648.
- Gabršček, A., 1894. Kažipot po pokneženi grofiji Goriško-Gradiški, 1. Goriška tiskarna, Gorica.
- Gabršček, A., 1911. Kažipot po pokneženi grofiji Goriško-Gradiški, 16. Goriška tiskarna, Gorica.
- Gams, I., 1991. Sistemi prilagoditve primorskega dinarskega krasa na kmetijsko rabo tal. Geografski zbornik = Acta Geographica, 31: pp. 5–106.
- Gams, I., 1991b. The origin of the term karst in the time of transition of karst (kras) from deforestation to forestation. In: Proceedings of the International Conference on Environmental Changes in Karst Areas, Università di Padova, Padova, pp. 1–8.

- Gams, I., Gabrovec, M., 1999. Land use and human impact in the Dinaric karst. In: Karst and agriculture in the world, Societa speleologia Italiana, Roma, pp. 55–70.
- Gašperšič, F., Winkler, I., 1986. Ponovna ozelenitev in gozdnogospodarsko aktiviranje slovenskega krasa. Gozdarski vestnik, 44 (5): pp. 169–183.
- Granda, S., 2023. Marginalije k ekološki zgodovini. The manuscript is held by the author of this article.
- Grove, A. T., Rackham, O., 2003. The nature of Mediterranean Europe: An Ecological History. Yale University Press, London, 384 pp.
- Jurc, M., 1993. Zdravstveno stanje in razvojna težnja mladega črnega bora na slovenskem Krasu. Gozdarski vestnik, 51(4): pp. 178–190.
- Južnič, S., 2013. Kraševec gospodar v Bruslju: ob tristoletnici rojstva Janeza Filipa Kobencla. Kras: revija o Krasu in krasu, o ljudeh in njihovem ustvarjanju, 122/123: pp. 14–19.
- Kladnik, D., Petek, F., Urbanc, M., 2008: Pogozdovanje in ogozdovanje. In: Hrvatin. M (Ed.), Kras: Trajnostni razvoj kraške pokrajine. Založba ZRC, Ljubljana, pp. 136–145.
- Kranjc, A., 1999. Reafforestation of Kras improvement or degradation? In: Proceedings of the International Seminar on Land Degradation and Desertification, International Geographical Union, Aveiro, pp. 71–76.
- Kranjc, A., 2012. Dinaric Karst: an example of deforestation and desertification of limestone terrain. In: Deforestation around the world, pp. 73–94.
- Lazarević, Ž., 2009. Plasti prostora in časa: iz gospodarske zgodovine Slovenije prve polovice 20. stoletja. Inštitut za novejšo zgodovino, Ljubljana, 466 pp.
- Levi, G., 1995. Nematerialna dediščina, Življenjska pot piemontskega eksorcista iz XVII. stoletja. Studia humanitatis, ŠKUC, Filozofska fakulteta, Ljubljana, 237 pp.
- Marušič, B., 1999. Na Krasu od konca antike do današnjih dni: okoli 500-1500 In: Culiberg, M., Kranjc, A. (Eds.), Kras: pokrajina, življenje, ljudje, Založba ZRC, SAZU, Ljubljana: pp. 164–189.
- Mlinšek, D., 1993. Beseda o knjigi. In: Kordiš, F., Dinarski jelovo bukovi gozdovi v Sloveniji, Univerza v Ljubljani, Biotehniška fakulteta, Oddelek za gozdarstvo in gozdna gospodarstva, Ljubljana: pp. 6–7.
- Ostrom, E., 1990. Governing the Commons: The Evolution of Institutions for Collective Action. Cambridge University Press, Cambridge, 295 pp.
- Panjek, A., 2006. Človek, zemlja, kamen, burja: zgodovina kulturne krajine Krasa. Založba Univerze na Primorskem, Koper, 127 pp.
- Panjek, A., 2015. Kulturna krajina in okolje Krasa: o rabi naravnih virov v novem veku. Založba Univerze na Primorskem, Koper, 154 pp.

- Panjek A., Larsson J., Mocarelli, L. 2017. Integrated peasant economy in a comparative perspective: Alps, Scandinavia and beyond. Založba Univerze na Primorskem, Koper, 444 pp.
- Panjek, A., 2018. Against the Desert in the Karst: a Paradigm-shift from Ruined Landscape to Cultural Savannah. Ekonomska i ekohistorija, 14 (1): pp. 52–71.
- Pavlin, V., 2022. Hans in družina Kobenzl od prebivalcev Štanjela do zemljiških gospodov. In: Vidic, F., Stasi, A. (Eds.), I Cobenzl: una famiglia europea tra politica, arte e diplomazia (1508-1823) I, Archivio di Stato di Gorizia, Gorizia; Lithos, Roma, pp. 69–95..
- Peresin Meden, N., 2017. Vloga vaške skupnosti in zemljiškega gospoda pri upravljanju srenjske zemlje v zgodnjem novem veku in na primeru devinskega gospostva na Krasu [Master thesis]. Univerza na Primorskem, Koper, 84 pp.
- Peresin Meden, N., 2019. Srenjska zemlja v sodobnem mednarodnem zgodovinopisju: aktualna vprašanja / Communal Land in Modern International Historiography: Topical Questions. Prispevki za novejšo zgodovino, 59(3): pp. 132–153.
- Perko, F., Grdina, I., 2013. Gozd in gozdarstvo v Bleiweisovih novicah 1843-1902. Zveza gozdarskih društev Slovenije, Gozdarska založba Jutro, Ljubljana, 831 pp.
- Perko, F., 2016. Od ogolelega do gozdnatega krasa: pogozdovanje krasa. Zveza gozdarskih društev Slovenije, Gozdarska založba Jutro, Ljubljana, 269 pp.
- Perko, F., 2018. Josip Koller: začetnik pogozdovanja krasa s črnim borom. Gozdarski vestnik, 76 (5/6): pp. 249–254.
- Pinto Correia, T., 1993. Threatened landscape in Alentejo, Portugal: the 'montado' and other 'agro-silvo-pastoral' systems. Landscape and Urban Planning, 24 (1-4): pp. 43–48.
- Premrl, B., 2018. Slavno županstvo v Koprivi. Zgodovina iz turna Sv. Elije. Založba ZRC, Ljubljana, 536 pp.
- Rajšp, V., Trpin, D., 1997. Slovenija na vojaškem zemljevidu 1763–1787 (1804), 3. zvezek. ZRC SAZU, Arhiv Republike Slovenije, Ljubljana.
- Remec, M., 2021. Črni bor kot črna kuga: odnos lokalnega prebivalstva do pogozdovanja s črnim borom na Krasu v 19. in 20. stoletju. Prispevki za novejšo zgodovino, 61 (2): pp. 43–66.
- Rubbia, K., 1912. Petindvajset let pogozdovanja Krasa na Kranjskem: poročilo komisije za pogozdovanje Krasa v vojvodini Kranjski o delovanju od leta 1886 do konca leta 1911: z dvema podobama. Pogozdovalna komisija, Ljubljana, 85 pp.
- Rutar, S., 1892. Poknežena grofija Goriška in Gradiščanska, I. del: Prirodoznanski, statistični in kulturni opis. Slovenska Matica, Ljubljana, 116 pp.

- Rutar, S., 1893. Poknežena grofija Goriška in Gradiščanska, II. del: Zgodovinski opis (12 podob). Slovenska Matica, Ljubljana, 131 pp.
- Shaw R. T., 2008. Foreign Travelers in the Slovene Karst 1486-1900. Inštitut za raziskovanje Krasa, Založba ZRC, Ljubljana, 338 pp.
- Smole, M., 1982. Graščine na nekdanjem Kranjskem. Državna založba Slovenije, Ljubljana, 712 pp.
- Sörlin, S., Warde, P., 2007. The Problem of the Problem of Environmental History: A Re-Reading of the Field. Environmental History, 12 (1): pp. 107–130.
- Stopar, I., 2006. Rihemberk, sivi grad v dolini Branice. In: Jereb, Z., Jogan, S., Vidmar, C., Abram, P., Kolenc, E. (Eds.), Kronika Rihemberka Branika II: zbornik strokovnih prispevkov s področja arheologije, zgodovine in umetnostne zgodovine. Kulturno posvetno društvo Franc Zgonik Branik, Krajevna skupnost Branik, Branik, pp. 19–42.
- Studen, A., 2021. »Kruh je najti le v hudo redkih hišah«:
  Postanek v Senožečah v času pereče eksistenčne krize
  sredi 60. let 19. stoletja. In: Peresin Meden, N. (Ed.),
  Dolenčev zbornik 2021: ob 200-letnici ustanovitve
  pivovarne Adria in 60-letnici rojstva senožeškega
  zgodovinarja Ervina Dolenca. Občina Divača,
  Divača, pp. 119–143.
- Šebenik, D., Bončina A., 2004. Spreminjanje gozdnatosti kraškega gozdnogospodarskega območja v obdobju 1830–2000. Gozdarski vestnik, 62 (9): pp. 355–366.
- Valenčič, V., 1970. Gozdarstvo. In: Blaznik, P., Grafenauer, B., Vilfan, S. (Eds.), Gospodarska in družbena zgodovina Slovencev, Zgodovina agrarnih panog, I. zvezek: Agrarno gospodarstvo. Državna založba Slovenije, Ljubljana, pp. 417–463.
- Vidmar, C., Jogan, S., Bavčar, M., Jereb, Z., Kmecl, M., 1994. Kronika Rihemberka – Branika. Krajevna skupnost Branik, Branik, 405 pp.
- Vilfan, S., 1961. Pravna zgodovina Slovencev: od naselitve do zloma stare Jugoslavije. Slovenska matica, Ljubljana, 567 pp.
- Vilfan, S., 1980. Soseske in druge podeželske skupnosti. In: Blaznik, P., Grafenauer, B., Vilfan, S. (Eds.), Gospodarska in družbena zgodovina Slovencev, Zgodovina agrarnih panog: 2. zvezek: Družbena razmerja in gibanja. Državna založba Slovenije, Ljubljana, pp. 9–74.
- Vilfan, S., 1991. Uvod v pravno zgodovino. Uradni list Republike Slovenije, Ljubljana, 159 pp.
- Zorn, M., Kumer, P., Ferk, M., 2015. Od gozda do gozda ali kje je goli, kamniti Kras? Kronika (Iz zgodovine Krasa), 63 (3): pp. 561–574.