

Professionalization, State-building and the Language Question in Forestry: The Case of the 19th Century Kingdom of Hungary

RÓBERT BALOGH – PÉTER HOMOR

Balogh, Róbert – Homor, Péter: Professionalization, State-building and the Language Question in Forestry: The Case of the 19th Century Kingdom of Hungary

Due to its role in transforming landscapes, and because of its knowledge production that took place in a transnational space, forestry is a salient aspect of environmental history globally. Yet, the way forestry management practices evolved in the eastern part of Austria-Hungary has a meagre presence in the literature of environmental history or in the study of empires. This paper begins with outlining routes of circulation of knowledge of forestry within the Habsburg Empire. It emphasises the role of the Academy (later College) of Forestry and Mining at Banská Štiavnica (Selmechánya in Hungarian) but does not ignore the role of other actors outside that education institution. Then, the paper turns to how the history of professionalization of forestry and the nascent legal notions related to land contributed to the changes of the landscape in the Kingdom of Hungary in the last decades of the 19th century. The third section discusses the importance of the effort by the community of Hungarian foresters to create a Hungarian professional language.

Key Words *Forest Management; Professionalisation; History of Professional Training; State-Building; Nationalism; National Language*

doi.org/10.15452/Historica.2022.14.0003

Contact *University of Public Service (Budapest) – Széchenyi István University (Győr); balogh.robert@uni-nke.hu – homor.peter.sze.hu*

The purpose of this paper is to situate the history of the professionalization of forest management in the Kingdom of Hungary within the larger context of global and regional developments. In his grand work on the global history of the 19th century, Jürgen Osterhammel posited that deforestation was one of the important changes between 1850 and 1920 on four continents. Osterhammel emphasised that the rate and extent of deforestation accelerated during those seven decades and exceeded the total forest area lost between 1700 and 1850. He highlighted the role of empires and capitalism in bringing about these changes contemporaneously.¹ At the same time, Osterhammel added that despite global connectedness through the phenomenon of ghost acres (trees felled in one region due to demand in a distant region or continent), historians would be wrong to project a single story line everywhere and that conservation ideas had an impact during the same period. It is worth studying the specific local and regional histories of forest management: the existence of global histories and connectedness does not mean that

¹ OSTERHAMMEL, Jürgen: *The Transformation of the World : A Global History of the Nineteenth Century*. Princeton 2014, p. 376.

there was a course of developments that can be applied to all cases.² In his recent works, Wolfgang Göderle has attempted to bring the Austro-Hungarian Monarchy as an empire within this global history while highlighting its special character. Göderle presented that Austria-Hungary had the capacity to act as a high-modernist state in the field of resource extraction and its innovative bureaucrats developed tools of representation to facilitate this process. Göderle showed that forestry administration was one of the branches that carried out planned interventions to biological niches, such as introducing mongooses to islands supposedly infested with snakes.³ When studying 19th century empires, forestry policies emerged to have an important role in state building through resource extraction and ideas of conservation.⁴ Importantly, for our research questions, Viktor Pál has recently argued that high modernist forest management in the territory of the 19th century Kingdom of Hungary was to control mountainous areas where non-Hungarians lived.⁵ Pál discussed major state projects of water management and forest conservation as two sides of the same coin: nationalising nature.

When discussing the history of knowledge, Osterhammel pointed out the role of the German language throughout the 18th and 19th centuries in literature and science and that it gained even more prestige with the founding of a unified Germany, and in the evolution of the university as a form of knowledge production, training and socialisation. Osterhammel also points out that German universities were the ones that instituted the model of research universities that also had a wide impact on training and knowledge production in Central Europe.⁶ In fact, the role of research rapidly increased at the Academy of Banská Štiavnica (Selmechánya in Hungarian) in the late 19th century. However, for placing Central Europe in the global circulation of knowledge and its institutions, it is important to give nuance to this picture. The case of the Kingdom of Hungary shows that German was not the only language used in administration and science. Jan Surman has pointed at the importance of language politics of nationalism, including translation, in the emergence of positivist science in Central Europe, with particular attention to Polish and Czech speaking territories.⁷ Our paper also contributes to reappraising the interaction between the global nature of scientific knowledge, legislation as well as nationalism.

We argue that the 19th century Kingdom of Hungary was a hub for developments of forestry practices especially with respect to the politics behind the use of language, legislation and higher education. Hungarian professional forestry emerged in the second half

² Ibidem, p. 381.

³ GÖDERLE, Wolfgang: The Habsburg Anthropocene : Vipers and Mongooses in Late Habsburg Southern Dalmatia. *Südost-Forschungen* 79, 2020, no. 1, pp. 215–240. DOI: <https://doi.org/10.1515/sofo-2020-790112>.

⁴ SIVARAMKRISHNAN, Kalyanakrishnan: *Modern Forests : Statemaking and Environmental Change in Colonial Eastern India*. Stanford 1999; OOSTHOEK, Jan K. – HÖLZL, Richard (eds.): *Managing Northern Europe's Forests : Histories from the Age of Improvement to the Age of Ecology*. Oxford 2018.

⁵ PÁL, Viktor: The “Second Hungarian Conquest of the Carpathian Basin” : High Modernism and the Ecological Crisis in the Eastern Half of the Habsburg Empire during the Nineteenth Century. *Agricultural History* 98, 2024, no. 1, forthcoming.

⁶ OSTERHAMMEL, J.: The Transformation, p. 782.

⁷ SURMAN, Jan: Translating Positivism : Framing Positivism in Book Series in Czech and Polish. In: Idem – SUMILLERA, Rocio G. – KUHN, Katharina (eds.): *Translation in Knowledge, Knowledge in Translation*. Amsterdam 2020, pp. 145–168; SURMAN, Jan: Science and its Publics : Internationality and National Languages in Central Europe. In: ASH, Mitchell G. – SURMAN, Jan (eds.): *The Nationalization of Scientific Knowledge in the Habsburg Empire, 1848–1918*. Basingstoke 2012, pp. 30–56.

of the 19th century, within the political framework of the Austro-Hungarian Empire. The question emerges however, what was specific about this situation?

The Compromise of 1867 marked the birth of a new political arrangement where the elites of Hungary recognized the right of the Habsburg dynasty to rule, and Franz Joseph I recognized the right of the Hungarian elite to form and run separate state organs and legislation of the Kingdom of Hungary. After 1867, autonomous central ministries and county administrations came into being or gained a new level of competence. At the same time, Hungarian nationalism fed on the memory of the 1848–1849 War of Independence from the Habsburg Empire and on the fear of competing nationalisms, both of which were cornerstones of the Hungarian-speaking political establishment and elite behaviour.⁸ The professionalisation of forestry was one of the areas where ideas about the common good, state and nation interacted with each other.

In turn, these interactions shaped the connection between human communities and the landscape that they were a part of. On the one hand, 19th century liberal economics and forest management were focusing on practices related to creating wealth, such as standards and methods for calculating the value of forest stands, that foresters applied in Hungary as well. In the past two decades, forest history research revealed that the German-speaking professionals were important nodes in the global circuits of knowledge production and transmission. Johann Christian Karl Gayer's (1822–1907) textbook written in German and the German-born Wilhelm Philipp Daniel Schlich's (1840–1925) English language textbooks became standard reference points worldwide. The latter's career in England and in British India highlights the colonies' importance in the development of forestry standards.⁹ Another similar example is Dietrich Brandis (1824–1907), who had a key role in establishing what tasks forest rangers proposed to share between the land use practices of indigenous peoples and professional forestry practices globally in the second half of the 19th century.¹⁰ On the other hand, the Hungarian National Association of Forestry, that brought state-, and privately employed foresters and private forest owners under one umbrella, became an important actor in creating a respectable professional society that enabled foresters to contribute to the nation-building project of the Hungarian elite.

Both of these circumstances had an impact on what the idea of the state and the “Hungarian Empire” within the Habsburg Empire meant for foresters and how this concept manifested on the ground from the 1860s.

Firstly, foresters had to engage with the peripheral position of forested regions, the Carpathians within the Kingdom of Hungary. These forested regions on the fringes of the country were mostly home to ethnic groups with their own national movements: Slovaks, Romanians, and Ruthenians. This put foresters in a special role: they were representatives of the Hungarian state administration in areas where few other branches of administration reached.

⁸ PALLÓ, Gábor: Scientific Nationalism : A Historical Approach to Nature in Late Nineteenth-century Hungary. In: ASH, M. G. – SURMAN, J. (eds.): *The Nationalization*, pp. 102–112.

⁹ DARGAVEL, John – JOHANN, Elizabeth: *Science and Hope*. London 2013, pp. 30–61.

¹⁰ WOHLERS, David C.: Prome, Burma : How a Village in Colonial Burma Became the Global Epicenter of Scientific Forestry and Impacted the Founding of the United States Forest Service. *Journal of Forestry* 117, 2019, no. 5, pp. 515–524. DOI: 10.1093/jofore/fvz045.

Secondly, global developments of the field prompted the implementation of standardised practices of forest management. Rational management of forests and management plans were not only about preserving forests but also about transforming them. By dividing forests into classes of age groups, tree plantation campaigns and by preferring certain species to others, a “second nature” emerged. Indeed, management plans have been the key tool in the hands of professional forestry since the 1860s. Management plans are documents that were approved by the central administration and aimed to realise a specific anthropogenic landscape. The goal of forest management plans was to achieve a so-called ideal situation that referred to a scenario when the age and species distribution within a given forest stand was sustainable enough to survive the number of years that the plan envisages for them, and, at least as importantly, the process stays financially profitable. The professional toolbox of 19th century forestry included infrastructure for transporting timber consisting of narrow gauge railways, slipways and engineering works that facilitated the process of floating timber downstream along rivers. Methods of classifying soils, measuring areas, assessing volume and value as well as representing this information on maps were also among the practices of forestry that together triggered landscape change. Forestry needed regulation – legislative and customary – that would guarantee a cheap and available labour force. There was also a need for a network of tree nurseries to provide young trees to be planted in clearings.¹¹ The state also financed and initiated afforestation at local levels. Even if these forests might have survived for decades, they were susceptible to new invasive insects, weather anomalies and diseases due to the decreased number of species present and the spatial concentration of age groups. The forests that emerged because of all these management activities differed from natural ones. At the same time, they were also unlike the forest stands where communities applied traditional knowledge and practices. This was largely due to the ban on grazing in areas classified as forests. In fact, professional foresters believed that grazing was a major threat to the management plan. This conviction led to a perpetual conflict with local inhabitants. Moreover, the state became the most important actor in organising large-scale land-reclamation that stamped out traditional forestry in the floodplains.¹²

Re-regulating landownership and land titles including the right to access forests especially after 1848 caused a major change in the agrarian system. Allocating plots to individuals and dividing the land of former landlords from those of the individuals of the village ended the practices of using pastures and forests in common. In many villages, a large number of village inhabitants were left without rights to access pastures and forests. Moreover, the rights over forest use were the most contested aspects of the partition and triggered court procedures that would often last for decades.¹³

¹¹ OROSZI, Sándor: *A magyar erdőgazdálkodás képes története 1867–1918*. Budapest 2016, pp. 270–285.

¹² DEMETER, Gábor – SZILÁGYI, Zsolt – PINKE, Zsolt: Sártenger és búzatenger : Mérlegen a vízszabályozások és az alföldi gabonakonjunktúra rövid és hosszútávú következményei. In: DEMETER, Gábor et al.: *Holdfogyatkozás : Agrár- és társadalomtörténeti tanulmányok*. Budapest – Debrecen 2022, pp. 56–92. See also: VÁRI, András: *Vízszabályozások, tulajdonjogok és gazdálkodás Magyarországon az 1820-as és az 1870-es évek vége között*. In: HALMOS, Károly et al.: *A felhalmozás míve : Történeti tanulmányok Kövér György tiszteletére*. Budapest 2009, pp. 329–339.

¹³ For the impact of the end of seigneurial system in Austria see: GINGRICH, Simone – GÜLDNER, Dino – SCHMID, Martin: Eine sozial-ökologische Interpretation der “Forest Transition” in den österreichischen Alpenländern des 19. Jahrhunderts. In: SCHANBACHER, Ansgar (ed.): *Ressourcen in historischer Perspektive : Landschaft, Literatur und Nachhaltigkeit*. Göttingen 2020, pp. 117–146.

Thanks to these measures, forestry administration became one of the organs of promoting profit-oriented agriculture and defining its programme. Moreover, by the turn of the 19th and 20th centuries, concern for the national economy as such were part of the arguments and discourse behind the legal reordering of the landscape. The sections that follow discuss the processes behind these developments.

Forms and Sites of Knowledge Transfer before 1867: Policy, Institutions and Individuals

By historicizing how forest management practices that developed in German territories made their way to Hungarian professional forestry, we may gain insight into the links between the place of the Habsburg Empire in the global circulation of knowledge and the nature of professionalization of forestry in the Kingdom of Hungary.

Before turning to that issue, it is important to make some qualifications. First, one needs to recall that the history of forest management is not the same as the history of professional forestry and its tools and methods. Indeed, recent research has revealed much about the history of intentional and organised human activity in the forests of mediaeval Hungary. Based on written sources, it is certain that in the early modern era, at the time when the Habsburg dynasty began their rule in Hungary, economy included forestry as a regular activity in the vicinity of the mining towns of what was then Lower Hungary (in today's Slovakia) and around the villages and towns of the Szekler autonomous *székek* (seats).¹⁴ Secondly, despite a historiographic tradition arguing for the contrary, the 16th and 17th century Ottoman rule and wars did not deplete forests beyond measure.¹⁵ Péter Szabó, using multidisciplinary methods, estimated the proportion of forest cover at 34.5 % for the mid-18th century.¹⁶

Károly Tagányi's late 19th century collection of sources on forestry policy show that the state in Hungary became active in the field of forest management by the mid-18th century. New policies were responses to the degradation of the water management system, and to the ensuing environmental crisis caused by late 17th and early 18th century wars in vast interior areas of Hungary.¹⁷ Forest landscapes came under the protection of the state not only as value for the treasury but also for the 'common good'. It was shortly before the mid-18th century when the idea of setting up a forestry authority within the traditional boundaries of the Kingdom of Hungary first appeared out of defence policy concerns. The area concerned was the Banat region, a special zone outside the control of Hungarian authorities, where the presence of a regiment dominated legal and ownership patterns. The forest management authority established in 1742 was to ensure that forests fulfilled two purposes: they posed an obstacle for potential enemies trying to advance, and they provided material for the construction of defence infrastructure as well as fire-

¹⁴ For forest management practices of the Szeklerland see: IMREH, István: *Törvény és rend a székely faluközösségben*. Sepsiszentgyörgy 2019.

¹⁵ VADAS, András – SZABÓ, Péter: Not Seeing the Forest for the Trees? : Ottoman-Hungarian Wars and Forest Resources. *Hungarian Historical Review* 7, 2018, no. 3, pp. 477–509.

¹⁶ SZABÓ, Péter: Changes in Woodland Cover in the Carpathian Basin. In: Idem – HÉDL, Radim: *Human Nature : Studies in Historical Ecology and Environmental History*. Brno 2008, p. 113.

¹⁷ TAGÁNYI, Károly (ed.): *Magyar erdészeti oklevéltár, II : 1743–1807*. Budapest 1896.

wood. Moreover, later in the same century, it was also in the Banat area that the issue of desertification and, thus, the possibility of afforestation occurred.¹⁸

However, forest management practices in the Banat area were an exception. The lack of cartographic surveys halted the spread of engineering approaches to forests. Moreover, traditional land use practices were not based on projections of straight lines, thus making it more difficult to apply an engineering approach.¹⁹

Changes promoting the engineering minded approach to forest management came through the policies that the increasingly centralised administration of the Habsburg Empire and the practices that crown estates introduced.²⁰ However, the resistance to new measures and policies in forestry formed a part of the general opposition to Joseph II's politics in the Kingdom of Hungary.²¹ As a result, following the death of the king, anti-Josephine feelings led to the destruction of most of the maps drawn up by the cadastral survey initiated by the late emperor.²² Therefore, surveying, mapping and designating plots for clearing was limited to areas that belonged to the treasury and to the forests of free cities. It is worth noting that some towns, such as Debrecen, planned to incorporate traditional practices of managing forests.

Educational institutions made a decisive change when it came to the engineering types of forest management. For example, the Forestry School founded in Banská Štiavnica was a state-run public institution. It received two kinds of inputs. On the one hand, by the time the Forestry School came into being in 1808, Banská Štiavnica had been a centre of applied science for decades thanks to the mining engineering and applied science school that opened there in the 1730s. Giovanni Antonio Scopoli (1723–1788), one of the most internationally renowned and recognized scientists of the Habsburg Empire taught at Banská Štiavnica for eight years.²³ On the other hand, institutions in German-speaking territories could serve as models. However, it is worth noting that the forestry school in Hungary was among the first ones in Central Europe. By the late 18th century, in provincial centres of the German lands and in areas under Habsburg domination west of Hungary it was not rare that an outstanding professional figure had a circle of students around him. These were the so-called *praktikant* schools or master's schools. Some of these became official schools recognized by state authorities.²⁴ Passing the exam after having completed the courses that these schools offered was a precondition to taking up state offices.²⁵ Authorities believed that nominating practising state officials to become exam officials was the best way of ensuring that students had the desired level and type of knowledge about forest management. In fact, there was one such *praktikant* school in one of the royal estates of Hungary, Liptovský Hrádok (in Hungarian Lipótújvár) north of

¹⁸ TAGÁNYI, Károly: Bevezetés. In: Idem (ed.): Magyar erdészeti oklevéltár, pp. 22–25.

¹⁹ MAGYAR, Eszter: Az erdész szakemberek képzése a hivatalos szakoktatási intézmények megjelenése előtt. *Erdészettörténeti Közlemények* 32, 1997, pp. 7–9.

²⁰ Ead: A Festetics-hitbizomány erdőgazdálkodása a Georgicon megalakításának az idején. *Erdészettörténeti Közlemények* 60, 2003, pp. 6–8.

²¹ Joseph II lived between 1741 and 1790. He was emperor 1765–1790, and King of Hungary 1780–1790.

²² ZOLTÁN, Dávid: Magyarország első kataszteri felmérése (1786–1789). *Történeti Statisztikai Évkönyv* 1, 1960, pp. 33–58.

²³ LESENYI, Ferenc: *A selmecebányai Erdészeti Tanintézet története (1808–1846)*. Sopron 1959, pp. 9–13.

²⁴ MAGYAR, E.: *Az erdész szakemberek képzése*, p. 20.

²⁵ Ead: A Keszthelyi Georgicon erdésziskolájának szakmai megalapozása. *Századok* 139, 2005, no. 5, p. 1234.

Banská Štiavnica. We know of three masters teaching there starting in 1768, successively.²⁶ However, this school waned when the public school at Banská Štiavnica started functioning in 1808. One of the imperial mining schools operated also in Banská Štiavnica, its primary purpose was to train forestry officials capable of ensuring that the forests around mines supplied sufficient amounts of timber and that timber production remained sustainable. In fact, the two institutions in Banská Štiavnica merged in 1846 and became the Mining and Forestry Academy. In Hungary, it remained the only school with such a scope and purpose, while, starting from 1813, students from the western areas of the empire might opt to study at the forestry school of Mariabrunn.²⁷

Heinrich David Wilckens (1763–1832), the first master forester to hold professorship at Banská Štiavnica, studied various subjects at the University of Göttingen and at the mining school of Freiburg. He only began to immerse himself into forestry as an area of knowledge when he joined Johann Mattheus Bechstein's (1757–1822) private school. He was a member of Bechstein's foresters' and hunters' club between 1796 and 1799. Wilckens published his lectures and other papers in forestry and hunting, and this was what earned him his post at Banská Štiavnica.

Although the Forestry School at Banská Štiavnica enjoyed a privileged status, it was not the only institution that had a role in transmitting ideas and practices of forestry. In fact, private estates had a key role in this regard. Typically, private estates employed foresters who completed their training in other parts of the empire. The Festetics estate in the south of the Trans-Danubian region was an exception to this. Here, the head of the institute was a young local, Antal Lakoszil. He enjoyed the support of the landlord, György Festetics (1755–1819), for eight years during which he visited the most important master schools and educational institutions of the German lands, the Austrian provinces as well as Bohemia. In some of these schools, he spent years. Eventually, he completed his study trip in Liptovský Hrádok (in Hungarian Liptóújfár) including a visit to the Esterházy estate near the town of Tata that was an important entity in the timber market at the time.²⁸

Another important case of knowledge transmission and transformation was that of Józef Decrett (1774–1841), who was a key forestry official of the royal estate of Banská Bystrica (in Hungarian Besztercebánya) between 1807 and 1837. In Decrett's case, we do not have any information about trips abroad or formal education within Hungary. His first biographer, Károly Kaán, who became the top forestry official in the post-World War I period, found that Decrett could learn much from contemporary foresters who had been trained in land surveying methods and that Decrett based his work on imagining a future map of forest stands. This method gained key importance in scientific forestry in Hungary in the 1860s. Thus, Decrett's outstanding capacity to revive the forested areas that had by his time become depleted due to the hunger of mines for charcoal as well as a consequence of overgrazing, had much to do with knowledge transfer even in the lack of direct contact with foreign experts. Decrett's main achievements were the innovation in motivating and organising the labour force for charcoal production and, even more importantly, the detailed sets of written rules for managing forests.²⁹

²⁶ Ead: *Az erdész szakemberek képzése*, pp. 12–19.

²⁷ Ibidem.

²⁸ Ead: *A Keszthelyi Georgikon*, pp. 1233–1259.

²⁹ KAÁN, Károly: *Decrett József élete és erdőgazdasági tevékenysége (1774–1841)*. Budapest 1912.

The knowledge transmitted at the School of Forestry was neither homogeneous nor unchallenged. When Wilckens retired in 1831, Georg Lang, one of the practising foresters of royal estates overtook teaching. Lang proved to be ambitious and proposed a comprehensive reform regarding the content and duration of education at the academy of Banská Štiavnica. Moreover, he believed there was a need to open a new institution for training professionals in forestry and agriculture.³⁰ However, Lang's proposal did not receive political backing and Rudolf Feistmantel, a new forestry professor, replaced him in 1835. Feistmantel graduated from the Forestry School of Mariabrunn. Based on his four-volume work published in 1835, his main goal was to apply the state-of-the-art practices of forest management to the actual condition in the empire. Unlike Wilckens, he was aware of the differences within the areas of the Kingdom of Hungary and Transylvania and took an effort to become familiar with regulations and customs in place, too.³¹ Indeed, Feistmantel's thoughts shaped the role of the state within forestry for decades to come. After he had returned to administration, he became the head of the department that drafted the Forest Law of 1852. Feistmantel was convinced that forestry as an independent field of economic activity practised according to its own rules would eventually produce more timber than when forestry had been treated as a subsidiary aspect of mining.³²

The consequences of the revolutions and armed conflict of 1848 and 1849 impacted the long-term perspectives of forestry training within the Kingdom of Hungary. Although in the spring of 1848 students stood together, clashes between students with different ethnic backgrounds surfaced by May 1848. In that month, 130 students of mining who originated from Austrian and Bohemian regions left Banská Štiavnica and they continued their studies elsewhere starting from the autumn of 1849.³³ It was also in 1849 that some of the courses at the Forestry School changed the language of instruction to Hungarian instead of German. However, after the war for independence had ended, German language returned as the medium of instruction and this situation lasted until 1867. The Forestry School of Banská Štiavnica experienced a prolonged crisis during first half of the 1860s. Many teachers were arrested for their revolutionary activities and had their professional career terminated or halted for decades. In 1861, the length of the forestry course decreased to two years. Moreover, the idea that the former Georgikon, a higher school teaching rational agricultural economics and related subjects founded by an aristocrat, Count György Festetics, should reopen and include a forestry school in Keszthely, had political support both from the governorate in Buda and from the Hungarian public. Although agricultural training in Keszthely's Georgikon revived in 1865, the programme for training foresters did not materialise at that time.³⁴

Following the Compromise of 1867, and the introduction of the Hungarian language

³⁰ VADAS, Jenő: *A selmezbányai M. Kir. Erdőakadémia története és ismertetője*. Budapest 1896, p. 31.

³¹ FEISTMANTEL, Rudolf: *Die Forstwissenschaft nach ihrem ganzen Umfange und mit Berücksichtigung auf die österreichischen Staaten*. Wien 1835.

³² HILLER, István: Ökológiai ismeretek és ökológiai szemlélet a Selmezbányai Erdészeti Akadémián. In: VÁRKONYI, Ágnes R. – KÓSA, László (eds.): *Európa híres kertje : történeti ökológia tanulmányok Magyarországról*. Budapest 1993, pp. 192–193.

³³ ZSÁMBOKI, László: A selmeci akadémia és ifjúsága 1848/49-ben. *Bányászati És Kohászati Lapok* 131, 1998, no. 7–8, pp. 239–241.

³⁴ CSISZÁR, Imre: A magyar agrár felsőoktatás története a neoabszolutizmus időszakától az első világháborúig. In: KAVECSÁNSZKI, Márton – SZÁSZFALVI, Márta (eds.): *Tanulmányok Ujváry Zoltán 80. születésnapja alkalmából*. Debrecen 2012, pp. 43–44.

as the medium of instruction, the School of Banská Štiavnica lost its imperial character. At the same time, the newly founded research and experimental station made it possible for Hungarian foresters to enter the European-, and global scientific arena. The quality of education also improved: as soon as Károly Wagner gained professorship, the board of the school raised the duration of the training from two to three years, as it had been the practice before 1861. A new department *Erdőhasználat* (Methods of Forest Exploitation) was also added to the existing two units. With the new department, the teaching of mechanics and chemistry had a pronounced place in the curricula. We have to note, however, that Wagner followed the curricula of Mariabrunn and stated that there was no major deviation from the ideas and material taught at the German-speaking imperial institutions.³⁵

The State: Legislation, Regulation and Administration

Studying the history of professional training allows us to place Hungary within the circulation and institutionalisation of knowledge about forest management. Looking at the way legislation intertwined with the history of professionalisation gives us insight into the changing forms of anthropogenic landscape change.

The 1852 forest law of the Habsburg Empire, often referred to as the “Austrian” forest law, came into force in Hungary in 1858 and deeply impacted the subsequent 1879 Hungarian forest law. For example, the 1852 regulation aimed to prevent soil erosion and described the cases of violations, which was adopted by the law of 1879. However, there were differences, too. While the key drive for the Austrian Forest Law was to resolve issues arising from the end of serfdom, this concern hardly surfaced in the draft law that the Hungarian Parliament eventually voted on.³⁶ The draft law of 1879 simply demanded that if there were any entitlements remaining from the previous land regime, these should have been clearly stated in the management plan. The reason behind the lack of paragraphs about the rights to timber resources after the partitioning of land was that it was the task of special courts to deal with partition agreements throughout the 1850s and 1860s and that a separate piece of legislation regulated outstanding issues in 1871.

The National Forestry Association (Országos Erdészeti Egyesület, OEE) and the National Agricultural Association of Hungary (Országos Magyar Gazdasági Egyesület, OMGE) had a major role in drafting the law of 1879. The fundamental goal of OEE was to realise its ideal of good economic governance that would grant larger space for the body of professional Hungarian foresters, a group of professionals that was in the making. OMGE was a key organisation promoting agrarian interests in Hungary. Thus, the draft of the law that the two associations first put forward in 1866 and submitted to the Parliament two years later was a compromise between different interests. The text held three axioms. Firstly, it posited that there were forests under which the soil was suitable for agricultural activities but in certain areas forests must have been maintained in order to preserve the soil. In other words, in the latter category of areas, forestry was the most fruitful type of economic activity. The OEE believed that without proper regulation,

³⁵ VADAS, J.: A selmeczbanjai M. Kir. Erdőakadémia, p. 117.

³⁶ For the background of the law of 1852 see: WEISS, Gerhard: Mountain Forest Policy in Austria : A Historical Policy Analysis on Regulating a Natural Resource. *Environment and History* 7, 2001, no. 3, pp. 335–355.

locals would destroy even those forests that were to be protected and kept intact in order to preserve the soil. In other words, they would cause damage to capital. This belief takes us to the second principle, according to which a forested area consists of capital i.e. soil and timber and these produce a certain interest on a yearly basis if managed properly.³⁷ The third principle held that forests that were part of private estates were best left without government interference because the owners would do everything possible not to undermine their own interests. This was the reason why the Forest Law compelled legal persons to submit a forest management plan spanning decades for official approval and to follow it thoroughly by employing trained personnel who had obtained their qualification via a state exam, while these requirements did not apply to private owners.

The debate on the draft of the 1879 Law XXXI was concentrating on the relationship between forestry administration and the constitutional setup of the post-1867 Kingdom of Hungary, as well as the broader environmental and ecological importance of forests. The interaction between constitutional changes and the introduction of a new agrarian system were the key reasons why it took more than a decade for the draft of the bill to turn into a legislative act. This was an extraordinarily long process, especially if we consider that there were no substantial changes between the initially formulated text and the law taking effect.³⁸ Journal articles dealing with the issue of forestry policy published between 1860 and 1878 invariably urged the legislation and enactment of the forestry law as soon as possible, pointing out that this was one of the recurring demands by members of the National Forestry Association. However, the obstacles to be overcome were serious ones. Firstly, there was the issue of partitioning the formerly common lands that was an especially complicated matter regarding forest rights. Imposing the new rules on unsettled conditions would not have made sense. Moreover, partitioning was a much slower process in Transylvania than in other parts of Hungary. Transylvania was one of the most forested areas of Hungary and it only reunited with the Kingdom of Hungary in 1867. It took decades to apply land related legislation in Transylvania because the common land ownership had historically specific forms and strong roots due to special rights of the Szeklers (in Hungarian Székelyek), a subgroup of Hungarian speakers in Transylvania.

Another question was that at the heart of the constitutional profile of the Kingdom of Hungary the competence of county administrations versus central ministries was considered.³⁹ During the debates in the journal of the OMGE, *Gazdasági Lapok* (Economic Pages), opposing voices appeared against establishing the offices of the Forest Superintendents in 1871, and also during the deliberations in Parliament in 1878–1879. Those who wished to remove the Superintendents' Office from the draft law, made a claim that counties were suitable to manage forest administration and that it would be wrong to adopt the new custom of state interference rooted in the allegedly unconstitutional period between 1849 and 1867.⁴⁰

³⁷ See the works of Lajos Fekete, for example: FEKETE, Lajos: *Erdőértékszámítástan*. Selmechánya 1892.

³⁸ In the Parliament, a fifteen-member committee discussed the draft starting from 23 January 1878. The committee submitted its report and the draft to the lower chamber called the House of Representatives on 28 February 1879. *Képviselőházi napló, 1878–1881, vol 6, 1879, május 7 – május 27*. The upper chamber, the House of Magnates, discussed the draft law in the second half of May and early June. *Főrendiházi napló, 1878–1881, vol 1*.

³⁹ MIRU, György: The Compromise and the Potentials of the Constitutional Politics in Hungary. In: GYÁNI, Gábor (ed.): *The Creation of the Austro-Hungarian Monarchy: A Hungarian Perspective*. New York 2021, pp. 200–225.

⁴⁰ *Képviselőházi napló, vol 6, 118. országos ülés, 1879, május 7, pp. 19–22*.

On the other hand, Baron Zsigmond Perényi (1843–1915), rapporteur of the law in the House of Representatives, argued that the draft forest law should be situated in the broader context of environmental thinking. First, Perényi posited that forests had an importance for the national economy both from the point of view of monetary gains as well as public health. This view reflected the concern for the environmental crisis in Hungary within the Habsburg Empire that began in the 1740s. Secondly, Perényi reminded members of the Parliament of the importance of protecting forests from overexploitation that had been a pattern since the 1850s due to the improvement of traffic and trade in the country.⁴¹ Perényi's concerns show that the validity of local level bans on treating timber as commodity was waning quickly. Thirdly, the rapporteur stated that clear cut forests threatened low lying areas with devastating floods and erosion sedimented on the plains, causing even more damaging floods.⁴² This latter point takes us to environmental context of the Forest Law of 1879, because the drought of 1863–1864 led to the debate about the potential of an afforestation programme in the Great Plains, as well as discussions focused on the devastating floods occurring in Miskolc in late August 1878 and in Szeged on 12 March 1879.⁴³

The Forest Law of 1879 divided non-state owned forests into two major legal categories: those owned by legal entities and private forests. The former category included woodland carved out from landland partitioned between former serfs and landlords, as well as forests in the hands of municipalities, public and private foundations and the Church. Legal entities had the obligation to manage their forests based on a forest management plan approved by forestry administration.

Regarding the sharp distinction between private and communal forms of ownership, we should take into account that from the perspective of large estates the role of forests as assets changed several times in the 19th century. Moreover, contradictory trends existed simultaneously. In the first half of the 19th century a push for increasing the area of arable land as well as for keeping large herds of sheep due to demand for wool came at the expense of forested areas and wetlands. The post-1850 period looked markedly different. According to Zoltán Kaposi's estimate, after the partition of land, large estates lost half of their landholdings, thus, areas that could be rented out or produce profit from cereals gained importance.⁴⁴ With a large economic shock coming towards the end of the century with the fall in cereal prices and the collapse of the demand for wool from Hungary, cattle and the milk economy became more important. For the latter, forests were a valuable source of fodder and grazing sites that were worth keeping. At the same time, one of the fields where new venture capital poured into was the production of sleepers for railway construction, which required large forest stands that would eventually be clear cut.⁴⁵ Thus, the technologies for maintaining yields sustainably gained importance,

⁴¹ PÁL, V: The "Second Hungarian Conquest of the Carpathian Basin", pp. 2–3.

⁴² *Képviselőházi napló*, vol 6, 1879, május 7, pp. 13–14.

⁴³ For the drought see: BOA, Krisztina: Az 1863–1864. évi aszály és inség Békés megyében. *Fons* 19, 2012, no. 2, pp. 161–199. For the debate on afforestation, see: JANKÓ, Ferenc: Elfeledett viták az alföldi erdősítés és vízrendezés éghajlati hatásairól. *Földrajzi Közlemények* 137, 2013, no. 1, pp. 51–63.

⁴⁴ KAPOSI, Zoltán: A nagybirtok és az agrárszegénység kapcsolata Magyarországon. In: GYARMATI, György et al. (eds.): *Bűnbak minden időben : Bűnbakok a magyar és az egyetemes történelemben*. Pécs – Budapest 2013, pp. 264–284; and KAPOSI, Zoltán: A magyarországi uradalmi rendszer változásai a XVIII–XX. században. *Agrártörténeti Szemle* 43, 2001, no. 1–2, pp. 239–260.

⁴⁵ Idem: A nagybirtok és az agrárszegénység, p. 280.

which contributed to the rising importance of forest management plans, a central concept in the Forest Law of 1879.

By the beginning of the 20th century, it became quite clear for leaders of the forestry administration that privately-owned forests were not in a better shape than the ones under more significant state control. Instead of managing their private forests to generate long-term profit and sustainable yields, many sold forest stands to dealers who most often clear cut purchased forests.⁴⁶ Even with the obligation to replant clear-cut areas, this meant a drastic change for habitats and produced more homogenous, therefore biologically less resistant stands. There were less trained foresters active in privately owned forests than in publicly owned forests which also contributed to the degradation of privately owned forests. Private owners kept employing personnel without official qualification in order to reduce the costs of production. This meant that privately owned forests management practices paid less attention to forest stand resistance and sustainable economic gains. Besides the way institutions of professional training evolved within the global and regional circuit of knowledge, economic ideas manifesting in legislative efforts were also major factors influencing the way forests changed in the territory of the Kingdom of Hungary in the 19th century.

The Link Between Nationalism and Professional Language in Forest Management

Working within the framework of the so-called New Imperial History, Pieter Judson and Tara Zahra argue that ethnic conflicts had much less importance for contemporary everyman than we might assume based on current nationalisms in the East-Central European region.⁴⁷ However, Nándor Bárdi, one of the leading figures of research on the history of post-World War I Hungarian minorities, began one of his key monographs by stating that discrimination was part of realpolitik in both the pre-1918 and post-1918 epoch. He posits that: *To a certain degree, we may talk of cooperation, but national-, and ethnic cleavages overwrite this when it comes to the struggle for positions of any importance: simply because it is about power [...] ‘us’ and ‘them’ exist in an unequal power relation. This is why being an ethnic minority is a situation that social historians should study.*⁴⁸

Regarding one region of the empire, the Karst in Croatia, Veronika Eszik highlighted a very direct link between anthropogenic landscape change and nationalist politics.⁴⁹ Hungarian state authorities saw the reforestation of the area as a civilising mission. Yet, the link between anthropogenic change and political ideology was rarely so obvious. One of the most important sources for studying the history of forestry and forests between 1880 and 1895 in Hungary is Albert Bedő's (1839–1918) multi-volume work called *A magyar állam erdőségeinek gazdasági és kereskedelmi leírása* (The Economic and Trade Description of the Forests of the State of Hungary). The eventual 1896 edition of this work was the culmination of a 20-year effort to provide accounts that are ever more

⁴⁶ HORVÁTH, Sándor: *Az erdőkről szóló 1917-es törvényjavaslat előadói indoklása*. Budapest 1917.

⁴⁷ See for example: COLE, Laurence: *Differentiation or Indifference?: Changing Perspectives on National Identification in the Austrian Half of the Habsburg Monarchy*. In: VAN GINDERACHTER, Maarten – BEYEN, Mar-nix (eds.): *Nationhood from Below: Europe in the Long Nineteenth Century*. London 2012, pp. 96–119.

⁴⁸ BÁRDI, Nándor: *Észrevételek. Regio* 26, 2018, no. 2, pp. 156–157.

⁴⁹ ESZIK, Veronika: *A horvát-magyar Tenger mellék mint nemzetiesített táj: Adalék az intézményesülő földrajz-tudomány és a nemzetépítés kapcsolatához. Korall* 62, 2015, pp. 75–95.

comprehensive including the format of representing data. Bedő was the chief of forestry administration in the first decade after the introduction of the Forest Law. Thus, he had the right to ask for statistical information and access to data that the Ministry of Agriculture collected. Bedő believed that economic interest was the synonym of the interest of the national economy. For forestry, it meant that preserving the capacity of soils to produce valuable products and serving the interests of the Hungarian state were tasks of equal importance. Bedő used the term ‘Hungarian state’ and ‘Hungarian empire’ interchangeably but for him it did not imply the vision of an ethnically homogenous Carpathian Basin. To the contrary, he argued that the interests of the Kingdom of Hungary are best served if the number of bridges between non-Hungarian nationalities and the state increases. Bedő concluded that, due to their presence in regions that would otherwise look like peripheries, foresters were in key positions in this regard. Indeed, some of the key sites of forestry administration, management and timber extraction were not central places in the Kingdom of Hungary.

Court cases, contemporary interpretations of what counted as violation of the law and documentary evidence about how authorities treated the accused are among the preferred sources of social historians. Bedő published a county level table about the number of violations between 1885 and 1894. Unfortunately, only about half of the counties are listed and we do not have data series that would provide at least partial information about smaller administrative units. Based on the census data from 1910, Hungarians formed the majority community in sixteen out of the 32 counties that Bedő listed and consisted of 30–50 % of the population in six others. However, there is no coincidence between ethnic proportions and the number of cases reported. The number of cases grew between 1885 and 1894 in all but one county while the total number of cases varied largely across counties, however the data is inconclusive. Closer analysis of individual cases from various counties would be useful should archival traces of them have survived in sufficient numbers.

In the last decades of the 19th century, one of the most salient aspects was mass emigration in terms of regional patterns of social change. Recently, Éva Bodovics’s study focusing on the north-eastern counties of the Kingdom of Hungary pointed out that weather anomalies – particularly cold and exceeding precipitation – could have been the last straw in the decision for emigration even if we are to avoid simple push-pull models.⁵⁰ The Forest Law comes to this picture through the question of silvopasture. For many communities and families, loss of area available for grazing due to the implementation of the law as well as for the partition of lands between former serfs and landlords was a major issue especially in times of crop failure. Shortly before the turn of the century, the discourse about mass emigration reached the dimension of moral panic and the OEE came under pressure, too.⁵¹ It responded by launching a debate about the feasibility of a land use system that would preserve soil but also open some space for pasturing. Interestingly, the outcome of this discussion became one of the avenues for Hungarian forestry to represent itself at the global stage: the first management plan for the silvopasture system was one of the items displayed at the Paris World Exhibition in 1900.⁵² There, the

⁵⁰ BODOVICS, Éva: Weather Anomalies and Their Economic Consequences : Penury in Northeastern Hungary in the Late 1870s. *Hungarian Historical Review* 9, 2020, no. 2, pp. 179–212.

⁵¹ See: Egyesületi közlemények. *Erdészeti Lapok* 41, 1902, no.1, pp. 73–88.

⁵² OROSZI, Sándor: Az erdélyi Mezőség fásítása és egyéb közérdekű erdőtelepítések. *Erdészettörténeti Közlemények* 65, 2005, footnote no. 275, p. 154.

Hungarian state as well as the Habsburg Empire presented new ways to control nature and extract benefits from the landscape understood as a resource.⁵³

Describing and classifying landscapes as resources is a crucial step towards commodification. In the second half of the 19th century, foresters wished to “domesticate” forests along principles of rationality and the state. This view allowed them to represent legible, and predictable landscapes that they were able to change following specific plans. Bedő mainly relied on tables showing and quantifying the tree species he believed to be most relevant, such as beech, pine and oak (without further specifying subspecies and varieties), the ways of management as established by contemporary standards (even aged forest with long rotational cycle, even aged forest with short rotational cycle, uneven aged forest) as well as legal categories of ownership. Thus, Bedő’s monumental work was at the juncture of nation-building and commodification within the Habsburg Empire. To be sure, efforts to classify, quantify and represent forest stands as well as timber products did not come to a complete stop after the *A magyar állam erdőségeinek gazdasági és kereskedelmi leírása* had appeared. The pocketbook series called *Erdészeti Zsebnaptár* that the OEE published between 1882 and 1919 responded to the changing market for certain timber products and made tables about the expected growth of the volume of timber widely accessible. Moreover, it was to keep forests up to date about legislation and personnel. Contemporary regional and professional journals were also indispensable media outlets to facilitate commodification: they reported on occasions when forest stands were auctioned and informed about market prices that greatly varied according to how far a location was from means of transport, mainly waterways and, most importantly, railways.

Indeed, one of the main aspects of the professionalization of forestry was the drive to create a Hungarian terminology. On the one hand, the OEE’s efforts to provide Hungarian terminology reflected that the leaders of the Association at least, wished to join the main political project of the time: nation-building coupled with state building. On the other hand, these efforts were also about creating a niche for Hungarian professional foresters that only they could fill. The language aspect was at the juncture of professionalization, its social implications and nationalism. The process of collecting “popular terms” allows us an insight into imagined hierarchies.

Károly Wagner (1830–1879), the first professor of forestry at Banská Štiavnica after 1867 played a key role both in making Hungarian the medium of instruction at the Forestry School and in making the issues of a professional language one of the main causes that the National Association of Forestry stood for. The first German-Hungarian dictionary for foresters appeared in 1879 and this was the joint effort of Wagner and Adolf Divald (1821–1891), another forester who had played a decisive role in creating and running the journal called *Erdészeti Lapok* (Journal of Forestry) starting in 1862. This forum gradually became the major channel of communication for the OEE. The efforts around the dictionary did not end with the first comprehensive volume. In 1882, the OEE launched a campaign for collecting terms and set up a committee that met regularly for two decades. The planned dictionary had a double purpose: it wished to develop the work of Wagner and Divald and give precise translation of German terminology that was itself

⁵³ ESZIK, V: A horvát-magyar Tengeremellék, p. 77; and GÖDERLE, Wolfgang: Materializing Imperial Rule? : Nature, Environment, and the Middle Class in Habsburg Central Europe. *Hungarian Historical Review* 11, 2022, no. 2, pp. 445–476.

expanding in the latter decades of the 19th century due to the rapid spread of scientific forest management and new technologies in transportation and timber processing. The effort did not wish to stop there, however, the OEE wished to collect the popular terminology: forestry related words that were in use in various regions and consequently in various languages.⁵⁴ Although calls that appeared in the *Erdészeti Lapok* indicated a preference for terms that the Hungarian speaking Szeklers used in the Eastern Carpathians, it did not imply the exclusion or lack of interest for words of different origins. Unfortunately, authors who paid attention to the latter did not disclose their method of collection, thus there is little that we may say about their informants, preferences or even the sites of collection.

In summary, the politics of nation building prompted efforts to describe and classify forested areas within the Kingdom of Hungary, as well as the sustained search for the right terminology. The information produced during this process and the modes of how the ministry collected data could potentially shed light on possible ethnic bias and discrimination in forestry administration. The findings, however, do not show a clear-cut picture of an open conflict. Conclusions require caution since archival traces of individual cases are missing. Importantly, efforts of providing comprehensive information about forests and about ways to “domesticate” them and turn forests into calculable economic assets for private and national interest were conducive to commodification of timber-, and forested landscapes.

Conclusion

The main aim of this paper was to point out specific historical features of professional forestry in the Kingdom of Hungary within global developments and regional patterns. The history of forestry proved to be a relevant terrain for showing how changes of the landscape, and political and social patterns interacted in the Kingdom of Hungary within the Habsburg Empire. First, the paper emphasised that Banská Štiavnica was a central site of reception and transmission of new ideas and technologies of forest management that had an imperial reach until 1848. From the early 19th century until the revolution of 1848 the Forestry School at Banská Štiavnica was a Habsburg imperial site from which vernacular translations of knowledge spread slowly. However, briefly after 1848 and again after 1867 the Forestry School became one of the engines and hubs for Hungarian nationalism mainly through language related politics.

The history of the Forest Law of 1879, which was to govern forest management for half a century, was part of the global process to preserve forests, banning traditional forest use and introducing the liberal idea of private property and profit. At the same time, the constitutional situation and the specific mid-19th century environmental history of Hungary resulted in a unique discourse. This aspect opens the door for further research between politics and environmental concerns in our view.

Resonating with arguments that Arvid Nelson and Viktor Pál have put forward, we point out the nation-building linked history of political change and forest management.⁵⁵ As the paper argued, the National Forestry Association had an important role

⁵⁴ See: Adatok az erdészeti műszótárhoz. *Erdészeti Lapok* 22, 1883, no. 2, p. 123.

⁵⁵ NELSON, Arvid: *Cold War Ecology : Forests, Farms and People in the East German Landscape*. New Haven 2005, p. 16; PÁL, V.: The “Second Hungarian Conquest of the Carpathian Basin”, pp. 2–3.

in establishing that link. It published media channels that disseminated standard procedures for assessing the value of forests, provided the prices of various commodities and information about changes in the personnel as well as about new regulations. Moreover, the National Forestry Association strengthened the professional identity among foresters and helped to create a sense of belonging to a knowledge community apart from sharing common interests and ideals. This pattern is in line with what Jan Surman has found about the media of positivist science in Czech-, and Polish speaking communities. Moreover, our findings point at how language politics impacted the material world and the economy and society along with it.

Bibliography

Printed sources

Adatok az erdészeti műszótárhoz. *Erdészeti Lapok* 22, 1883, no. 2, pp. 122–129.

Egyesületi közlemények. *Erdészeti Lapok* 41, 1902, no. 1, pp. 67–125.

FEISTMANTEL, Rudolf: *Die Forstwissenschaft nach ihrem ganzen Umfange und mit Berücksichtigung auf die österreichischen Staaten*. Wien 1835.

FEKETE, Lajos: *Erdőértékszámítástan*. Selmecbánya 1892.

HORVÁTH, Sándor: *Az erdőkről szóló 1917-es törvényjavaslat előadói indoklása*. Budapest 1917.

KAÁN, Károly: *Decrett József élete és erdőgazdasági tevékenysége (1774–1841)*. Budapest 1912.

TAGÁNYI, Károly: Bevezetés. In: TAGÁNYI, Károly (ed.): *Magyar erdészeti oklevéltár*. Budapest 1896.

VADAS, Jenő: *A selmecbányai M. Kir. Erdőakadémia története és ismertetője*. Budapest 1896.

Literature

BÁRDI, Nándor: Észrevételek. *Regio* 26, 2018, no. 2, pp. 148–164. DOI: 10.17355/rkpkt.v26i2.215.

BHATTACHARYA, Neeladri: *The Great Agrarian Conquest : The Colonial Reshaping of a Rural World*. Albany 2020.

BOA, Krisztina: Az 1863–1864. évi aszály és inség Békés megyében. *Fons* 19, 2012, no. 2, pp. 161–199.

BODOVICS, Éva: Weather Anomalies and Their Economic Consequences : Penury in Northeastern Hungary in the Late 1870s. *Hungarian Historical Review* 9, 2020, no. 2, pp. 179–212. DOI: 10.38145/2020.2.179.

COLE, Laurence: Differentiation or Indifference? : Changing Perspectives on National Identification in the Austrian Half of the Habsburg Monarchy. In: VAN GINDERACHTER, Maarten – BEYEN, Marnix (eds.): *Nationhood from Below : Europe in the Long Nineteenth Century*. London 2012, pp. 96–119. DOI: 10.1057/9780230355354_5.

CSISZÁR, Imre: A magyar agrár felsőoktatás története a neoabszolutizmus időszakától az első világháborúig. In: KAVECSÁNSZKI, Máté – SZÁSZFALVI, Márta (eds.): *Tanulmányok Ujváry Zoltán 80. születésnapja alkalmából*. Debrecen 2012, pp. 41–54.

DARGAVEL, John – JOHANN, Elizabeth: *Science and Hope*. London 2013.

DEMETER, Gábor – SZILÁGYI, Zsolt – PINKE, Zsolt: Sártenger és búzatenger : Mérlegen a vízszabályozások és az alföldi gabonakonjunktúra rövid és hosszútávú következményei. In: DEMETER, Gábor et al.: *Holdfogyatkozás : Agrár- és társadalomtörténeti tanulmányok*. Budapest – Debrecen 2022, pp. 56–92.

ESZIK, Veronika: A horvát-magyar Tengermellék mint nemzetiesített táj : Adalék az intézményesülő földrajzudomány és a nemzetépítés kapcsolatához. *Korall* 62, 2015, pp. 75–95.

GINGRICH, Simone et al.: Hidden Emissions of Forest Transitions : A Socio-Ecological Reading of Forest Change. *Current Opinion on Environmental Sustainability* 38, 2019, pp. 14–21. Accessible at <https://doi.org/10.1016/j.cosust.2019.04.005>.

GINGRICH, Simone – GÜLDNER, Dino – SCHMID, Martin: Eine sozial-ökologische Interpretation der “Forest Transition” in den österreichischen Alpenländern des 19. Jahrhunderts. In: SCHANBACHER, Ansgar (ed.): *Ressourcen in historischer Perspektive : Landschaft, Literatur und Nachhaltigkeit*. Göttingen 2020, pp. 117–146. Accessible at <https://doi.org/10.17875/gup2020-1352>.

GÖDERLE, Wolfgang: The Habsburg Anthropocene : Vipers and Mongooses in Late Habsburg Southern Dalmatia. *Südost-Forschungen* 79, 2020, no. 1, pp. 215–240. Accessible at <https://doi.org/10.1515/sofo-2020-790112>.

GÖDERLE, Wolfgang: Materializing Imperial Rule? : Nature, Environment, and the Middle Class in Habsburg Central Europe. *Hungarian Historical Review* 11, 2022, no. 2, pp. 445–476.

- HILLER, István: Ökológiai ismeretek és ökológiai szemlélet a Selmecbányai Erdészeti Akadémián. In: VÁRKONYI, Ágnes R. – KÓSA, László (eds.): *Európa híres kertje : Történeti ökológia tanulmányok Magyarországról*. Budapest 1993, pp. 184–200.
- IMREH, István: *Törvény és rend a székelyfaluközösségben*. Sepsiszentgyörgy 2019.
- JANKÓ, Ferenc: Elfelejtett viták az alföldi erdősítés és vízrendezés éghajlati hatásairól. *Földrajzi Közlemények* 137, 2013, no. 1, pp. 51–63.
- KAPOSI, Zoltán: A nagybirtok és az agrárszegénység kapcsolata Magyarországon. In: GYARMATI, György et al.: *Bűnbak minden időben : Bűnbakok a magyar és az egyetemes történelemben*. Pécs – Budapest 2013, pp. 264–284.
- KAPOSI, Zoltán: A magyarországi uradalmi rendszer változásai a XVIII–XX. században. *Agrártörténeti Szemle* 43, 2001, no. 1–2, pp. 239–260.
- LESENYI, Ferenc: *A selmecbányai Erdészeti Tanintézet története (1808–1846)*. Sopron 1959.
- MAGYAR, Eszter: A Festetics-hitbizomány erdőgazdálkodása a Georgicon megalakításának az idején. *Erdészettörténeti Közlemények* 60, 2003, pp. 5–18.
- MAGYAR, Eszter: A Keszthelyi Georgikon erdésziskolájának szakmai megalapozása. *Századok* 139, 2005, no. 5, pp. 1233–1259.
- MAGYAR, Eszter: Az erdész szakemberek képzése a hivatalos szakoktatási intézmények megjelenése előtt. *Erdészettörténeti Közlemények* 32, 1997, pp. 3–24.
- MIRU, György: The Compromise and the Potentials of the Constitutional Politics in Hungary. In: GYÁNI, Gábor (ed.): *The Creation of the Austro-Hungarian Monarchy : A Hungarian Perspective*. New York 2021, pp. 200–225.
- NELSON, Arvid: *Cold War Ecology : Forests, Farms and People in the East German Landscape*. New Haven 2005.
- OOSTHOEK, Jan K. – HÖLZL, Richard (eds.): *Managing Northern Europe's Forests : Histories from the Age of Improvement to the Age of Ecology*. Oxford 2018.
- OROSZI, Sándor: *A magyar erdőgazdálkodás képes története 1867–1918*. Budapest 2016.
- OROSZI, Sándor: Az erdélyi Mezőség fásítása és egyéb közérdekű erdőtelepítések. *Erdészettörténeti Közlemények* 67, 2005.
- OSTERHAMMEL, Jürgen: *The Transformation of the World : A Global History of the Nineteenth Century*. Princeton 2014.
- PALLÓ, Gábor: Scientific Nationalism : A Historical Approach to Nature in Late Nineteenth-Century Hungary. In: ASH, Mitchell G. – Surman, Jan (eds.): *The Nationalization of Scientific Knowledge in the Habsburg Empire, 1848–1918*. Basingstoke 2012, pp. 102–112.
- PÁL, Viktor: The “Second Hungarian Conquest of the Carpathian Basin” : High Modernism and the Ecological Crisis in the Eastern Half of the Habsburg Empire during the Nineteenth Century. *Agricultural History* 98, 2024, no. 1, forthcoming.
- SIVARAMKRISHNAN, Kalyanakrishnan: *Modern Forests : Statemaking and Environmental Change in Colonial Eastern India*. Stanford 1999.
- SURMAN, Jan: Science and its Publics : Internationality and National Languages in Central Europe. In: ASH, Mitchell G. – Surman, Jan (eds.): *The Nationalization of Scientific Knowledge in the Habsburg Empire, 1848–1918*. Basingstoke 2012, pp. 30–56.
- SURMAN, Jan: Translating Positivism : Framing Positivism in Book Series in Czech and Polish. In: SURMAN, Jan – SUMILLERA, Rocio G. – KUHN, Katharina (eds.): *Translation in Knowledge, Knowledge in Translation*. Amsterdam 2020, pp. 145–168.
- SZABÓ, Péter: Changes in Woodland Cover in the Carpathian Basin. In: SZABÓ, Péter – HÉDL, Radim: *Human Nature : Studies in Historical Ecology and Environmental History*. Brno 2008, pp. 106–115.
- VADAS, András – SZABÓ, Péter: Not Seeing the Forest for the Trees? : Ottoman-Hungarian Wars and Forest Resources. *Hungarian Historical Review* 7, 2018, no. 3, pp. 477–509.
- VARGA, Anna et al.: Prohibited but Still Present : Local and Traditional Knowledge about the Practice and Impact of Forest Grazing by Domestic Livestock in Hungary. *Journal of Ethnobiology and Ethnomedicine* 16, 2020, no. 1. Accessible at <https://doi.org/10.1186/s13002-020-00397-x>.
- VÁRI, András: Vízszabályozások, tulajdonjogok és gazdálkodás Magyarországon az 1820-as és az 1870-es évek vége között. In: HALMOS, Károly et al.: *A felhalmozás míve : Történeti tanulmányok Kővér György tiszteletére*. Budapest 2009, pp. 329–339.
- WEISS, Gerhard: Mountain Forest Policy in Austria : A Historical Policy Analysis on Regulating a Natural Resource. *Environment and History* 7, 2001, no. 3, pp. 335–355.
- WOHLERS, David C.: Prome, Burma : How a Village in Colonial Burma Became the Global Epicenter of Scientific Forestry and Impacted the Founding of the United States Forest Service. *Journal of Forestry* 117, 2019, no. 5, pp. 515–524. DOI: 10.1093/jofore/fvz045.

- ZOLTÁN, Dávid: Magyarország első kataszteri felmérése (1786–1789). *Történeti Statisztikai Évkönyv* 1, 1960, pp. 33–58.
- ZSÁMBOKI, László: A selmeci akadémia és ifjúsága 1848/49-ben. *Bányászati és Kohászati Lapok* 131, 1998, no. 7–8, pp. 239–245.

Summary

Professionalization, State-building and the Language Question in Forestry : The Case of the 19th Century Kingdom of Hungary

Hungarian professional forestry emerged in the second half of the 19th century, that is, within the political framework that Austria-Hungary constituted. The practices that foresters applied in Hungary had global standards and methods of calculating the value of forests stands at their base. In the past two decades, research into the history of forestry revealed that the German-speaking professionals were important nodes in the global circuits of knowledge production and transmission as well as in standardization. Johann Christian Karl Gayer's (1822–1907) textbook written in German and the German-born Wilhelm Philipp Daniel Schlich's (1840–1925) English language textbooks became standard reference points worldwide. The latter's career in England and in British India is a case in point to highlight the importance of colonies in the development of standards in forestry. Another such example is Dietrich Brandis (1824–1907) who had a key role in establishing what the tasks of forest rangers were and proposed a compromise between land use practices of indigenous people and the statist views of professional forestry practices in three continents in the second half of the 19th century. On the other hand, however, the Hungarian National Association of Forestry, the association that brought state and privately employed foresters and private forest owners under the same umbrella, became an important actor of the nation-building project. This situation had an impact on the place of timber produced in Hungary in the world economy and in Austria-Hungary, as well as on the way the idea of the "Hungarian Empire" manifested. While considering the roles of the Association within the history of professionalization and landscape change, one should not forget that forest management was about creating wealth and a respectable professional society.

The way professionalization interacted with nation building in Hungary was a key factor in the reception of scientific forest management in Austria-Hungary. This encounter demanded that foresters engage with the non-central position of forested regions, – the Carpathians within the empire –, and they had to address the road leading to the Compromise of 1867 and its aftermath. Surely, these could not have been so without engagement with landscape management as science. In other words, nation-building and state-building efforts as well as the institutionalisation of professional forestry contributed to defining the contours of the environmental history in two ways. First, the state became the most important actor in setting up infrastructure that professional forestry activities required – including irrigation that stamped out traditional forestry in floodplains – and of afforestation. Together, these activities brought about what we may call "second nature" in which commodification became a central aspect of nature-culture relationships. The term "second nature" refers to the ubiquitous human presence, which goes without saying everywhere, as well as to the lack of human consciousness while carrying out activities that influence nature-culture relationships.

The second way nation-building and state-building influenced landscape change epoch emerged was through re-regulating landownership and land titles including the right to access forests especially after 1848. Thanks to these measures, forestry administration became one of the organs promoting profit-oriented agriculture and defining its programme. Importantly, concern for the national economy as such were part of the arguments and discourse behind the legal reordering of the landscape.