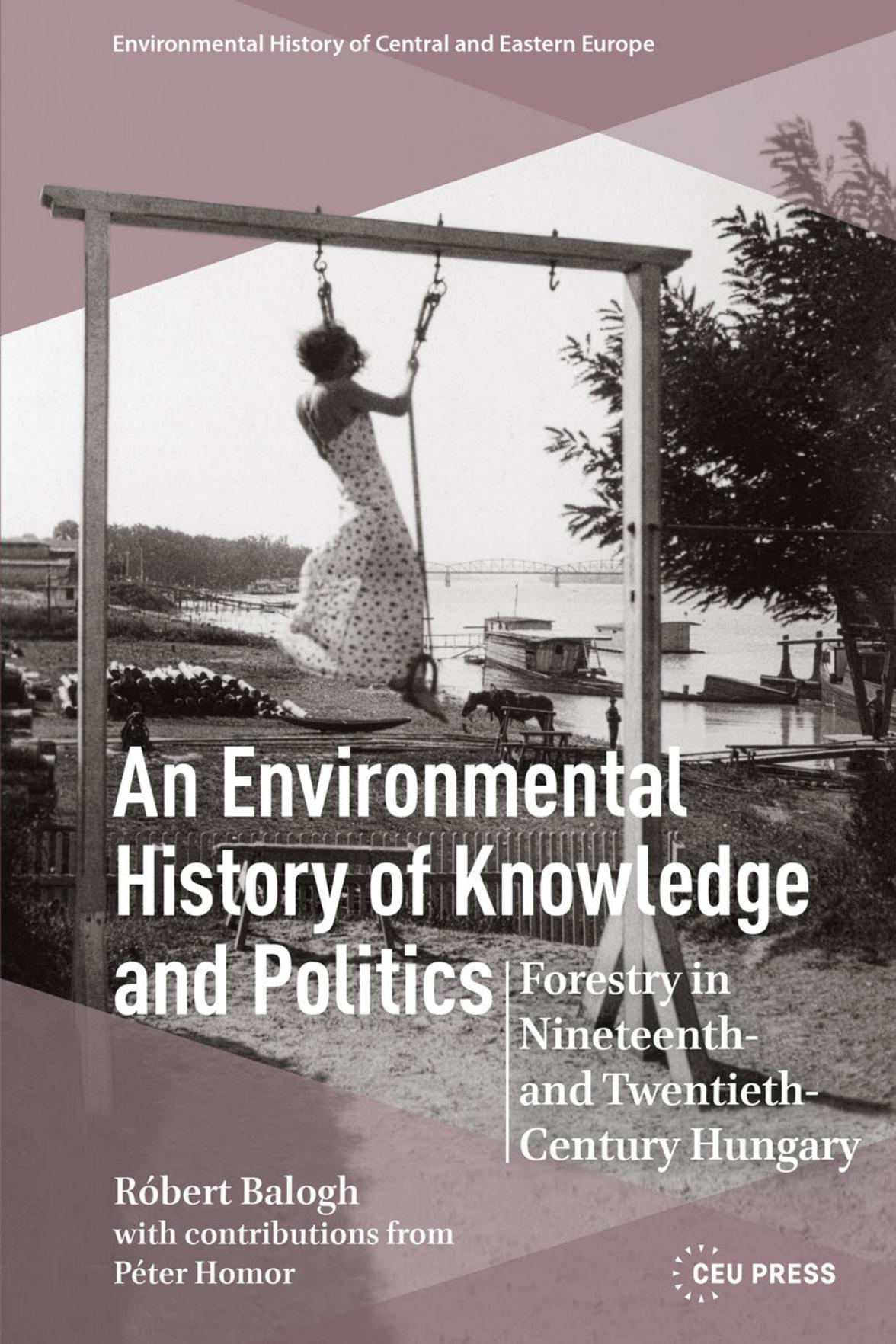


Environmental History of Central and Eastern Europe



An Environmental History of Knowledge and Politics

Forestry in
Nineteenth-
and Twentieth-
Century Hungary

Róbert Balogh
with contributions from
Péter Homor

CEU PRESS

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An Environmental History of Knowledge and Politics

*Forestry in Nineteenth- and
Twentieth-Century Hungary*

Róbert Balogh

*with contributions from
Péter Homor (in chapters 2, 3 and 4)*



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As I mention in the Introduction, a seminar lecture given by Dipesh Chakrabarty at the Center for Historical Studies at the Jawaharlal Nehru University in late 2012 and Himani Upadhyaya's then-ongoing research gave me the initial impetus to turn towards the problem of environmental history and the Anthropocene. I was there on a scholarship provided by the Indian Council for Cultural Relations, which enabled me to study and carry out research in Delhi. It was due to a curious coincidence of names for administrative regions (I come from the county of Hajdú-Bihar and one of my closest friends, Priyanka Nirupam, was from the state of Bihar) that I went on to explore some of the archives on the early twentieth-century history of the industrial town of Jamshedpur.

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1. Introducing the Changes

Abstract: The introduction discusses how historians have addressed the Anthropocene epoch and outlines the methodologies that various researchers have proposed. I posit that there are two paradoxes that historians need to address when it comes to forests. The first is that there is nothing new about direct and indirect human intervention changing the conditions in which other species have to live. Studies in ethno-biology, anthropology, and environmental history have demonstrated that human communities and individuals have been altering their environment for a very long time. The second is that we see forests both as the major victim of environmental damage and as a potential saviour, a carbon-dioxide processing machine.

Keywords: environmental history, methodology, Anthropocene, empires, forestry

The registry book dating to the first decade of the twentieth century that summarised forest management plans in Northeastern Hungary was among the first historical records that I looked at in the course of my research – and the one that surprised me the most. The numbers indicating the area to be cut each year in various categories of ownership were unexceptional: it was the dried tree leaves that appeared between the pages as I opened them that sparked my enthusiasm. The presence of the leaves is a puzzle. There was nothing to indicate whether one of the officials had placed them there, or what purpose they served. Clearly, the leaves were from the neighbouring area since they were from beech, elm, ash, and poplar trees, along with horse chestnut, wild elderberry, and wild cherry. Perhaps this collection served as a kind of crib sheet for non-specialists who referred to the register, or maybe the directory had been repurposed in a forgotten school assignment at some point before the book was accessioned as archival material. At any rate, the juxtaposition of leaves and calculations was also a reminder that

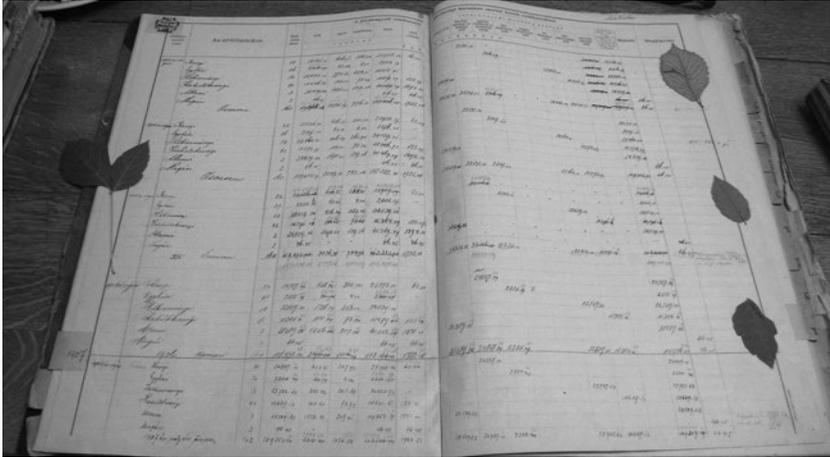


Fig. 1.1. A page from the registry book of management plans submitted to the Forestry Superintendent of Forestry in Debrecen, Hungarian National Archives, Hajdú-Bihar County Archives.

beyond the numbers indicating area, there were different species and the challenge of knowing nature.

The registry book of forests stored in a county archive held at the National Archives of Hungary represents the duality and innate tension within the history of forestry. On the one hand, it is driven by economic and legal ideas about what landed property is and what it should be used for. Foresters are engineers qualified to carry out complex calculations about the area of forests and the volume of timber they contain, to design transport and storage facilities, and to represent these findings on maps. On the other hand, when calculating sustainable yield and timber value, they also needed to consider the biological features of tree species.

By providing the context for this tension, historians can help make planetary and deep perspectives tangible. There is much to gain through the analysis of the textual and visual sources that record human thought and action. For the exhibition “Uprooted: Two Centuries of Forest Change,” presented at the Kew Botanical Garden, curators Heather Craddock and Christina Hourigan defined the mission and method of their work as environmental humanities scholars in this way: “Rather than presenting vague ideas of forest, we decided to focus on the nuanced stories of a few individual tree species and their relationship to Kew.”¹ Indeed, historians may

1 Craddock and Hourigan, “Uprooted.” See also Cornish and Hourigan, “Introduction: Tree Cultures and the Arboreal Humanities”

work within the framework of environmental humanities as they examine archival traces to study past attitudes to forests and trees.

This book describes the efforts and experiences of trained foresters driven by competing priorities, as well as their impact on the society, landscape, and politics of Hungary between about 1860 and 1975. By the end of this introduction I wish to convince readers that the history of forestry in a European country is an engaging subject for those concerned with the current environmental trouble that is, to paraphrase Donna Haraway, here to stay.²

A number of historians have described the global history of environmental and ecological crises that may arguably be called the central feature of the Anthropocene. Leading members of the research community such as J. Donald Hughes, Sunil Amrith, Etienne Benson, Amitav Ghosh, Joachim Radkau, and Frank Uekötter, as well as Jason Moore and Raj Patel and John R. McNeill and Peter Engelke, have presented global histories that effectively narrate the epoch of environmental catastrophes and destruction we live in.³ Other scholars, including historians of Russia and the Soviet Union such as Kate Brown, Jennifer Keating, and Maya K. Peterson, have addressed the epoch of environmental crisis in a way that brings its history closer to home, foregrounding regional and local experiences, as well as politics.⁴ Brown highlights the similarity and ubiquity of extractive practices and their consequences on social and spatial patterns; Peterson, meanwhile, discusses the efforts to re-engineer the Aral Sea between the mid-nineteenth century and the 1940s, under different political regimes. This chronology corresponds to the one I have adopted in this book and the rationale is also similar: Peterson was interested in long-term continuities of the approach to hydrology as well as in exploring the changes brought about under the Soviet Union and Stalinist rule. The local impact of extractive practices are also at the heart of enquiries into the relationship between the Anthropocene and visual culture.⁵

Historians addressing the Anthropocene may adopt one of several agendas regarding their methodology. The most influential take is probably that of Dipesh Chakrabarty, who argues that historians should forgo the dominant

2 Haraway, *Staying with the Trouble*.

3 Hughes, *An Environmental History of the World*; Amrith, *The Burning Earth*; Benson, *Surroundings*; Radkau, *Nature and Power*; Ghosh, *The Nutmeg's Curse*; Uekötter, *The Vortex*; McNeill and Engelke, *The Great Acceleration*.

4 Brown, *Manual for Survival*; Brown, *Dispatches from Dystopia*; Peterson, *Pipe Dreams*; Keating, *On Arid Ground*.

5 Angus, *Camera Geologica*.

agenda of global social justice espoused by the international community of historians of modernity and offers an example of how to replace this meta-narrative with global histories of the planetary crisis.⁶ French historians of science Jean-Baptiste Fressoz and Christophe Bonneuil, meanwhile, aim to historicise the main sources of emissions of Greenhouse Gases (GHG) as well as knowledge of the negative impact of these emissions by highlighting the interests that create unfavourable conditions and stifle responses.⁷ Among philosophers of history, Zoltán Boldizsár Simon is perhaps the most alarmed about the divergence between the way “hard sciences” and the humanities approach the Anthropocene. He aims to reconnect the two areas of knowledge and suggests that it would be most fruitful for historians to focus on key events that have triggered the changes leading to the Anthropocene.⁸ If we survey the existing literature of the global history of the Anthropocene, the picture is less conflicted, since all the authors integrate a critical view of the impact of colonialism and violence into their discussion of global and planetary environmental history, albeit to differing degrees. Amitav Ghosh’s *The Nutmeg’s Curse* as well as Moore and Patel’s work are examples of an explicitly critical approach to the history of capitalism. Eva Horn and Hannes Bergthaller urge humanities scholars to integrate the notion of deep time into their analysis by looking at humans as members of a species that has occupied and broken through niches, migrated and interbred with other hominids, rather than seeing ourselves solely as individuals and communities that make choices and consciously alter their environment.⁹

Looking at planetary ecological trouble through the lens of the history of forestry allows me to bring together several of these viewpoints and draw on the advantages of their various approaches. In particular, I will draw on Simon’s notion of the *epochal event*. I interpret the professionalisation of forestry as a formidable change in the emergence of the Anthropocene. This is due to the many ways forestry intertwined with key notions of capitalist land-use and because of the importance of the demands on and commodification of forests in the crisis of biodiversity on Earth. I argue that the way the professionalisation of forestry unfolded in the territory of Hungary as a state reflects the specificities of Central Europe within global history, and thus in planetary change – if we adopt Chakrabarty’s

6 Chakrabarty, *The Climate of History*.

7 Fressoz and Bonneuil, *The Shock of the Anthropocene*.

8 Simon, *The Epochal Event*.

9 Horn and Bergthaller, *The Anthropocene*.



Fig. 1.2. The Kálvin tér (Budapest, Hungary) with *Celtis* trees, 28 June 2024. Photo credit: Róbert Balogh.

terminology. In writing a history of forestry in Hungary, my goal is to create a historical narrative about contemporary planetary change and ecological crisis from a regional point of view.

Stepping into the history of forestry prompts one to wonder about the ways in which humans interact with trees. Walking through Budapest during breaks from writing this book, I was often struck by how essential hackberry trees are to the character of the city. They create the shady spaces that invite vendors, pedestrians, and café-goers to congregate. Outside Budapest, in the villages tucked among the Mátra Hills, willow and oak trees provide shade for the animals on hot summer days and circulate nutrients in pastures. Both in the city and outside it, trees serve as landmarks and markers of memory, both public and private. People who revisit trees standing in floodplains from time to time may track changes in the water level, or see signs of recurrent drought as well as the impact of human intervention in the flow of rivers.



Fig. 1.3. Oak tree over the cemetery at the Fortified Church in the town of Sfântu Gheorghe (in Hungarian: Sepsiszentgyörgy) in Romania, October 2021.

In the city of Catania in Sicily, I observed how urban life there would be unthinkable during summer heatwaves without tree cover. Moreover, on a more emotional level, the figs, evergreen oaks, chinaberries, black locust, oleanders and laurels that line the streets of Catania seem to provide solace for the calamities of which the mighty and mysterious statue, *U Liutru*, is a reminder. In all these locations, trees remind us of the passage of time.

Humans regard the forest with a complex blend of intentions: utilitarian, social, and romantic at the same time. Trees in forests are felled for various purposes, including firewood, furniture, and lumber for construction. Forests are sites of hard work and leisure, and both kinds of activities reflect social relations or communities, as well as creating new connections. Forests are also spaces for other than human life, where insects, wild animals, and untamed nature might harm or even kill people, and where it would not be possible to survive a week without specific expertise in biology.

In his book *Wood: A History*, Joachim Radkau demonstrates how wood and timber were fundamental pillars of the European economy from the early medieval period.¹⁰ Before centuries of experience revealed that ecological stability requires agriculturalists to take the principles of ecological succession into account, farmers simply cleared forests to increase the amount of arable land available. Consequently, forest clear-cutting was already widespread by the year 1000. As Europe underwent proto-industrialisation in the early modern period, with expansions in agriculture, shipbuilding, and fortifications, followed later on by the production of gunpowder, forests came under more pressure in Central, Western, and Northern Europe. As Oliver Rackham and Péter Szabó, among others, have demonstrated, this did not mean that forest management was absent before the eighteenth century.¹¹ From such research into historical ecology, it is clear that due to the complex factors involved in agroforestry, it is not simply total forest loss or gain over time that determines ecological stability or instability. It is also true, however, that by the sixteenth century, it had become clear that unless measures were taken, timber resources, especially around mines and centres of smelting, would be depleted. Accordingly, regulations aiming at the sustainable use of timber began to appear.¹² Indeed, the issue of whether timber was scarce and required intervention was a major debate in both the early modern and modern periods, and likewise among environmental historians.¹³ Paul Warde has contributed to and moved beyond this debate by offering a history of how state power, data collection, and the idea of sustainability intertwined between the sixteenth and the nineteenth centuries.¹⁴

In his comprehensive work on the global history of the nineteenth century, Jürgen Osterhammel posited that deforestation was one of the main factors

10 Radkau, *Wood*; Szabó, "A Royal Forest."

11 Rackham, *Trees and Woodland*, 59–90; Szabó, "The Extent and Management of Woodland in Medieval Hungary."

12 Warde, "Trees, Trade and Textiles"; Daheur, "Extractive Peripheries in Europe."

13 Warde, "Fear of Wood Shortage"; Castungay, "How About the Threatened Timber Famine?'"

14 Warde, *The Invention of Sustainability*; Vadas and Szabó, "Not Seeing the Forest for the Trees."



Fig. 1.4. Street in Catania (Italy), 11 August 2023. Photo credit: Róbert Balogh.

of change between 1850 and 1920 on four continents: “Between 1850 and 1920 probably as much primeval forest was lost worldwide as in the period double that length from 1700 to 1850.”¹⁵ In his discussion of frontier conditions, he emphasised the role of empires and capitalism connecting these changes; at the same time, however, he added that despite the global connectedness stemming

15 Osterhammel, *The Transformation of the World*, 376.

from 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 storyline throughout the world and that conservation ideas already had weight in this period: “Nevertheless, although local histories can and must be linked together, it cannot easily be argued that they add up to an overarching history of unrelieved environmental degradation.”¹⁶ As William Cronon demonstrated in his classic study of Chicago’s environmental history, urbanisation, landscape alteration, timber grading, timber processing, and forestry went hand in hand.¹⁷ The wave of globalisation in the second half of nineteenth century brought about a twofold change in the history of forestry. When steam replaced sails, the international and transatlantic trade of timber resulted in direct and negative environmental impact on forests of North America.¹⁸

The question of forest cover cannot be treated in simple terms. Several studies have revealed that forest loss was not as drastic for the region as we might assume for the nineteenth century.¹⁹ In some areas in Austria, forest transition – that is, the increase of forested area due to the abandonment of pastures – was already underway in the second half of nineteenth century.²⁰ Moreover, the figures show large variations among plains, low hills, and high mountains.²¹ The composition of the forests of the Pannonian Region changed during the twentieth century due to climate change and the impact of the increased presence of invasive species on tree species and niches.

Paradoxes in the Forests of the Anthropocene

Works of science fiction, such as the animated film *Sky Dome 2123*, calls attention to the fact that trees cannot be simply taken as the saviours of human civilisation on the verge of collapse. Far from being machines regulating the presence of molecules, being a tree is a distinct life form that responds in unexpected ways to biochemical change and stress.²² I first decided to study

16 Osterhammel, *The Transformation of the World*, 381.

17 Cronon, *Nature’s Metropolis*.

18 Lower, *Great Britain’s Woodyard*; Pallavi Das; *Colonialism, Development and the Environment*.

19 Biró et al., “Behind the General Pattern of Forest Loss and Gain”; Munteanu et al., “Forest and Agricultural Land Change in the Carpathian Region”; Konkoly-Gyuró and Balázs, “Erdőborítás-változás a Kárpát-medence térségében”; Máté, “Transdanubian Pusztá”; Máté, “Research of the Local Road Network.”

20 Gingrich, Güldner, and Smid, “Eine sozial-ökologische Interpretation der ‘Forest Transition’.”

21 Konkoly-Gyuró and Balázs, “Erdőborítás-változás a Kárpát-medence térségében.”

22 Szabó and Bánóczki dir., *Sky Dome 2123*

the history of forestry from an environmental history perspective upon my return from the Jawaharlal Nehru University in Delhi, India, where I spent two years on a scholarship. It was while listening to a paper by my fellow student Himani Upadhyaya on colonial knowledge production about the forests of the Kumaon region of the Himalayas that I decided to embark on a dissertation about the history of knowledge production related to forest management, in dialogue with political and social patterns at various scales in nineteenth- and twentieth-century Hungary.²³ In late 2012, while I was still in Delhi, students taking the course in modern Indian history had the opportunity to listen to Dipesh Chakrabarty presenting his thesis about the meaning of the Anthropocene and its implications for research.²⁴ During the discussions that followed the lecture, Upadhyaya brought two paradoxes to my attention that suggested historical questions about the ongoing planetary ecological-environmental crisis.²⁵

One of these paradoxes is that there is nothing new about direct and indirect human intervention changing the conditions in which other species have to live. Studies in ethno-biology, anthropology, and environmental history have demonstrated that human communities and individuals have been altering their environment for a very long time. In the case of interaction with forests, human impact does not simply mean deforestation. It also involves human communities deciding which species they want in a forest, how these species will interact with domesticated trees and crops nearer their houses, and how domesticated animals will affect forested spaces. For example, the presence or absence of domestic animals, or undomesticated herbivorous animals, makes a big difference for forest growth. This is not unique to the Himalayas. As Anna Varga and other ethno-biologists posit, the area of Central Europe analysed in this book, which is known by scientists as the Pannonian Region and occupies an area extending beyond the territory of the late nineteenth-century Kingdom of Hungary, is one of the best examples of this latter process. Many of the signature grasslands of the Pannonian Region would not exist if large animals did not prevent tree seedlings from becoming trees and forests.²⁶ The landscapes we see today are thus the result of human activity in the past. The other side of this, however, is that human impact is creating catastrophic conditions in the form of deadly heatwaves, floods, forest fires, extremely powerful hurricanes, and rising

23 Upadhyaya, "Claiming the 'Bhotiya'."

24 Chakrabarty, *The Climate of History*.

25 In the literature see Skaria, *Hybrid Histories*; Bhattacharya, *The Great Agrarian Conquest*.

26 Öllerer et al., "Beyond the Obvious Impact."



Fig. 1.5. A willow tree near the former drinking trough near the village of Szajla. (Heves County, Hungary). Photo credit: Róbert Balogh.

sea levels. In the Pannonian Region it was the extremely arid weather of 2022 that raised questions about the gravity of the planetary situation and the sustainability of modern life.²⁷ As historians, we need to determine breaking points between sustainable and unsustainable lifestyles, and why, how, and when the “nature” of human impact stopped being moderate or beneficial and instead became dangerous.

The second paradox is that forests are increasingly perceived in mechanistic ways in the Anthropocene, and yet it is precisely this mechanistic thinking that perpetuates ecological imbalances. In this way, forests are both victims and saviours in contemporary public space. Forest fires and forest loss in Brazil, Indonesia, Russia, Australia, and the USA are graphic and distressing examples of forests falling victim to pumped-up demand for products grown on plantations, and of the brutality arising from this demand. A great deal of scientific research has gone into thinking about trees and forests as if they were potentially giant machines regulating carbon levels on Earth.²⁸ Thinking about forests in such an instrumental way encourages reductionist approaches to the world we live in. This duality alerts historians to the heterogeneity of contemporary perceptions of trees and forests. Let’s look at an example.

When assessing the carbon stock stored as biomass in the area of present-day Austria, Simone Gingrich and her colleagues found that the

²⁷ Timár, Jakab, and Székely, “A Step from Vulnerability to Resilience.”

²⁸ Waring et al., “Forests and Decarbonization.”

link between the expansion of commercial forests and the rise of the new agrarian economy was already becoming clear between 1830 and 1880. At the same time, they encountered many uncertainties about the changes in the organic content and the anthropogenic changes of the soil during the same period.²⁹ Some of the questions that Gingrich and her colleagues raised can be addressed in a qualitative manner by studying the work and career of Sándor Márton, a graduate from the Forestry Academy of Selmecbánya (present-day Banská Štiavnica in Slovakia). Márton studied many of the conditions that Gingrich and her colleagues investigated, bringing local decisions related to commodification, changes of forest cover and soil conditions, central legislation and administration, and ethnically mixed areas into the same frame. In 1897, Márton responded to the call of the National Forestry Association by submitting a monographic study on silvopastures, or land-use forms wherein pastures and trees are integrated into the system of grazing in a way that is beneficial for all human and non-human participants, as a sustainable method of economic production.³⁰ Márton found that silvopastures, encouraged by increased levels of light away from heavy tree cover but also aided by the circulation of minerals and nutrients provided by trees, feature more biological diversity than closed forests. Márton had experience in the area where the Pannonian Great Plains give way to hilly areas in Zemplén County, and later in his career he spent decades in a similar region of Szatmár County, also located in northeastern Hungary.

By the final years of the nineteenth century, it was clear to foresters in northeastern Hungary that the local need for domestic animals and hence for pastures was in tension with the ordering of forests introduced by Hungary's Forestry Law of 1879. A new economic formula and scheme were needed that would expand pastures while being compatible with the legal framework. Apart from a sharp distinction between private and other forms of ownership, the legal model enshrined in the 1879 Forestry Law rested on the principle that forest cover was the key tool for conserving soil. According to the 1879 law, soil was capital that produced wealth in the form of harvests and could therefore not be risked, let alone lost. Not surprisingly then, Márton presented his model for silvopastures as one that provided protection against both floods and drought. Although Márton had no idea of the consequences of carbon emissions for the global climate, he was aware that the soil loses its organic content when exposed to the air:

29 Gingrich et al., "Changes in Energy and Livestock Systems."

30 Varga et al., "Prohibited, but Still Present."

The damage that heat and the resulting drought causes implies that the soil loses its water content and materials that plants need will not be present in the form of solutes. The topsoil evaporates because there is no water to which it could be attached. If the heat and drought last long, cracking appears in the ground thus opening it up for the damaging heat [...] If a clear-cut area stands without protection for two or three years, it will be left with one-fourth or onethird of its organic content. Trees in silvopastures are there to protect just this organic matter.³¹

Márton's proposal conceptualized the soil as a grand machine. In fact, a forester living in the late nineteenth or early twentieth century would probably be surprised to see how marginal a role five thousand years of agriculture and human intervention in soil conditions play in the current discussion about the Anthropocene epoch. If Márton had lived long enough, he would probably have provided twenty-first-century scientists William Ruddiman, Simon Lewis, and Mark Maslin with additional insights on indigenous agricultural practices to argue that carbon release due to agriculture had altered the downward trend in the atmospheric presence of CO₂ – and hence, the character of the global climate – well before the age of power plants.³² The proud nineteenth-century engineer would likely have added that, in his time, management practices and the scope of intervention causing either soil degradation or its prevention increased so much that it became a turning point in the history of the relationship between agriculture and forest cover, and thus, the Anthropocene epoch.³³ Márton's thinking leads us to realise that professional forestry was an important agent in bringing about the Anthropocene, in part due to the way forestry administration interacted with local inhabitants and to some extent channelled their demands.

Empires

Sándor Márton lived in the Kingdom of Hungary but also in the Austro-Hungarian Empire. Since the language of instruction was German, professional forestry training institutions influenced social ties and the reception and transformation of knowledge within the empire, there were shared

31 Márton, *A legelő-erdők berendezése, kezelése és hasznosítása*, 49.

32 Ruddiman, *Plows, Plagues, and Petroleum*; Lewis and Maslin, *The Human Planet*, 60–63.

33 Lewis and Maslin, *The Human Planet*, 34–36, argue that in the nineteenth century the bodies that introduced the term *Holocene* actually meant what we mean by *Anthropocene* today.

circuits of knowledge and borrowing (as in the case of the Forest Law of 1879). At the same time, in Hungary, imperial status influenced environmental policy only indirectly: within the Austro-Hungarian Empire, imperial legal frames allowed for compromise between the Hungarian government and different elite interests on the ground, especially in multi-ethnic contexts.³⁴ The elite of the Kingdom of Hungary wished their state to operate as an empire within the Habsburg empire, the only difference being that it was dominated by Hungarians.³⁵ Since professional training reflected as well as produced social hierarchies and political agendas, when talking about the work of professional foresters in the Kingdom of Hungary in the imperial context, it is important to keep in mind the way nation-building and state-building intertwined.

In her book on Central Asian environmental history during the Russian Imperial era, Jennifer Keating posits that since resource extraction and commodity production were at the heart of imperial domination, the political history of empires is also the environmental history of empires.³⁶ In *Time's Monsters*, Priya Satia analyses the role of historians in imagining, implementing, and reproducing colonial violence and repression, pointing out sharply that the Anthropocene could not have occurred without the presence of empires: there was a close link between nineteenth- and twentieth-century wars fought for colonial domination and the global impact of industrialism.³⁷ Joining this brand of thinking, Joanne Yao's ambitious book *Ideal River* connects international politics and the imperial aspects of environmental history for vastly diverse regions along three major rivers – the Rhine, the Danube, and the Congo.³⁸

Starting in the early 1990s, environmental historians of empires have demonstrated that reserving, classifying, and exploiting forests, as well as standardising the way state authority relates to inhabitants of forested regions, were all major ways in which empires altered the ecology of areas they wished to dominate.³⁹ Scholarship on the environmental history of forests in such colonial realms emphasises that we should see forests as social

34 Ordasi, "Borderline Syndrome in Fiume."

35 Csaplár-Degovics, "Austro-Hungarian Colonial Ventures"; Egry, "Regional Elites, Nationalist Politics, Local Accommodations."

36 Keating, *On Arid Ground*.

37 Satia, *Time's Monster*, 28.

38 Yao, *The Ideal River*.

39 Sivaramkrishnan, *Modern Forests*; Rangarajan, "Imperial Agendas and India's Forests"; Chandra, *Resistance as Negotiation*.

spaces where hierarchies and violence manifest.⁴⁰ Indeed, as James C. Scott and Timothy Mitchell have famously claimed, much the same ideas that shaped agrarian modernity came to shape everywhere else in the second half of the nineteenth century.⁴¹ It has also become clear that the history of Western science's efforts to model the impact of forest cover on weather and climate also has its roots in the history of empires.⁴²

The Austro-Hungarian Empire has already proven a feasible framework for studies on the environmental history of empires. On the one hand, it was well connected to other empires in terms of knowledge circulation and had an increasingly dense network supporting internal and external trade and flow of materials. On the other hand, the historical development of the Austro-Hungarian Empire offers an advantage to environmental historians interested in the links between the different scales of action, policy, and its implementation. As Deborah Coen wrote of Austro-Hungarian scientists encountering the idea that changes in the natural world might operate at different scales simultaneously, including the global:

Climatology's history in Austria sheds light on this science's close ties to nineteenth-century imperialism more generally. At the same time, the scientific institutions of the supranational state formed a unique lens onto the natural world. Unlike administrators in Washington or Saint Petersburg, the emperor's ministers in Vienna saw good reasons, both practical and ideological, to support the study of climate down to the details of the smallest scales. And unlike British scientists, with their insistence on the fundamentally orderly atmosphere of India, Habsburg climatologists were far more ready to grapple with the true complexity of their data.⁴³

Giacomo Bonan's study of commons and resource use in the Alps and Ágnes Ordasi's research on the social and political roles and uses of commodities in the port of Fiume, respectively, show that the regional interconnectedness within the Habsburg Empire and the salience of small-scale policies designed by local authorities strongly influenced the environmental impact of that empire.⁴⁴ Wolfgang Göderle was the first to consider forest management in

40 Skaria, *Hybrid Histories*, 153–225; Philip, *Civilizing Natures*.

41 See Demeter, *Agrarian Transformations*, 130–35.

42 Grove and Damodaran, "Imperialism, Intellectual Networks, and Environmental Change."

43 Coen, *Climate in Motion*, 15.

44 Bonan, *The State in the Forest*; Ordasi, "A faipar és fakereskedelem"; Ordasi, "A fiumei elitsoportok és a bosnyák vasúti."

the Austro-Hungarian Empire from the perspective of the Anthropocene. He identified forestry as one of the imperial vehicles that carried out tasks that altered ecological conditions of specific areas, such as introducing new species, with a high modernist attitude. Göderle also foregrounded the importance of the circulation of news and practices between empires in designing responses, such as news about ecological issues in the British Raj becoming known through media in the Austro-Hungarian Monarchy. Another of Göderle's hypotheses emphasises the class aspect of resource use as well as its representation.⁴⁵ These contexts influenced the careers of the foresters in the Kingdom of Hungary who appear in this book.

Less than two decades after World War I, Hungary came under the sway of other empires – first Nazi Germany and then the Soviet Union. Both of these influenced the direction of forestry research and forestry policy. Just at the time when the Forest Law of 1935 came into force in Hungary, the foreign policy of the Horthy regime was to annex territories with sizeable forest cover that used to belong to the Kingdom of Hungary. Timber turned into an element of the war economy. Shortly thereafter, a new situation emerged when imported wood and timber from the Soviet Union became essential for supply, placing a serious strain on the budget. As we shall see, the might of the Soviet Union also manifested in afforestation propaganda, collectivisation, and research. The post-1945 Hungarian timber economy also became part of Comecon deals and the world economy just at the time when conservation became an element of politics once more, both at a global level in Cold War politics and at the national level, too.

Timeframe

The narrative contained in this book begins in the early 1860s, even though potential candidates for the start date of the new planetary epoch based on scientific evidence include 1610, 1781, and 1945.⁴⁶ The 1860s are chosen as the starting point here because that decade saw an increase among Hungarian scientists in the awareness of the possibility of human-induced environmental crisis, with afforestation and the biology of trees recognised among the potential remedies.⁴⁷ The extreme drought of 1863 had a major impact

45 Göderle, "The Habsburg Anthropocene"; Göderle, "Materializing Imperial Rule?"

46 Balogh, "Anthropocene."

47 The credit for this hypothesis goes to Anna Varga.

on scientific approaches to the landscape of the Great Plains of Hungary. This drought was so devastating that it caused the centralised Habsburg imperial government to fear that there would be famine with the potential for hunger to lead to revolt and large-scale migration.⁴⁸ The geographer Ferenc Jankó has pointed out that this event led to the debate between two of the leading scientists in contemporary Hungary: János Hunfalvy, one of the founding figures in Hungarian geography, and the forester Adolf Divald, who played a key role in the post-1867 forestry administration of Hungary as well as in drafting the Forest Law of 1879. In addition, agricultural expert Adolf Érkövy and Antal Hideghéthy also took part in the debate, which mostly appeared in print on the pages of *Erdészeti Lapok* (Forestry Gazette). Interestingly, Hunfalvy was the only participant in the debate who believed that afforestation was the key to countering extreme drought as well as extreme precipitation, and thus floods.⁴⁹

When looking at publications discussing the problems of the Great Plains in the aftermath of the drought of 1863, we find more than a mention of the possible impact of trees on the climate. Writing in 1866, Ferenc Török was among the sceptics who stated that decisions about afforestation should depend purely on economic calculation and believed that the issue of aridity could be solved by simply channeling precipitation in the right way. He claimed that trees “do not gain water for dry ground and at best can somewhat slow down the rate of loss of water that is naturally present in the soil.”⁵⁰ He maintained his scepticism about the potential of afforestation despite knowing about the successful efforts in Nagykovács to counter the loss of soil humidity by planting trees, given that trees circulate water instead of letting rainwater disappear into the sand. Török agreed that the large-scale planting of trees was indeed advisable in areas that were not suitable for other kind of agricultural activity. However, pointing to the significant water content of plants and especially trees, he quickly turned to arguing that trees deprive areas of water. In fact, both of his observations had a fundamental validity and could have led him to a differentiated model about soil conditions and types of trees. Instead, he stressed the importance of realising a network of irrigation canals.

Other experts who paid attention to the details of plant biology developed much more favourable views about the potential of afforestation. Pál Sporzon’s argument was strikingly in line with the understanding and

48 Boa, “[A]z ínség olly rém alakban gyakorlá hatását’.”

49 Jankó, “Elfeledett viták.”

50 Török, *Az alföldi aszály*, 9.

tone prevalent in the 2020s: “We ourselves are to some extent responsible for the change in our climate, as is generally known and admitted: by the clearing of our mountains, the destruction of our forests, the excessive draining of our waters and the partly inappropriate regulation of our rivers.”⁵¹ He was also explicit about the remedy: “Only the idea of the salutary influence of forests, of the manifold usefulness of plantations, must be generalised: and the “the barren lands in the Carpathians will again be leafy, the deserts of the lowlands will again be green”, and the cooling, evaporating, soil-fertilising, wind-catching, dew-catching action of millions of trees will bring us the lost springs.”⁵² An outstanding high school teacher working at a church institution in the southern Great Plains, Mike Tóth, was even more nuanced, elaborate, and firm in his argument for afforestation as a remedy for the drought there.⁵³ Writing in 1873, he observed: “The drought event of 1863 did not stand in isolation. Debates about the place of forests in the economy of the time benefited from the surge in economic thought in the 1860s, which was in turn fuelled by the opening up of the political space for the Hungarian body politic as well as by the ongoing process of dividing land among former serfs and landlords.” As we shall see shortly, the fundamental concepts of the would-be Forest Law were also the product of that decade. The early 1860s were an outstanding temporal juncture of extreme environmental conditions, public scientific thinking and writing, dramatic social change, and political developments that significantly impacted the future of forests in the Kingdom of Hungary. At the other end of the chronological range of this study, the mid-1970s saw the beginning of a new wave of awareness of the unfolding of an environmental crisis.

Overarching Themes and Roadmap of this Book

Since the timeframe of this book covers a period of drastic changes in the legal background of land-use and economy, the history of the transformation of land rights and its limitations will be a theme throughout the following analyses. At the start of this period, court processes that ended the era of serfdom and altered the management of commonly administered lands, pastures, and forests were underway. In barely two generations,

51 Sporzon, *Mit tegyen a magyar gazda?*, 25.

52 Sporzon, *Mit tegyen a magyar gazda?*, 27.

53 Tóth, *A magyar síkság jövője*.

the age of rapid expansion of state power arrived and effected changes in fields that had hitherto been left unregulated, including the management of privately-owned forests. Then came the drastic land reform of 1945, which was carried out unevenly across the various regions, without adequate expert preparations, and was soon followed by the violence of collectivisation around 1960. These changes had specific impacts in the realm of forest management and the popular perception of trees. Each of the chapters that follow will specify how the history of forestry clarifies the relationship between political and environmental history in the state of Hungary.

Since these overarching themes are easier to observe in sequence, the five chapters in this book will follow events in chronological order. The first will present an overview of the factors that drove the commodification of forests and of timber between about 1860 and World War I. It will visit the impact of the concepts behind the Forest Law, its contested impact in rural areas, and the specific issues that modernising cities faced in this regard. While studying the role of capitalism, this case study reconstructs the motives behind the railway building project that specifically targeted the timber economy and provides an example of how the changing place of timber in the urban economy relates to urban social history.

The third chapter stays with the same timeframe and discusses the interplay between nationalism and forestry, asking questions about the possible identities and attitudes of foresters as well as about the broader impact of nationalist thought in the daily operation of forestry. This chapter will pay special attention to the place of knowledge production from the perspective of nationalism and nation-building.

The fourth chapter moves ahead in time to focus on the impact of World War I, as well as on the territorial changes of the post-war period, to explain the spectacular expansion of the scope of central administration in forestry in this period. The chapter will present this expansion as the outcome of a new compromise between large private owners and the government, which was built on the experience that Károly Kaán's programme and practice brought into the history of forestry.

The last two chapters discuss changes in the forest landscape and in forestry programmes carried out by the state socialist regime. While the authoritarian nature of the Stalinist Rákosi government and the subsequent Kádár regime were important in framing research programmes and afforestation campaigns in forestry, we also need to see these events as part of both the Great Acceleration of human impact and a longer history of afforestation.

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2. A History of Value: Forests and Timber as Commodities

Abstract: This chapter maps out the various junctures of the process of commodification in the area of the Kingdom of Hungary. The narrative here will rely on the classic analyses presenting the actors and the infrastructure in the flow of materials and a critical take on nineteenth-century private property within the legal framework of the state. There is also an emphasis on the ground-level activities of foresters as representatives of the state and on communities that had to address, confront, and adapt to changing notions about appropriate interactions between states, lands, and landowners, as well as to the introduction of state legislation reflecting these changing notions.

Keywords: commodity, adaptation, village community, enclosure, legislation

A huge oak tree figures prominently in the permanent exhibition on forestry at the Museum of Agriculture in Budapest. The enormous specimen of timber, positioned alongside detailed maps and forest management plans, clearly conveys the message that by the turn of the twentieth century, forestry in Hungary had developed into a world-class provider of natural resources, connecting rural areas to the national and international economy to great effect. This achievement required the successful development of complex legal and intellectual frameworks, infrastructure as well as the emergence of actors who could tie these various frameworks together and turn them into forest products. Over the course of the nineteenth century, these actors and their frameworks drew Hungarian forests into the global economy, transforming them into capital and permanently altering the lives of nearby inhabitants.

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Fig. 2.1. Sample of a large block of oak tree in the exhibition of the Museum of Agriculture in Budapest, 30 July 2022. Photo credit: Róbert Balogh.

Commodification is one of the key processes that triggered the changes resulting in environmental crisis. To borrow Constantin Ardeleanu's concise definition, "[w]ith reference to the emergence of the capitalist system, commodification means the transformation of objects, services or ideas into goods destined for commercialisation."¹ Commodification is not a harmless or neutral process. One of the most important lines of argument about the historicity of the ongoing planetary environmental crisis posits that capitalism, as a process with a five-hundred-year history, is responsible for the crisis. In their bestselling book *Seven Cheap Things*, Raj Patel and Jason Moore argued that keeping the price of resources extracted at the lowest level was the single most important feature of the history of capitalism. As they demonstrate, this was only possible through repression and exploitation on a mass scale that totally dismissed the human and environmental costs of pollution, devastation of the landscape, and uprooting of people.²

It is no coincidence that one of Marx's first writings about political economy dealt with the new legal restrictions on access to forest produce that were introduced in Prussia in the early 1840s. In a series of articles

1 Ardeleanu, *Steamboat Modernity*, 16.

2 Patel and Moore, *Seven Cheap Things*.

published in a newspaper initially launched to support royal policies, the young Marx condemned the parliament and the parliamentary debates that criminalised a number of wood-collecting practices that used to be customary for peasants.³ Marx argued that the new laws concerning private property were manufactured to serve particular interests instead of the common good. An article he wrote in 1842 also criticised the scheme and extent of punishment for acts that would constitute forest theft in the new legal framework: as subsequent research has shown, several events in mid-nineteenth-century political and legal history relating to forests resulted in people's exclusion from once-common areas.⁴

William Cronon's classic study on the part Chicago played in changing the landscape of a vast hinterland describes in detail the steps along the value chain. Presenting the place of human labour and knowledge networks at the various stages of this chain, Cronon talks of the importance of naming, categorising, and assessing tree species as well as mapping and attributing economic value to forested spaces. *Nature's Metropolis* details how organised cutting and sawing needed capital from entrepreneurs, workers and horses with hierarchical working structures, and then, once the wood was transported to the edges of the city, timber yards that could measure and cut timber into standard sizes according to the requirements of various specialist industries.⁵ Giacomo Bonan has provided a similarly sweeping account of the origins of capitalist timber production for one of the regions in the Alps. Importantly for this chapter, Bonan talks of an area where the commons' influence was strong at the start of the process, around the turn of the nineteenth century.⁶ For the territory of the Kingdom of Hungary, research on the grain markets along the Danube in Budapest as well as at the port of Fiume reveals linkages between commodity flows, marketplaces, and urban infrastructure.⁷

This chapter maps out the various junctures of the process of commodification in the area making up the Kingdom of Hungary. The narrative here will rely on the classic analyses briefly presented above, including Cronon's method of presenting the actors and the infrastructure in the flow of materials and Marx's criticism of the reinterpretation of private property within the state legal framework. I complement these analyses

3 Bensaïd, *The Dispossessed*, 5–20 and 59–106.

4 Pichler, Schmid, and Gingrich, "Mechanisms to Exclude Local People from Forests."

5 Cronon, *Nature's Metropolis*.

6 Bonan, *The State in the Forest*, 119–64.

7 Bagi, "A só, a hal és a híd"; Ordasi, "A faipar és a fakereskedelem térformáló hatása."

with two perspectives adopted from postcolonial historiography. On the one hand, there is the emphasis on the ground-level activities of foresters as representatives of the state.⁸ On the other hand, I consider that throughout the nineteenth century, countless communities had to address, confront, and adapt to changing notions about appropriate interactions between states, lands, and landowners, as well as to the introduction of state legislation that reflected these changing notions.

Legal Framework of Private Property in Forests

In the first half of the nineteenth century the Kingdom of Hungary was evolving into a constitutional monarchy within the Habsburg Empire; it reached a special political compromise with the imperial centre in 1867, following war and retribution. The legal system creating private property was imposed as one of the post-war measures of the 1850s, but it had a decades-long prehistory. The issue of turning forests into private property was a particularly difficult and lengthy process that was not resolved with the introduction of the Hungarian Forest Law of 1879.

The transformation of Hungarian forests from agrarian resources to global capital was a gradual one; it is impossible to identify a singular starting point because there were earlier precursors to this process long before the legal framework was put in place in the middle of the nineteenth century.⁹ At the end of the eighteenth century, the exponential growth in the demand for cereals and military clothing encouraged landlords to adapt their economic strategy and create large manors in the Kingdom of Hungary, too. This process of allodisation resulted in the clearing of forests at a large scale and disturbed the legal and economic balance between serfs and landlords, triggering a wave of court cases in the 1820s and 1830s.¹⁰

As the drive for profit-oriented production accelerated, legislation regarding land titles and land use in the Kingdom of Hungary underwent a profound change. In April 1848, the leaders of the Hungarian Revolution, seeking autonomy within the Habsburg Empire, demanded the compulsory division of land between serfs and landlords in order to abolish the system of serfdom. Although the revolution was eventually defeated, an imperial

8 Bhattacharya, *The Great Agrarian Conquest*, 109–52.

9 Rus, "Perceptions of the Wood Crisis."

10 Szabó, "A jobbágybirtok problémái 1848–49-ben." See also Szabad, *A tatai és gesztesi Eszterházy–uradalom*, 191–240.

order of 2 March 1853 reintroduced the principle that all land had to be formally divided between private owners.¹¹ While this move established private property as the dominant regime, it caused economic hardships for members of village communities for a number of reasons. First, entitlement had to be proved by legal documents since landlords might challenge the de facto situation. Second, the methods of common land use that had developed over the previous 150 years had to be replaced by a new economic routine. Access to pasture and timber became uncertain as the legal regulation was vague about the exact mode of their distribution. On top of all this uncertainty, peasants were obligated to pay their former landlords a sizeable sum in compensation for the free labour and land the landlords had to forgo.

Two important pieces of legislation – the Imperial Forestry Decree of 1852, referred to in Hungary as Austrian Forest Law, and the Forest Law of 1879 – were pivotal in the long transition towards profit-oriented agriculture in the Hungarian part of the Habsburg Empire. Sections of the Austrian Forest Law that discussed measures to prevent soil erosion and described cases of violation made their way into the Forest Law of 1879, but nevertheless there were notable differences between the two pieces of legislation. While one of the main reasons for regulating forest use was the end of serfdom and the resulting dispute over what had been used in common by the village community and the former landlord, the 1879 Forest Law barely addressed this concern, merely mentioning that if there were any entitlements remaining from the previous land regime, these should be clarified in the management plan.¹² This was because specialised courts were still dealing with the division of rights over formerly common land at the time the draft of the Forest Law was submitted to the public and, subsequently, to parliament.¹³

The draft that the Hungarian parliament eventually voted on was based on a set of core ideas and a viewpoint whose key proponent was Adolf Divald (1828–1891), the main contributor and editor of the journal *Erdészeti Lapok*, which became the official publication of the National Forestry Association (Országos Erdészeti Egyesület). Divald was eventually appointed chief forestry officer within the Ministry of Finance right after the compromise was agreed, a post he held for five years. (Between December 1872 and late 1873, Adolf Divald chose to leave his post at the ministry and take up

11 See, for example, Niederhauser, “The Peasantry and Latifundia.” More recently, see Demeter, “Territorial Disparities.” For a regional view, see also Demeter, *Agrarian Transformations*.

12 For the background to the law of 1852 see Weiss, “Mountain Forest Policy in Austria.”

13 For the issues around commonly used land, see Orosz, “Peasant Emancipation.”



Fig. 2.2. Forester with a measurement tool, 1917. Source: Fortepan/Mária Hanser.

employment in a consortium that planned to exploit an extremely valuable forested area in Croatia, triggering a number of critical articles in the contemporary press.)¹⁴

The first draft of the 1879 law, which the National Forestry Association put forward in 1866, was based on classifying forested areas according to soil

14 See, for example, the article in the daily *Ellenőr* 5, no. 255 (1873): 1–2.

type and ownership type. Classification according to soil was quite simple. The bill held that there were forests under which the soil was also suitable for more profitable agricultural activities, while in other areas forests had to be maintained in order to preserve the soil, and in such areas, forestry was the most profitable economic activity. The classification based on types of ownership reflected contemporary notions about private ownership as taught at the Forestry School of Selmecbánya and was popular among members of professional associations that assisted in drafting the bill. The National Forestry Association, along with an agrarian association called the National Agricultural Association of Hungary (Országos Magyar Gazdasági Egyesület), argued that forests that were part of private estates would be best left without government interference, as it was in the interest of private owners to manage forests in a sustainable manner. Conventional wisdom held that legal entities such as municipalities, the church, private and public foundations, and village communities were likely to mismanage forests, and hence they should be obliged to submit a long-term forest management plan for official approval. The draft also assumed that only the employment of trained foresters, who had obtained their qualifications through a state exam, would guarantee that the approved management plan would be followed.¹⁵ Accordingly, when the draft became the Forest Law in 1879, cutting rights of private enterprises were curtailed, and grazing in forests and designated protected forest areas was strictly forbidden. The forest management plans were expected to ensure maximum profit from the growth of trees without damaging the base value of the capital, that is, the longevity of the forest. Management plans envisaged an ideal distribution of tree age and species in the forests, as well as a system of planting and cutting that made it easier to carry out mathematical calculations and also facilitated the installation of infrastructure. Calculations that aimed to assess the worth of forests, along with the methods of placing timber on the market, resulted in the commodification of forests. Foresters played a key role in these processes. They managed and supervised state-owned forests and, as civil servants, they were responsible for approving the forest management plans on behalf of the Ministry of Agriculture. Moreover, they had specific roles in determining whether and how a particular forest stand could be turned into timber.

In 1885, Albert Bedő, the royal forestmaster, prepared a major work titled “The Economic and Commercial Description of the Forests of the Hungarian State” (*A Magyar Állam erdősegeinek gazdasági és kereskedelmi leírása*) for

15 See the draft proposal published in parts in *Erdészeti Lapok* 5, nos. 7–10 (1866).



Fig. 2.3. Millennial exhibition. Various products made of oak timber from Slavonia (Croatia) by S. H. Gutmann Co., 1896. Source: Fortepan/ Fortepan / Budapest Főváros Levéltára. Levéltári jelzet: HU.BFL.XV.19.d.1.10.239.

the National Exhibition held that same year. This work reflected the ideas behind the 1879 Forestry Law. Bedő based his tables on the figures of the forest cadastral surveys completed in the early 1880s, and categorised forests by yield per acre, ownership type, site classification, soil type, dominant species, and forest administration level. His method allowed species and regions to be characterised by determining one or two main categories. The maps accompanying the work were prepared for the even more complete and representative revision of 1896. The map called “Political Divisions” showed the forest administration centres and their districts, demonstrating how the tasks laid down by law were translated into a three-tier forest organisation system that Bedő was implementing at the time.

Responses to the Regulations of Forest Management: Cases from Szatmár County

During the nineteenth century, notions about the interaction between states, land, and landowners underwent changes that facilitated the maximisation

of extraction, be it through agricultural production, mining, forestry, or other means. Forests became sites for negotiating state power and development.¹⁶ The key to these changes was the demise of the notion of the commons, in which land and resources were collectively managed by communities. For the contemporary mainstream of liberal thinkers and professionals, commons as a form of land-use was judged to be a backward and harmful relic of feudal-style entitlements and pre-modern communities. Yet research into the environmental history of various regions across the globe has revealed that commons were often a sustainable means of organising economic activities ranging from energy production to fishing and pastures. It is widely known that the surge in the wool trade as a result of continental wars contributed to the state-backed enclosure process in Britain. The end of feudalism brought about by the French Revolution meant the end of contractual relationships that allowed for the common use of pastures in France. If we consider the idea of manifest destiny in North America or colonialism in Australia and New Zealand, which involved conflicts with Indigenous peoples' collectively-held land rights, as did the establishment of state-run colonial administrations in South Asia, we can recognise the global nature of the enclosure process. The global move to enclose the commons had impacts in Central Europe during and after the revolutions of 1848.

As pointed out in the Introduction, Sándor Márton was one of the most thoughtful and impactful foresters of the late nineteenth and early twentieth centuries. His main area of activity was in the eastern part of Szatmár County, including the Avasság (Tara Oasului in Romanian) and the areas around the towns of Nagybánya (present-day Baia Mare in Romania) and Felsőbánya (present-day Baia Sprie in Romania). In what follows, I feature examples of responses to these changes from communities in a hilly area of Central Europe. The village communities in the Avasság area responded to the enclosure process in particular ways because of their location in a semi-peripheral region rich in timber and mineral resources. Also relevant was the fact that community members were Romanian speakers of the Greek Catholic faith, and so were positioned outside of the social networks that were dominant in the Kingdom of Hungary at that time. Many areas subjected to the enclosure process were zones of cultural contact and resource frontiers. Additionally, the villages of Szatmár experienced brutal inter-ethnic violence in 1848 and 1849, as the Hungarian Revolution manifested as civil war in many multiethnic areas.

16 Scott, *Seeing Like a State*; K. Sivaramkrishnan, *Modern Forests*; Lucic, "Law of the Forest"; Bonan, *The State in the Forest*; Chandra, *Resistance as Negotiation*.

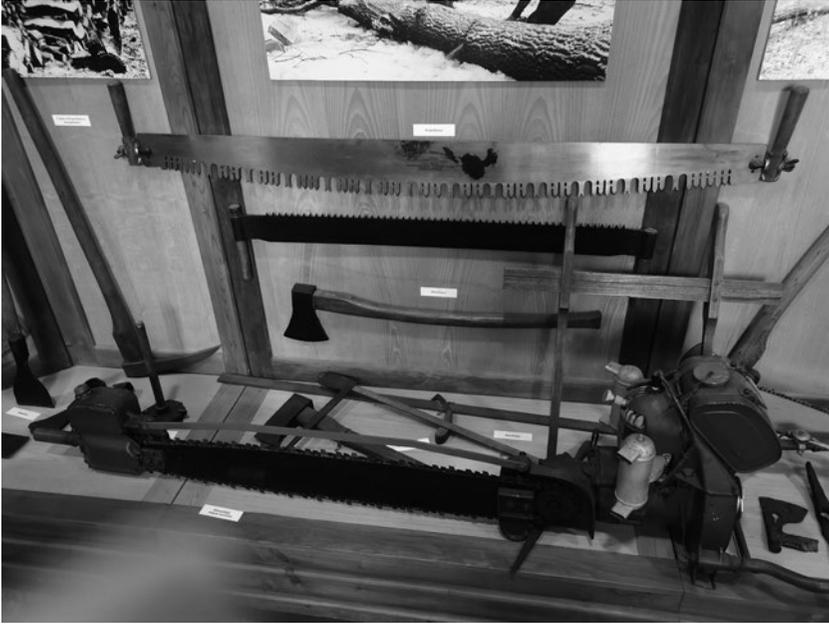


Fig. 2.4. Tools from the exhibition of the Museum of Agriculture in Budapest, 30 July 2022. Photo credit: Róbert Balogh.

The written material produced by county-level administration in Szatmár contains examples of the conflicts that emerged within village communities, as well as between forestry authorities and village communities upon the introduction of the Hungarian Forest Law of 1879. Thus, this subchapter discusses the tensions arising from the conflicting priorities of the Forest Law of 1879 and how the forestry administration facilitated a compromise between the new rules of profit-oriented agriculture and the economic activities at the local level.

Through the enclosure process, some village communities in Szatmár County were left without pasture, but they still had an obligation to pay compensation to their former landlords. In this context, communities sought to commodify the local forest plots and to convert these areas into pastures. In some locations, villagers disagreed about the desirability and timing of cutting the forest, with some villagers preferring payment in the form of ongoing access to forest produce and others preferring immediate cash income. On some occasions, the local (mostly Greek Catholic) churches also decided to sell their forest plots, which were important for grazing, thus causing further conflict over land use.

To make things more complex, the Forest Law of 1879 prohibited village communities from selling their forests unless the Hungarian national

forestry authority, operating as part of the Ministry of Agriculture, gave permission. Clear-cutting was expressly forbidden. Village communities could obtain permission to cut any area only after they had an approved management plan in place. Importantly, communities could not arrange to divide the land on their own, even if they would have done so prudently. This latter prohibition caused conflict in a village called Buzesti in Romanian (in Hungarian: Oláhújfalú; later, Szamosújfalú). The village planned to finance its obligation to pay 1500 forints to Count Lajos Károlyi by selling forty-four cadastral acres of oak forest next to the village. A complaint about the cutting reached the authorities so many years after it had taken place that it was hard to date the event to a particular year. In fact, by 1891 there was already a young mixed forest stand in the same area.¹⁷ Curiously, neither the estate of Count Károlyi nor the village administrators were able or willing to reveal the actual contract about the division of the land. The contract might have clarified whether the arrangement was made before or after the passage of the Forest Law of 1879, which was important because the action may have violated the terms of the law. Eventually, the village received a moderate fine and had to pay for the preparation of a management plan for the new stand. Village leadership agreed to do so when they received permission to sell the leftover older oak trees.

Restrictions on land use often weighed heavily on communities, but local grievances did not always immediately come to light. For example, a petition addressed to the Hungarian authorities in May 1919, at the time when post-World War I border changes were already in sight, makes clear that a village called Iegheriste (in Hungarian: Alsóhuta) was left without sufficient firewood and sufficient pasture as a result of settlement in former commons carried out in the 1860s and 1870s. The local representative claimed that the Count Károlyi family had in the 1860s enclosed 1400 cadastral acres of forest that had previously been used as emergency pasture for cattle and as a source of lumber and timber. The forestry authority in the city of Debrecen ultimately dismissed the matter, claiming it had been addressed as part of legal proceedings between the village and the Count in the 1860s.¹⁸

Conflict between village communities and authorities also occurred when foresters designated certain areas as protective forest belts, thereby

17 Romanian National Archives (RNA), Cluj County Department ACSM Actele Comitetului Admin., 1891, vol. I. 220–49.

18 Hungarian National Archives (HNA), Szabolcs–Szatmár–Bereg County Archives (SZSZBM), IV. 757/b. box no. 69. 305a/1919.



Fig. 2.5. Villagers working on a wooden house, 1907. Source: Fortepan/Hungarian Museum of Geography.

denying villagers access to any forest products. Paragraph two of the Forest Law of 1879 made it clear that while both the landowners and the county administration could make proposals bearing on land access, it was the forestry administration under the Ministry of Agriculture that made final decisions. In locations where prospectively protective areas had been alternately used as pasture and arable land, the situation was particularly concerning. The mostly Hungarian inhabitants of the village of Kószegremete (Remetea Oaşului in Romanian) suggested a compromise: they would plant walnut trees (*Juglans regia* spp.) in the area that the state authorities wished to see protected so that the soil would be preserved and the two-year system of agriculture could also continue.¹⁹

Common land was vital to the economies of village communities in Tara Oaşului in the nineteenth century. Cows could not survive without feeding on common pastures, while common forests were the source of energy and timber. Enclosure proved a disruptive process. The rural populations in these

19 HNA, SZSZBM, IV. 757/b. Alispáni iratok, VII/2255/1913.

villages adapted to enclosure and to limitations on their ability to commodify timber by acting in their own interest, even in the face of fines and even if their actions caused conflict within the village. Efforts by villagers to assert their interests contributed to public alarm about the potential loss of forests and helped prompt the enactment of the Forest Law of 1879. When the newly established forestry authority pushed the villages further by establishing protective forest belts, villages put forward creative solutions. In time, rural persistence paid off. Eventually, the forestry authorities operating within the Kingdom of Hungary's Ministry of Agriculture recognised that diminished pastures threatened both economic viability and subsistence prospects, and tacitly consented to recategorising forest land as areas that may be turned into pasture.

The Role of Foresters

In 1913, Tibor Blattny and Lajos Fekete published a major study of the forests in the Kingdom of Hungary. In the opening pages, the authors summarised their understanding of the role of foresters within the timber economy:

One of the key tasks for forestry is to keep or develop for the future forests that strengthen both their owners and the national economy using the will of nature. While preserving the area of forests, it needs to aim at stability and increase the volume of timber. Works to renew forests and afforestation should be done in the shortest possible time.²⁰

Indeed, the figure of the trained professional as administrator emerged as a key to implementing this capitalist commodification in the latter part of the nineteenth century. The forester, acting on the ground, resolved conflicting land claims and submitted memoranda about the desired course of future legislation on land-use issues. Even if the foresters' actions and decisions did not always have the intended outcome, it was nevertheless these administrative officers that reordered the landscape on behalf of the state and shaped land-use practices in rural areas. The professional forester, travelling from village to village to rule on legal cases, served as a key actor in determining land-use practices in a new agricultural regime.²¹

20 Fekete and Blattny, *Az erdészeti jelentőségű fák és cserjék elterjedése*, 721 and 730.

21 Szabó, "The Horka Litter Raking Incident."

This activity was particularly sensitive when the forest lay along state boundaries.²² One representative arbitration read:

The representative of Csík County sells 1,184 cadastral acres of forest on the Solyomtár Alp that had been ceded to Romania during the Hungarian-Romanian border settlement [in 1886]. The price per cubic metre before cutting is settled at 60 krajcár or 120 fillér. Buyer is obliged to pay the price thus calculated during each measurement in cash. The county keeps an inspector at the site of sawmills who has the duty to make sure that each useful tree is cut and measured and that no piece of wood goes to the mill without being measured.²³

In this case, local political decisions and local officials certified by the central state administration played vital roles in determining how, and whether, commodification of timber from the border area took place. Thus, the work of forest engineers incorporated the idea of profit and capital on a daily basis.

These new assignments put forestry at the point of contact between private interests, the national economy, and the need for sustainability. An important non-human actor assisted them in their efforts: *Erdészeti Zsebnaptár* (Forestry Pocket Calendar), published by the Hungarian Forestry Association between 1882 and 1918, which summarised the expertise developed in the years since the Austrian Forest Law, standardising measurements and tables based on experiments that enabled the commodification of forests. The pocket calendar facilitated the methods of calculation necessary for the systematic execution of forest management plans and the planning of annual works. The calendars included, in addition to the directories of the administration, tables of the number of days required for each task, barking tables, formulas for calculating forest value, interest rates, and tables of timber production for different species of wood. These tables synthesised the data contained in internationally used manuals as well as that derived from Hungarian forestry research. The production tables were of paramount importance, as they recorded the growth capacity in terms of volume and diameter of individuals of a species at different ages under different classes of site conditions. They therefore had a decisive influence on modelling

22 Nagy, "Erdővagyon-újraelosztás és faipari nagyvállalatok megjelenése Háromszéken."

23 Contract between Csíkvármegye and Csíkvármegyei Erdőipar Részvénytársaság. The document is held at the Historical Collection of the Csíki Székely Múzeum (Szekler Museum of Ciuc).

what was imagined as the ideal future state, a model that was key to the relationship between the forest manager and forestry commodification, both of which were overseen by the state.

In fact, forestry officials on the ground were often the main experts who, having internalised standard methods of forest management, carried out the tasks that the commodification of land required.²⁴ In short, the professional work of foresters in late nineteenth- and early twentieth-century Hungary was undertaken against the backdrop of the capitalist redefinition of landed property (including forests) and the rise of state-based politics.

One of the daily activities of a forester was determining the value of designated forest stands scheduled for auction.²⁵ The regulations specifically prepared for evaluating the forests near Fiume (today, Rijeka in Croatia) convey well the activities that forest rangers were expected to carry out when cruising the forests.²⁶ Rangers played an indispensable role in measuring, evaluating and controlling, and thus commodifying, forests. Many of the tasks of foresters working in the territory of Fiume centred on turning trees into precisely standardised goods to be processed further. Rangers took part in the exact measurement of the area to be cut, kept track of the maturing of trees, maintained stocks of seeds for reforestation, and then followed detailed instructions about preparing the land for reseeding and protecting seedlings on steep hillsides and in highly variable weather conditions.²⁷

24 According to the censuses of 1891, 1900, and 1910, the number of forestry officials who had completed their higher training at the Academy oscillated between 1,800 and 3,000. We may put the number of forest rangers at around 30,000 to 40,000. This number does not include those who worked in forests for part of the year but remained agricultural workers for several months. Based on census data from 1900 and 1910, there were between 130,000 and 160,000 people who were directly dependent on the forest economy; these figures included workers and their dependents in the Kingdom of Hungary, together with those in Croatia. Moreover, the number of people who depended in part on forest-related economic activities for their income came close to equalling the number of people in full-time employment in 1910. See 1910, *évi népszámlálás* 6 [Census of 1910, volume 6], *Végeredmények összefoglalása* [Summary] Budapest 1920, 112.

25 The journal of the National Forestry Association in Hungary, *Erdészeti Lapok*, regularly included a section on auctions under the heading “Fakereskedelem” (Timber Trade). See, for example, *Erdészeti Lapok* 44, no. 10 (1905): 915–16.

26 This was a multilingual area where Croatian and Hungarian competed for dominance, although Italian was the most commonly used language in the early years of the twentieth century. City authorities were particularly concerned with the question of demarcating and protecting state boundaries. See Ordasi, “Borderline Syndrome in Fiume.”

27 *Szolgálati és fegyelmi szabályok a Fiume város tulajdonát képező erdők és kopár területek őrzésénél alkalmazott főerdőőr, erdő és erdőszolgák részére* [Service and disciplinary regulations for Forest Rangers of various ranks employed to protect forests in the possession of the City of Fiume], 1906, 30–38, State Archives of Rijeka, Papers of the Governorate, DARJU 5, box no. 412.

As the written personal testimonies of foresters demonstrate, forestry professionals worked in widely disparate regions over the course of their careers.²⁸ Ákos Simonfy, the son of Sámuel Simonfy, a noted veteran of the revolutionary wars of 1848 and 1849, was born in 1867 near the southeastern border of Austria-Hungary, in Háromszék County in Transylvania. But Simonfy began his career at Nagybánya in present-day Romania, and then later worked in Besztercebánya, in present-day Slovakia. Over the course of the 1890s, he became an expert of measuring the dimensions and assessing the value of forests, as well as of drawing up management plans, and developed considerable expertise in mensuration and reforestation.²⁹ Yet despite his acumen, pushed by low salaries and slow progress, Simonfy left Besztercebánya and landed in Nagykőrös, one of the small towns of the Great Plains in 1896. This was a sandy area where extensive afforestation was needed to achieve actual forest cover, requiring of Simonfy a different skill set. Later still, he was transferred to service in present-day Croatia, and then back near his hometown in the western part of Transylvania. After World War I, local officials recalled him to Nagykőrös, where he undertook major afforestation works throughout the 1920s.

Likewise, the forest engineer named Heribert Loványi worked in diverse geographical conditions and regions of pre- and post-World War I Hungary. These included the old privately owned beech forests in Krassó-Szörény County in present-day Romania, Biharsály, in the sandy area of the Great Hungarian Plain, the town of Debrecen and different locations in today's central Slovakia, including Brezno, Voznica (Garamrét in Hungarian), Liptovská Teplička (Teplicska in Hungarian), Breznóbánya (Brezno), Garamrét (Vozniva), Teplicska (Liptovská Teplička) and the high regions of the Tatra Mountain. He spent most of his career near Visegrad, where his many tasks included construction, wildlife management, the archeological excavation of medieval remains, and the rewilding of the forest by resettling bison. His reminiscences make it clear that foresters were key actors in implementing anthropogenic landscape change. Loványi's main expertise focused on civil engineering: he designed and oversaw the construction of a tourist lodge, an office building and lumber yard, roads for cars, and also narrow-gauge removable railway lines. He also managed waterflow between dams and built infrastructure for the rafting and floating of timber. Apart from these

28 Archives of the University of Sopron, SOE KL 104.

29 While working in Banská Bystrica, Simonfy became convinced that existing methods of reforestation would have favoured the limited *Robinia pseudoacacia* stands in the Great Plains, but required excessive work in the large pine forests in the north.

tasks, he took part in prospecting for minerals, managed fisheries and the auctioning of cut timber, and assessed the damage that game animals had caused in agricultural areas.³⁰ Clearly, forest rangers provided institutional continuity, carrying their expertise from place to place in the empire, despite considerable political upheaval. Taken together, the autobiographical accounts of Simonfy and Loványi demonstrate that foresters were important in implementing infrastructural change in a large number of localities across various terrains, and that they played a key role in creating and designing the timber market both locally and at the large scale.

Railways and the Timber Economy: Two Cases

The construction of railways also links the fin-de-siècle Kingdom of Hungary to global developments. Moreover, a close look at two cases of railway construction foreground the actors and motives behind everyday practices of commodification in a regionally specific way.

According to Sándor Domahidy (1841–1907), a key figure in the transformation of Szatmár County, the villages in that county had only recently abandoned pastoralism, which the author considered primitive and unprofitable, and were slowly shifting towards crop production, which as yet had only flourished in the model farms of the large landowners. Domahidy points out that the area consisted of primeval forests, whose trees would be valuable only with the construction of a railway line through the Vécsey estate. At the turn of the twentieth century, one of the key drivers that altered the landscape of the region was the invention of technologies for producing furniture and railway sleepers. Due to innovations in the technology of

30 SOE KL104, Heribert Loványi, *Pályafutásom 1898–1958* [My career 1898–1958]. Lovanyi recalls his efforts in afforesting a sandy area that had been subjected to erosion around 1905, and notes that he saw the fruits of his labours decades later. Moreover, he emphasises how he used his notes from the early years of the twentieth century in the 1920s when afforestation became important once again. Apart from *Robinia pseudoacacia* and pine species, he mentions the Kentucky coffee tree, *Gymnocladus dioicus*, as one that would become important in afforestation: “the task was to carry out afforestation in a puszta of 40,000 cadastral acres called Peszéradacs. At the same place, there have been some related works had been done for four or five years to a smaller extent. The management of the estate decided that the area should be prepared using a steam plough. We planted black locust, black pine and *Pinus banksiana* in an area of seventy cadastral acres. I wrote detailed notes about my experiences especially regarding the problems that layers of sand and sandstone cause for black locust [...] I made great use of these notes later on during the afforestation campaign in the Great Plains. What can make a forester happier than seeing the outcome of his work after 30 to 36 years? I had such a luck when I visited the area on the occasion of hunting invitation.”

bending timber, beech became a more valuable commodity than ever before. While sawmills still operated based on oak resources in Nagybánya and other towns, in the late nineteenth century new companies interested in furniture and railway sleepers moved into the region. One of the major private owners, the Vécsey family, embarked on constructing a new railway line between their centre for timber extraction and Szatmárnémeti, the regional centre, in 1906.³¹

In the summer of 1904, Baron László Vécsey wrote to his brother, Baron Miklós Vécsey, reporting on a meeting with the administrative head of the county regarding negotiations about the exact route the railway would follow.³² At the time of writing, discussion about the route and the future tariffs was ongoing, dictated primarily by the expectations of the Berliner-Handelsgesellschaft, one of the largest German banks at the time, involved in industrial financing, railway construction and the issuance of government bonds. The man Vécsey called the “Jew of the bank” was probably Carl Fürstenberg, the bank’s director, or Walther Rathenau. The latter was involved in the management of both institutions at the beginning of the century through close links between the Allgemeine Elektrizitäts Gesellschaft, or AEG, and the Berliner Handelsgesellschaft.

The Kolozsvári Erdőipar Részvénytársaság (Forest Industry Company of Kolozsvár) was founded in May 1914, and it is a particularly interesting case for showing how businesses brought together capital owned by people from very diverse social backgrounds. The president of the company, Baron János Urmánczy, was one of the participants of the Hungarian-Romanian clashes of November 1918. Urmánczy also had sawmill and forestry interests in Kalotaszeg, where, as was the practice during World War I, Italian and Romanian prisoners of war were employed. In the last days of the war, a rebellion broke out at the plant, but it was violently crushed by Nándor Urmánczy, János’s brother. After the clash, which claimed several dozen victims, according to Romanian sources, twenty Romanians who had been taken prisoner were killed. Between 1902 and 1918, Nándor Urmánczy was a member of parliament, a member of the National Party and later of the Independence and Forty-eighth Party. He was nearly forty years old at the time of World War I, but fought at the front in 1917.³³ Among the founders of

31 MNL OL Z 40–1581; P98 Szatmár–Bikszádi HÉV.

32 Vécsey László to Vécsey Miklós (Sárköz, 8 August 1904), published in Zsoldos, *A szatmári Vécseyek*, 114. Pethő György was an officer of the estate of Sárköz, while Szentiványi Gyula was another landholder in the region.

33 Nándor was the Urmánczy who, a few days after the incident, took part in the formation of the Szekler National Council in Budapest. Erdélyi Napló, 2 November 2018, online: <https://>

the Forest Industry Company of Kolozsvár we find Mór Tischler, who in 1905 was the fourteenth largest taxpayer in Szolnok-Doboka County. In 1908 he became the president of the Neologic parish of Kolozsvár, and in 1910 he was a nobleman and an entrepreneur interested in the livestock trade.³⁴ We also see Count István Lázár as a member of the board of directors, who was the chief bailiff of Brasov County, then a member of parliament.³⁵ Among the officers and shareholders in the year of its foundation was Adolf Hirsch, a royal councillor, a leather merchant and distillery owner in Kolozsvár (Cluj), whose shop in Wesselényi Street is known from postcards.³⁶

The Kolozsvári Erdőipar Részvénytársaság processed beechwood in the forest of Bikszád, and, after the outbreak of World War I, it mainly supplied firewood and sleepers to the Hungarian State Railways (MÁV).³⁷ Annual production was over 10,000 m³ according to data for 1915, but no systematic record of the output has survived.³⁸ In the profit and loss accounts, the lines “beechwood from Szatmár” and “firewood invoice” are included, but not the amounts. It is clear that the company had a steam sawmill not only in Bikszád but also in Satu Mare, so the railway line that had been built was essential for the processing of the company. However, the ownership of the company was constantly changing, and by 1918 none of the original subscribers were shareholders.

In 1919, despite the fact that “the price of food and the shortage of workers caused by communism had a negative effect on production, and the shortage of railway wagons made transport and sales difficult,” a profit of nearly 29,000 crowns was made.³⁹ At that time, most of the shares went first to leading politicians and bankers in Szatmárnémeti, then to Jenő Ungár, an entrepreneur and Jewish community leader with interests in Debrecen and Budapest, and the Rényi brothers in Vienna.⁴⁰ The entry of Jenő Ungár also meant that the Debrecen furniture factory, which he also owned and which was established in 1908 and aimed at export markets,

erdelyinaplo.ro/aktualis/szazeves-erdelyi-magyar-autonomiakuzdelem (last downloaded 9 July 2024).

34 In May 1933, Tischler was assassinated in the Palace of Justice in Bucharest. Egrý, “A mócok útján Székelyföldre?” 500; Butnaru, *The Silent Holocaust*, 50; Livezeanu, *Cultural Politics in Greater Romania*, 287.

35 Erdélyi Kárpát Egyesület: <http://mhk.szofi.net/tortenet/eketor.htm> (last accessed 9 July 2024).

36 On Adolf Hirsch see the government document granting him the title of councillor on 26 April 1911: HNA OL K 27_19110426.

37 RNA Arhivele Nationale Satu Mare, Trib. Satu Mare, Dosare de firme no. 5. 30. és 39.

38 RNA Arhivele Nationale Satu Mare, Trib. Satu Mare, Dosare de firme no. 5. 30–31, 39.

39 RNA Arhivele Nationale Satu Mare Dosare de firme no. 5. 18.

40 RNA Arhivele Nationale Satu Mare Dosare de firme no. 5. 19.

was supplied with beechwood from the forests around Bikszád after the end of World War I.⁴¹

The motives behind constructing a narrow-gauge railway near the city of Debrecen were drastically different from the example of Bikszád. The minutes of the Debrecen legal and economic committee and the municipal committee's general assemblies show that the construction of the forest railway to the Gút forest in 1882 was motivated primarily by the need to harvest timber as quickly as possible and transport it to the town.

The presiding mayor submits that the cutting of the Gút forest will take place in the coming year 1881, and because the distance and the frequent poor condition of the road make it impossible to transport timber from there by road to the extent required, even at the highest freight rates, a method should be devised by which the supply of timber to meet the demand could be supplied at the desired time.⁴²

In addition, the need for increased transport capacity was further strengthened by the fact that the second half of the nineteenth century was a period when the leather industry, and therefore demand for tanning materials, was booming. According to a report by the deputy forestry officer, the town devoted a total of 120 acres of forest in 1880 and forty-four acres in 1882 to the tanning industry, not in the Gút forest but in the Savoskút forest.

The reduction in transport costs also meant that better prices could be obtained at auction.⁴³ In order to build the Gút railway, the city leased or expropriated land from five landowners for twelve years, and tried to make the buildings along the line, such as the Csizmaszár pub on the Várady-Szabó estate, fireproof. Thus, the 1884 forestry officer's report stated that "the storage of the timber still out on the cutting field in Gút next to the railway line was completely finished by the end of June." The railway terminus was the Epreskerti Rakodó (Strawberry or Mulberry Gardens), which had existed since 1803 and traces of which can still be seen today, located on the edge of the town between the cemetery and Vámospércsi út.⁴⁴

Over time, as a result of the logging rotation, transport from the Gút forest became uneconomical, as it did from the forested areas of the so-called

41 Szűcs, "A debreceni bútóripar története."

42 HNA HBL IV B. 1403/i 1.d. Igazságügyi és gazdasági vegyes bizottság, 7 February 1880.

43 HNA HBL IV B. 1403/a 7.k. 32/806.

44 Penyigey, *Debrecen erdőgazdálkodása*.

Erdőspuszta south of the town.⁴⁵ Thus, in 1901, the assembly decided to build an additional railway line. However, it did so according to a different model from that of two decades earlier. This time, it did not accept any of the bids received for the construction of the Fancsika–Bánk line, and instead built using its own infrastructure, starting in 1904.

It is important to note that, over the decades, the relationship between the railway line and the areas along the line also evolved. As a result, the forest railway became more than just a means of transporting harvested timber. In 1920, a contract between the Várady-Szabó and Reviczky families, who had a long history of owning neighbouring land, and the town not only ceded their land to the railway line, but also paid a significant part of the construction costs in exchange for the railway to transport their farm produce to Debrecen. They wanted to adapt the timetable specifically to the market access for milk.⁴⁶ Thanks to the railway line, a distillery was established in the 1920s on the so-called Melánia farm, which was also owned by the Reviczky family near the village of Nyírmártonfalva.

Conclusion

Wood and timber as commodities underwent a transformation and contributed to the epochal change that was already in the making at the turn of the twentieth century. The Forest Law of 1879 was an integral element of the legal framework of profit-oriented agriculture that had been in the making since 1848 in Hungary. The foresters who had channels of public communication open for them in the 1860s added their ideas about what capital and interest meant in forests to this framework so that the legal concepts in Hungary differed from those in force in the Austrian part of the Austro-Hungarian Empire.

This chapter aimed to enrich the critical interpretation of the history of legal concepts related to private property. The Forest Law of 1879 was part of the history of profit-oriented legislation and of the way this goal clashed with the functioning of rural economy at the village level. Conflict between village communities and authorities also occurred when foresters designated certain areas as protective forest belts, thereby denying villagers access to any forest products. Paragraph 2 of the Forest Law of 1879 made it clear that while both the landowners and the county

45 HNA HBL IV B.1403/b. 1901. 133/9787.

46 MNL HBL IV. B.1406/b. 495.d.

administration could make proposals bearing on land access, it was the forestry administration under the Ministry of Agriculture that made final decisions. In locations in which protective forest areas had been alternately used as pasture and arable land, the situation was particularly concerning. Thus, this chapter contributes to the literature on how forests were sites of resistance and state intervention. It shows that forestry administration played the role of mediator between interested parties with differing interpretations of the legal changes, as well as in mitigating the crisis the legal changes caused for animal husbandry and access to timber. Eventually, the forestry authorities operating within the Kingdom of Hungary's Ministry of Agriculture recognised that diminished pastures threatened both economic viability and subsistence prospects, and tacitly consented to recategorising forest land as areas that could be turned into pasture.

The history of the operation of timber processing businesses in the same northeastern region of Hungary reflects the diversity of the social background of local actors who created and operated various points of the value chain. We find that former landlords, members of the nationalist nobility, leading members of Jewish communities, and established urban artisans were crucial in the construction of railway infrastructure and the establishment of timber processing businesses. The examples presented here also show that the continental level of timber trade were the immediate drivers of exploitations and that World War I meant shifts but did not lead to complete cessation of businesses in the region. The history of timber-related capitalism was based on the cheapness and availability of forests and it was a venture linking otherwise distant regions and social groups, thus reordering spatial and social hierarchies. Concerns about the life of trees and forests did not feature in the archival traces of businesses around the turn of the nineteenth and twentieth century.

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3. Foresters Building Nation: Nationalism in Hungarian Forestry, 1862–1913

Abstract: Between the 1860s and the outbreak of World War I, professional forestry was linked to nationalism by two issues: the emergence of a Hungarian-speaking professional community, and the development of Hungarian as a professional language as a programme. The confrontation between the local population and the Hungarian state's programmatic pursuit of modernisation are outlined in the context of the vision of the professionals sent to investigate the flood disasters in the southern region in the 1910s. The chapter then examines the drivers behind these skilled forest engineers' attitudes towards nationalism, and captures the spectrum of these attitudes by describing the milieu of higher vocational education and the role of the National Forestry Association (OEE).

Keywords: nationalism, higher education, associational life, ethnicity, natural disaster

Nationalism is one of the political ideas and social phenomena of the nineteenth century that significantly shaped the impact of human communities on the environment. This was not unique to Central Europe, but this region is a relevant field for research on the relationship between environmental history and the history of nationalism. The aim of this chapter is to show that the engineering methods of forest management, which took shape in a global framework in the second half of the nineteenth century, also came into contact with the history of nationalism in the Kingdom of Hungary.¹ One of the reasons for this interaction was that the traditional economic and political establishment and the legal framework that encouraged “modernisation” – meaning profit-orientated management based on private property – met, in the case

1 Dargavel and Johann, *Science and Hope*; Philip, *Civilizing Natures*.

of forestry, in parts of the country where the population was not typically Hungarian-speaking. This circumstance is important if one is to examine the functioning and reality of Hungarian nationalism at the local level and its actors. Another reason for the link between Hungarian nationalism and the history of forestry is that the German language dominated forestry in Hungary in the mid-nineteenth century.²

As Miroslav Hroch and other historians point out, in historical research on the nineteenth and twentieth centuries, it is particularly difficult to overcome methodological nationalism.³ The archives mainly preserve documents produced by state institutions that aspired to or legitimised the existence of a nation state.⁴ But to explore the boundaries of nineteenth-century environmental and political history, it is necessary to avoid seeing the by-products of national history everywhere. As Manu Goswami reminds us in his study of India's colonial economy:

Rather than presupposing nationalist categories such as national economy and national space, we need to provide a historical sociological analysis of their constitution.⁵

As will become clear below, the relationship between the institutional framework of scientific forestry and the effects of nationalism is worth exploring in the context of the broader research problem posed by Goswami.

Forestry in Hungary changed significantly in the second half of the nineteenth century. These changes followed the general direction of the global trends in the emerging discipline of forestry, which was mainly influenced by German scientific forestry. The scientific and engineering approach to forestry was born out of global networks in which the work of German foresters in the British colonies, the schools they founded, and the textbooks they wrote all played key roles. Ravi Rajan and James Beattie have already pointed out that in the last third of the nineteenth century, in particular, Wilhelm Philipp Daniel Schlich's five-volume *Manual of Forestry* and Dietrich Brandis's school-building work were of global and transcontinental importance.⁶

2 Surman, "Science and its Publics."

3 Hroch, *European Nations*, 277–286. Gyáni, "The Past as History: National Identity"; Storm, *Nationalisms*.

4 On the impact of archives on historical thinking, see Stoler, "Colonial Archives and the Arts of Governance"; Lal, "The Lure of the Archive."

5 Goswami, *Producing India*, 20.

6 Rajan, *Modernizing Nature*; Beattie, *Empire and Environmental Anxiety*, 123–49.

Rational management and operational management meant not only preserving forests but also transforming them. By dividing the forests into management classes through planned planting and by favouring economically valuable tree species, including non-native species, a secondary nature was created, transformed by humans. Since the 1860s, one of the main tools of science-based forestry has been the forestry management plans, documents approved and controlled by the state administration to transform the landscape. Their formal goal is an ideal state, that is, an ecologically and economically sustainable and financially profitable forest tree population with a species and age composition that is both ecologically and economically sustainable. Other important tools include transport infrastructure: forest railways, skidder systems, and water measurement structures for collecting rafted timber. Equally important were the classification of soils and land according to quality and productivity and the mapping of this information, as well as tables quantifying the total volume of trees in a given area and their average growth. The German foresters working in the British Empire tried to introduce a strictly financial approach to forestry in the colonial territories, and this had an impact on forestry in the British Isles.⁷ However, by the turn of the century, colonial realities forced greater involvement and consideration of the local population, and the approach of the Indian and then North American forestry schools began to diverge from the training centres in France and Germany.⁸ The point of intersection between forestry practitioners in Hungary at the time and the principles and methods emerging in the colonial world is represented by the textbooks of Karl Johann Gayer, which were among the established references in Hungary, and in works that had been translated into English (for example, Schlich's manual).⁹

Historical literature offers several points of reference for analysing the links between nationalism, state-building, and forestry in Hungary. István Imreh, in his studies on the modernisation of remote areas, argues that the modernisation of nation- and state-building led to the transformation of settlements based on traditional farming into besieged fortresses, and he also points out that modernisation did not mean a rapid takeover but the long survival of traditional forms of farming.¹⁰ Petra Balaton stresses the importance of Hungarian government economic policy:

7 Oosthoek, *Conquering the Highlands*, 33–50.

8 Jameson Karns's research shows how these experiences and changes were embodied in the instruments used, Karns and Wohlers, "Gauging Historical Forest Surveys"

9 Gayer, *Der Waldbau*; Gayer, *Der gemischte Wald*.

10 Imreh, "A székely faluközösség alkonya."

The implementation of mercantilist liberal economic policies in the course of a few decades has sharpened the conflicts between the centre and the periphery, between industrialising and traditional farming areas, in a way that promises social and demographic tragedy. Highlands, especially Transcarpathia, the Transylvanian Mountains and Szeklerland, were so disadvantaged that their decline became unstoppable without state aid.¹¹

In contrast, Botond Nagy made in-depth case studies of local innovation and adaptation and explored the role of the state borders of the time, in relation to Szeklerland as well. Moreover, the sources he examined suggest that centralised modernisation efforts were burdensome.¹² Narrowing the focus of our investigation to forestry, we can also take as a starting point Veronika Eszik's observation about forestry projects that sought to transform the eroding parts of the Dinaric Karst. The area was within the borders of present-day Croatia, which was then part of the Kingdom of Hungary. As Eszik puts it:

Despite the serious local conflicts, the Hungarian state efforts civilising the Karst were very significant. The stakes of the work went beyond the increase of the area under cultivation: the discourse of geography as well as the forestry texts contributed to the reconstruction of the Karst region, where the Hungarians were carrying out a civilising mission, as an area that was still barbaric, but which could become a vivid testimony of the technical-scientific competence and nature-transforming potential of the Hungarians.¹³

In light of Eszik's analysis, the case of the reforestation of the Dinaric Karst raises three problems to which our study seeks answers.¹⁴ The clearest question is whether there were other distinctive forestry programmes, such as karst afforestation, that shed light on how landscape transformation, "serious local conflicts" between rural populations and forestry, and nationalist politics were intertwined. Implicit in the above quotation remains the problem of why foresters had anything to do with the nationalist aspirations of the

11 Balaton, "A székely társadalom önszerveződése: a székely társaságok," 78; Balaton, *A székely akció története*.

12 Nagy and Nagy, "A tájhasználat változása és a modernizáció közötti kapcsolat."

13 Eszik, "A magyar-horvát tenger mellék mint nemzetiesített táj," 83.

14 Meta Remec has recently analysed the impact of afforestation on invasive insect species that damage forests, following the recent afforestation of the Dinaric karst. Remec, "Afforestation with Non-native *Pinus nigra*."



Fig. 3.1. The gorges of the Vaskapu near Orsova in 1964. Source: Fortepan/ Tibor Erky-Nagy.

state: via what pathways did professional foresters become nationalists? Thirdly, it is also worth delving into the history of the tension between the professional self-image of Hungarian foresters as a body and local practices.

As a starting point, our study outlines contemporary professional views on the causes and consequences of flash flood disasters that recurred several times between 1910 and 1913 in a region of southern Hungary. This discourse is as revealing as the one about the afforestation of the Dinaric karst. The floods devastated the narrow lowland area of the Krassó-Szörény county (partly coinciding with the present-day Romanian county of Caraş-Severin), a border region that was economically important for its ore deposits and railway network, on the Danube before the Iron Gate. This event is of particular interest to us because of the nationalist implications of the forest engineers' position, and we will therefore discuss the institutional and political context of the forest engineers' perspective on the flooding. The relationship between forest engineering knowledge and Hungarian nation-building is captured in the context of the long-term programmes and activities of the National Forestry Association (OEE), which brought together forest engineers and owners of state and private forests. The archives of the OEE are an appropriate setting for our questions, not least because Károly Kaán (1867–1940), one of the experts sent to investigate the floods, was a well-known figure in the papers published in the *Erdészeti Lapok* at the turn of the century and also played an important role in the life of the professional community as vice-president of the association between 1920 and 1923. Likewise, the Selmechánya Forestry Academy (from 1906, the

College of Forestry) is an inescapable institution, both for Kaán's professional views and for the history of forestry in Hungary. Through correspondence with other associations, the OEE archives also provide an opportunity to observe differences of interest between peripheral but economically important forestry areas and the political centre.

A Natural Disaster and the Agenda of the Modernising Nation-state

In 1910 and 1913, the floods in Krassó-Sörény caused enormous damage in the summer, sometimes several times a year. The floods claimed hundreds of lives, washed away roads and railway lines, and rendered large areas of farmland unproductive for years. The scientific responses to the situation, including the published opinions of forest engineers, reveal the programme of the modernising nation-state and its relationship with the management of local populations.

The summer floods of 1913, based on the weather reports published by the meteorologist Ferenc Sávolý (1870–1938) in *Köztelek*, the most important agricultural weekly of the period, severely affected the whole of contemporary Hungary, but East Hungary was exposed to the most unusual conditions for the longest period of time.¹⁵ As the flooding was the third anomaly in four years, the question arose as to whether this was a prolonged change and what factors influenced the extent of the flood damage. As Sávolý wrote: "In Krassó and its neighbouring Transylvanian landscapes, floods seem to be becoming a permanent feature, destroying economic assets on each occasion."¹⁶ Sávolý's analysis was the third attempt in a row to understand this series of disasters through scientific means. The first analysis, by geologists Zoltán Schréter (1882–1970) and Jenő Lampel, who unwittingly witnessed the flash floods of June 1910 that claimed many victims, identified the poor choice of settlement sites as the main cause of the disaster. The Ministry of Agriculture and Forestry appointed Károly Kaán and another important forestry official, Béla Térfi (1869–1959),¹⁷ to assess the situation,

15 For further analysis of the contemporary scientific discussion of floods and deforestation, see Pál, "The Second Hungarian Conquest."

16 Sávolý, "A délkeleti árvizekhez," 1835.

17 Béla Térfi (1869–1959) studied in Selmecebánya, then started working as a trainee at the forest directorate in Besztercebánya. In 1900 he was appointed to the Ministry of Agriculture. During World War I, he was a councillor in the Ministry of Public Food, and from February 1919 he was State Secretary for Public Food. He remained in this post until August 1919, when he was

identify the root causes, and propose remedies. Róbert Balogh had already pointed out in a previous study that Kaán's ad hoc mission with Béla Térfi to the southern border region of contemporary Hungary had a significant impact on forestry policy in Hungary after 1919.¹⁸

Who was Károly Kaán and why is his voice significant? Kaán was born into a family of Jewish origin in Zala County, which had lost its wealth due to its active participation in the 1848–49 War of Independence. He graduated from the College of Forestry as a scholarship student and, after passing his state exams, spent the early part of his career at the Forestry Directorate in Besztercebánya (Banská Bystrica in present-day Slovakia). In 1916, after only six years in the Ministry of Agriculture, he reached the position of Deputy State Secretary, which in fact made him the highest-ranking state forestry official. He retained this position during the short-lived People's Republic and Bolshevik regimes.

The flooding in the South was an important example of how the modernising Hungarian nation-state shaped the perceptions of the local population. Already in the early years of his career, around 1900, Kaán believed that forestry would have to become an important factor in order for the Hungarian national economy to become a strong competitor in the European and world economies. He was convinced that this had not been achieved earlier because the lack of public investment had left the infrastructure underdeveloped. Indeed, Kaán saw forests as both a national economic and geopolitical factor. He saw the location of forest assets within national territory as both a threat to the hegemony of the Hungarian elite within the Kingdom of Hungary and an obstacle to the national economy fulfilling its potential. Accordingly, in 1902, he supported the idea of a social movement to establish majority Hungarian ownership of the areas where non-Hungarians were in the majority.

On this basis, Beksics had conceived a plan for the acquisition of land: that our landlords should parcel out land in the Sic region and buy forests in the mountainous areas with the wealth they had thus acquired, and a proposal that our magnates should create trusts for their second- or third-born sons in the forests of the mountainous areas, and thus conquer

appointed National Government Commissioner for Grain Harvesting, and from December 1921 to October 1922, he was Minister without Portfolio for Public Food Affairs in the Bethlen Government. In 1924, he was elected vice-president of the National Forestry Association and remained an official of the association until after World War II. He died in Argentina.

¹⁸ Balogh, Róbert: "A Kárpát-medence-fogalom jelentősége az antropocén korszak szempon-tjából. Válságtudat és antropogén tájtalakítás (1910–1945)",

the Felvidék and the Transylvanian parts of Hungary; not only from the point of view of our highest national aims, but also from the point of view of forestry policy, we are most willing to accept it.¹⁹

The mission to Krassó-Szörény took place shortly after Kaán published his principles of forestry in the 1911 issue of the *Erdészeti Lapok*. At that time, he highlighted the unfavourable practice of selling forests in Krassó-Szörény:

In contrast to this, and on the basis of the premises outlined above, the economic conditions of the state-owned and privately-owned forest stock of more than 600,000 hectares in the same county are still very unfavourable and completely primitive! A significant proportion of these forests, most of which are still unexploited, cannot even be profitably harvested and therefore cannot be sold at all. In other parts of the forests, the sale of timber over several years is of very little importance from a private economic point of view, and of even less importance from a national economic point of view, because the underdeveloped forestry is not capable of promoting the development of a culturally backward region in any significant way.²⁰

Studying the flood situation in 1912, Kaán and Térfi concluded that devastating floods could not be explained by rainfall and the location of settlements alone. The destruction of forests in the areas at higher altitude, primarily due to goat grazing, exacerbated the disaster. The forestry engineers sent out believed that the local inhabitants were undermining the forestry authorities' efforts to create protective forest strips to prevent soil erosion. However, there was already a difference between Térfi and Kaán regarding how they perceived the possible outcomes of the situation. Térfi was optimistic about persuading the population to improve their practices, whereas Kaán expressed a more pessimistic view in his summary, written seven years later.²¹ According to Káán, local people were unable to foresee the consequences of their actions. It should be added that during the nineteenth century, goats and goat keepers were widely considered by foresters to be the enemy of rational forest management. For this reason, unauthorised

19 Kaán, "Nemzeti akció és erdőgazdaság," 479. Gusztáv Beksics (1847–1906) was a lawyer, publicist, and politician: as a representative of the Libertarian Party and as a ministerial advisor, he worked to build the Hungarian state, and he published several pamphlets in which he expressed his views on the nationality question, especially regarding the situation in Transylvania.

20 Kaán, "Erdőgazdasági eredmények és azok gazdaságpolitikai következtetései," 43.

21 Térfi, "A krassó-szörényi árvízkatasztrófák." See also Kaán, *Erdőgazdaság-politikai kérdések*.

grazing of goats in the forest was subject to higher penalties than that of horses and donkeys. Article 100 of Act XXXI of 1879, largely copied from the Austrian Forestry Act of 1852, stipulated that:

Whoever grazes in a forest in which he has no right to graze, intentionally or negligently, shall, in addition to the damage caused and possibly the compensation for the driving money, be punished by a fine to the following extent:

1. for 1 head of cattle..... 50 kr.
2. for a goat..... 50
3. for a horse, mule or donkey 40
4. for a sheep..... 15

In addition,

If grazing takes place in forests under fifteen years of age or under prohibition, or in forests under protection or in quicksand [...] a fine shall be charged for each animal twice. And if grazing takes place in artificial plantations or forest plantations or nurseries under the age of six, the fine shall be three times the amount.²²

We know from Térfi's article, published in several versions in 1912, and from Sándor Oroszi's research on the history of forestry in the region that the conflict between the livestock-keeping population and the forestry administration came to a head in 1886, when the state took over the management of the forests of the former Serbian border guard community. From then on, the servitude of the local population was effectively abolished, and from 1892 the farm plan came into force, which further restricted the use of the landscape.²³ Both Kaán and the renowned meteorologist Ferenc Sávoly, who had studied the floods independently, suggested that the state institutions should introduce strict controls among the mainly Romanian peasantry to prevent herds of goats and sheep from grazing on the hillsides: "the constant danger of floods should be reduced with the utmost vigour by afforesting the slopes used for sheep and goats, and the Romanians living there should be subjected to the strictest controls to prevent vandalism of the wood."²⁴ While Kaán supported the idea of settlement in 1902 because

22 Article 100 of Act XXXI of 1879 <https://net.jogtar.hu/ezer-ev-torvenyei>

23 Oroszi, "A bánási volt határőr közösségek (Krassó-Szörény vármegye) erdőgazdálkodása."

24 Sávoly, "A délkeleti árvizekhez."

of the future impact of the investments, the flooding reinforced the idea that state control was needed to counteract the harmful practices of the local population.

It is important to clarify that in Hungary, the Forest Act, which came into force in 1880, did not contain a paragraph on nationalism, nationality, or ethnicity. Albert Bedő (1839–1918), as the Chief Forester of the Kingdom of Hungary, was the head of the forestry administration in the first decade after the introduction of the Forestry Act, and in his essay *On the National Profession of the Hungarian Forester (A magyar erdész hivatása)*, written before his retirement as State Secretary in 1896, he argued that foresters acted as the furthest outpost of the state and therefore as a bridge between non-Hungarian ethnic groups and the Hungarian Empire, that is, the Hungarian state.²⁵ In other words, the presence of foresters could help to instill a sense of loyalty to the Hungarian state among people of other nationalities. Bedő was also the editor-in-chief of the monumental work entitled *The Economic and Commercial Description of All the Forests of the Hungarian State (A magyar állam összes erdőségeinek gazdasági és kereskedelmi leírása)*, which mapped, classified, and quantified all the forests of Hungary between 1872 and 1896. This work included the administrative division of the country, the geographical location and types of forest stands, and land ownership.²⁶ Few people were more aware than Bedő, who was of Szekler origin, that state-owned forests were mainly located in the Carpathians, where the Hungarian population was in a minority, except in the inner reaches of the Eastern Carpathians. He believed that this situation posed a problem for the state, as the conditions on the fringes of the state made it difficult to ensure the level of prosperity needed to operate the timber supply chain and attract the skilled labour needed to export it. According to Bedő, the solution, in line with Kaán's model, lay in the creation of a body of professional foresters who would take on the management and supervision of long-term harvesting to ensure that the forests produced sufficient wealth for both the state and the local people who were engaged in forestry activities.

Bedő's essay expressed his vision of the relationship between forestry, nation-building, and state-building. Among the many tables in the *Economic and Commercial Description of All the Forests of the Hungarian State*, the table summarising the number of infringements between 1885 and 1894 also (albeit indirectly) reports on the relationship between nationalities and the state forest administration. Unfortunately, only about half of the

25 Bedő, *A magyar erdész nemzeti hivatása*.

26 Bedő, ed., *A magyar állam erdőségeinek gazdasági és kereskedelmi leírása*.



Fig 3.2. The Erzsébet tér (square) in the town of Selmecbánya (Banská Stiaavnica) with the statue of the Revolutionary Soldier representing Hungarian nationalism, 1907. Source: Fortepan.

counties are included, and there are no data series that would provide even partial information on administrative units smaller than counties. The number of cases increased in all but one county during the period, but the extent of the change varied greatly between counties. The extreme variation in the number of cases was probably not due to real differences in the incidence of actual damage, but to the extent to which they were assessed

and detected. In the county of Sáros, the number of cases almost doubled between 1893 and 1894, suggesting a possible change of attitude or a sudden crisis. This was not a coincidence, as we shall see below. If enough archival records had been kept, a more detailed analysis of the county cases would be possible. According to the 1910 census data, Hungarians constituted the majority community in sixteen of the thirty-two counties listed by Bedő and accounted for 30 to 50 per cent of the population in six others. However, there is no apparent correlation between ethnic proportions and the number of reported cases of forest felling.

In the remainder of this chapter, we will review the political socialisation of professional foresters – that is, the political context of forest engineers' training – the linguistic and ethnic aspects of the forestry profession's knowledge production, and its position on the typical problems of peripheral areas in order to contextualise Kaán and Térfi's interpretation of the Krassó-Szörény floods of 1910 to 1913, as outlined above.

How Were Hungarian Nationalism and the Professionalisation of Forestry in Hungary Related?

Modernisation and large-scale engineering programmes, from South America to South Asia, intertwine with nationalism. The training and activities of foresters in Hungary provide an excellent case study to illuminate this relationship. The project of Hungarian nation-building and the demand for modernisation were closely intertwined in the perceptions of public administration as well as in Hungarian public discourse, as can be seen in contemporary writings about forestry, whether scholarly works or the local or national press. After the Compromise, Hungarian legislation and government policy prioritised the use of Hungarian as the language of instruction, leading to overt discriminatory policies in the decade before World War I.

Professional Training and Hungarian Nationalism

In this section, we discuss the main elements and consequences of this process in light of the changes that followed the introduction of Hungarian as the language of instruction at the Forestry Academy (from 1904, the College of Forestry) focusing on the question of national identity.

Selmecbánya (today: Banská Štiavnica) is in the Ore Mountains, which is a segment of the Carpathian Mountains, in present-day south-central Slovakia. Thanks to its silver mines, it had been an important city of the

Kingdom of Hungary for centuries. However, as the seams diminished in the nineteenth century, the population declined. Selmecbánya was one of the many multiethnic areas of the Kingdom of Hungary in the second half of the nineteenth century; it was located in a majority-Slovak region and Slovaks constituted the majority in the city as well. Hungarians and Germans (some of whom adopted a Hungarian identity) tended to be concentrated in the downtown area, while the Slovak majority lived in the outskirts.²⁷ A German population had been present in Upper Hungary in general and in Selmecbánya in particular since the mid-thirteenth century. By the second half of the nineteenth century, the Slovak population outnumbered the German and Hungarian communities in the city, which had about 15,000 inhabitants at the time. Language politics were a terrain of conflict both in the multiethnic city and in the Forestry Academy with its diverse student body. Students engaged in debates about whether to keep the customs of student life rooted in German culture, which had marked the academy since its establishment, even before the introduction of Hungarian as the language of instruction. At the same time, the political system established by the Habsburg Compromise proved to be successful in assimilating the middle classes into the two national groups that had a hold on state power, and there were notable foresters and instructors at the Forestry Academy who did not have a Hungarian background and yet actively promoted Magyarisation and the cause of the Hungarian language in 1867.

The Magyarisation of the Forestry Academy

One problem for Hungarian authorities as they set out to create a national forestry service was that forestry was taught in German, not Hungarian. In an 1866 essay whose title translates as “Fragments of Economic Thought about Forestry,” which was a major contribution to the making of forestry legislation, Adolf Divald (using the pseudonym “Erdődi”), a forester born to German-speaking parents in Selmecbánya, considered the challenge of using the Hungarian language in forestry instruction while advancing the cause of modernisation through science:

We need to seriously consider that it would be very difficult to find trained Hungarian-speaking lecturers for two or three institutions. Would it not be more reasonable to aim at Magyarising the Forestry Academy at Selmec[bánya] and also to raise it to European standards in terms of both

²⁷ Bartha and Oroszi, *Selmec, Téged soha nem feledtünk!*, 123; Szűts, “Selmecbánya gazdasága és társadalma az 1910-es években,” 260.

scientific level and method of training. If the need for more institutions arises, the graduates of the Academy will by then have enough practical experience to be recruited as teachers.²⁸

He concluded that “[i]n order to promote professional knowledge and to embed it into, and disseminate it in, the Hungarian language, the Academy at Selmec should be Magyarised.”²⁹

Jenő Vadas (1857–1922) cited the memoirs of his fellow professor, Lajos Fekete (1837–1916), in his 1896 work on the history of the Forestry Academy. Lajos Fekete studied forestry in Selmecbánya between 1856 and 1859, then taught at the Academy from 1867, eventually being appointed professor in 1871. In the academic years 1897/1898 and 1899/1900, he was the director of the academy, where his research and teaching activities covered almost all branches of forestry. In 1913, with co-author Tibor Blattny, he published a major monographic study of the forests within the Kingdom of Hungary.³⁰ Though his memoirs are lost, they were cited by Jenő Vadas, who had access to them; here, Fekete rationalised this policy of Magyarisation:

At the time, there was neither Hungarian forestry nor forestry literature in Hungarian. However, there were Hungarian youth at the academy who gained knowledge about their profession in German, which they hardly understood [...]. How much easier it would have been to listen to lectures in their sweet native language! How much more pleasant it would have been to compete during the exams using their mother tongue!³¹

Vadas also recounted another romantic story from Fekete’s memoir. The narrative was about Károly Wágner (1830–1879), who hailed from Máramaros County (partly corresponding to Maramureş county in today’s Romania) and whose mother tongue was German, but who would become one of the most important of the foresters demanding forestry legislation and shaping their professional identity. According to this story, in which Fekete attempted to highlight the true nature of the language question, on one of the days of practical training on assessing forest value in a forest tract, Wágner, then

28 Erdődi (Divald), *Közgazdasági eszmetörédékek az erdészet köréből*, 65.

29 Erdődi (Divald), *Közgazdasági eszmetörédékek az erdészet köréből* [Fragments of economic thought about forestry], 68.

30 Albert et al., eds., *Az erdészeti felsőoktatás 200 éve* [200 years of forestry higher education], vol. 1, 239–40; Bartha, *Fekete Lajos (1837–1916) élete és munkássága* [The life and work of Lajos Fekete], 20 f.

31 Vadas, *A selmecbányai M. Kir. Erdőakadémia története*, 132.



Fig. 3.3. The main building of the Forestry Academy in Selmečbánya (Banská Stiaňnica) in 1906.
Source: Courtesy of Péter Fricz-Molnár

an assistant professor at the Forestry Academy, divided his students, who included Fekete, into a group of Hungarian speakers and a group of speakers of other languages. Either by chance or on purpose, Wágner took the group of Hungarians to the highest peak in the area, where he spoke to them in their own language and raised the issue of creating a Hungarian professional language. According to Fekete, when Wágner expressed what the students had been thinking they became excited and enthusiastic. Wágner stated that a monument would eventually be built at that location to honour the initial proposal of writing forestry texts in Hungarian.³²

Jenő Vadas was indeed an outstanding forester of non-Hungarian background who propagated the Magyarisation of professional culture. A Slovakian, he changed his family name from Vlkolinszky to Vadas in 1882.

³² On 1 July 1900, at the site where the event probably took place, a memorial plaque was unveiled during the general assembly meeting of the National Forestry Association in Selmečbánya. The marble plaque has since been destroyed, but it originally read: “Bear the name of this peak / Károly Wagner. It was here that in the academic year 1858/59 he presented / The idea of Hungarian forestry literature / to his enthusiastic students. / The memory of this was celebrated here / Hungarian foresters / July 1, 1900.” In his inaugural speech, Lajos Fekete, as director of the academy, recalled the story again. “Visszapillantás idei közgyűlésünkre” [A look back at this year’s General Assembly], *Erdészeti Lapok* 39, no. 7 (1900): 644; Bartha, *Fekete Lajos (1837–1916) élete és munkássága*, 4.

He became a professor at Selmecebánya in 1891.³³ In a newspaper obituary we read that “in college, he stood out in his class, along with some of his peers, as they would walk around in Hungarian-style clothes making a great propaganda effort to Magyarise the German customs of student life.”³⁴

What is the background to these views? The history of higher education in forestry began with the Forestry School (Forest Institute) established to complement training at the Academy of Mining at Selmecebánya in 1808. As good-quality timber supply was indispensable for the maintenance of mines, the primary purpose of the Forestry School, which was a state-run public institution, was to train forestry officials capable of ensuring that the forests around the mines kept them continuously supplied with timber. The first batch of foresters started their training in 1809 at Selmecebánya, and from 1810 on, the condition for employment in state-owned forest estates was graduation from that forestry school.³⁵ In the early period, the forestry course lasted for two or three years. The local Mining Academy merged in 1846 with the forestry school and became the Mining and Forestry Academy. Until 1848, the institution at Selmecebánya was the only such academy in the empire.³⁶ In the Kingdom of Hungary, the Forestry School remained the only school with such a scope and purpose, while from 1813 students in the western areas of the empire had the option of studying at the forestry school of Mariabrunn, near Vienna. While in the Mining School, the majority of students came from outside the Kingdom of Hungary; 70 to 80 per cent of forestry students were Hungarian. The Forestry School was an institution of higher education, admittance to which required a high school diploma. A few students already had a degree when they joined forestry courses, and private estates occasionally sent their foresters there for advanced training.

The revolution of 1848 significantly altered the ethnic profile of the institution. Although in the spring of 1848 there was solidarity among the students, ethnic and national tensions soon surfaced. In May 1848, 130 mining students who hailed from the Austrian and Bohemian regions left Selmecebánya to continue their studies elsewhere.³⁷ In 1849 some of the courses at the Forestry School were taught in Hungarian for the first time,

33 Albert, et al. *Az erdészeti felsőoktatás 200 éve*, vol. 1, 297.

34 “Vadas Jenő (1857-1922)”, 215.

35 Lesenyi, *A selmecebányai Erdészeti Tanintézet története: 1808–1846* [History of the Forestry School in Selmecebánya 1808–1849], 38.

36 The institution at Mariabrunn was promoted to the status of Forstakademie in 1866. In 1875, it was integrated into the Agricultural College (Hochschule für Bodenkultur of Vienna) founded in 1872, as the Faculty of Forestry. See Leipold, “Zöld peregrinációban,” 14.

37 Zsámboki, “A selmeci akadémia és ifjúsága 1848/49-ben,” 239.

but this was for a very short period and German remained the language of instruction until 1867. The Compromise of 1867, which introduced Hungarian as the language of instruction, also meant that the institution lost its imperial character and students from Moravia or Bohemia became a rarity. The split, however, did not divide forestry professionals as a community of knowledge. Károly Wágner, the first professor of forestry at Selmecbánya after 1867, who played a key role in making Hungarian the language of instruction at the Forestry School, was attentive to the curricula in Mariabrunn and stated that there was no major deviation from the ideas and material taught at the major imperial institutions, where the language of instruction was German.³⁸

Social and Ethnic-National Profile of Students at the Forestry Academy

In terms of their social status, foresters (forest engineers) with a degree from the academy were members of the middle class even at the start of their careers. If they reached the rank of senior forestry councillor or councillor to the ministry, this placed them in the upper middle class. The social characteristics and composition of the students of the Forestry Academy can be derived from information about the collection of student enrolment registers deposited in the archives of the academy's successors, along with lists containing the occupation of the fathers of students enrolled between 1900 and 1906.³⁹ Some of their contemporaries working on statistics about the Forestry Academy tried to gather data about where former students were employed, so that we would have information about their career paths.

Based on these sources we may identify patterns of the social mobility and ethnicity of the student body that are relevant to their attitudes towards nationalist politics in the period we discuss here. However, first we have to note that the number of applicants for the forestry course drastically increased while the number of students from outside Hungary dramatically dropped after 1867. The proportion of forestry students at Selmecbánya jumped from 20 per cent to more than 70 per cent among the students of the Mining and Forestry Academy.⁴⁰ After Hungarian was introduced as a teaching language in 1867, only 94 of the 1,950 students registered for that course were born outside the Kingdom of Hungary.⁴¹ The growing interest

38 Vadas, "A selmeczbányai M. Kir," 117.

39 Faller, *Gedenkbuch zur hundertjährigen gründung der Königl. ungarischen berg- und forst-akademie in Schemnitz 1770–1870*, 133–48; Pauer, *A selmeczbányai m. kir. bányászati és erdészeti akadémia*, 254–338.

40 Heilau, *Külföldi hallgatók magyar felsőoktatási intézményekben*, 190–223; Pauer, *A selmeczbányai m. kir. bányászati és erdészeti akadémia története*, 337.

41 Heilau, *Külföldi hallgatók magyar felsőoktatási intézményekben*, 223–44.

in forestry courses mainly stemmed from the changes introduced by the Forest Law of 1879, which made it compulsory for a wide range of entities (municipalities, funds, church estates, and non-saleable estates) to employ forest officers. Such officers could be appointed as such only if they had completed the course and passed the state exam in forestry (paras. 21 and 36 of the Forest Law). Although the Forest Law did not apply to private owners, if they employed such officers to protect their forests, the same conditions applied in terms of qualifications (para. 38 of the Forest Law). Another important factor was that the tuition in many cases was free.⁴²

Thanks to a list containing the names of students between 1900 and 1906, indicating the father's profession in 427 out of 569 cases, we may also assess what studying at the Forestry Academy meant in terms of social mobility.⁴³ To begin with, the forestry students studying at Selmechánya were members of the small-town middle class. A quarter of the students (26 per cent) hailed from families where the father was a professional forester of some ranking. Out of this group, one-third of the fathers were forest rangers, a junior rank among forest officers compared to forest engineers. In fact, state policies actively supported such mobility within the profession, and it was sons of forest rangers who received most state-financed scholarships. There was also a relatively large number of state officials and clerks (13 per cent) among the fathers of students and a smaller percentage of Protestant pastors, schoolteachers, army officers and rural landholders.

Since we do not have a similarly rich source for the ethnic composition of the student body, we have to use statistical data on the religious affiliation of students as such a proxy. According to the 1910 census data,⁴⁴ 63 per cent of Roman Catholics spoke Hungarian as their mother tongue, as compared with 98 per cent of Calvinists and Unitarians. Among Greek Catholics, 82 per cent were native Romanian or Ruthenian speakers and 97 per cent of the Orthodox population were Romanians or Serbs. Based on the data on the students between 1900 and 1906, in the early twentieth century, Evangelical Protestants, Unitarians, and Roman Catholics were over-represented by 150 per cent, 125 per cent, and 23 per cent, respectively, among the students of the Academy of Selmechánya. The number of Greek

42 It is notable that almost 40 per cent of these graduates did not subsequently pursue a career in forestry, instead becoming financial or tax officers, land surveyors, or employees in the mines.

43 Register of students at the Hungarian Royal Academy of Mining and Forestry from the academic years 1900/1901, 1901/1902, 1902/1903, 1903/1904; register of students at the Hungarian Royal College of Mining and Forestry at Selmechánya from the academic years 1904/1905, 1905/1906 and 1906/1907 (HU SOE KKL 101).

44 "A jelenlevő népesség vallása, összevetve a nyelvismerettel," 452–529.

Catholic and Greek Orthodox followers was 38 per cent of proportional distribution. These figures indicate the presence of a relatively small but visible minority of Romanian, Ruthenian, and Serbian students and a massive dominant group of Roman Catholics and Evangelist Protestants made up of students with Hungarian, Slovak, and German ethnic backgrounds. Data about scholarships awarded to students give us a hint about the institutional policy response to this situation. Six of the sixteen students that hailed from families of priests of the Greek Orthodox or Greek Catholic faith received scholarships out of the thirty that the Ministry of Agriculture financed in the first few years of the twentieth century.⁴⁵ Moreover, from 1910 there were separate scholarships awarded to students hailing from the County Beszterce-Naszód.⁴⁶ This region was a sparsely populated one, former frontier zones that used to be under special administration and where Romanians were the majority community. The scholarship policy indicates that the Board perceived the Academy as one of the potential channels that might serve to integrate the sons of those with influence over the Romanian community, and thus prevent them from being receptive to Pan-Slavic ideas or propaganda from the Romanian Kingdom.

Nationalist Politics at the Forestry Academy

The history of student associations in Selmecebánya reveals the clashes and rivalries between the various ethnic groups at the school in the context of the policy of Magyarisation.⁴⁷ The long-standing institution of the student fraternity or association (*Burschenschaft*), rooted in the traditions of German guilds, had undergone a transformation with the rise of Hungarian nationalism. Student associations became arenas for articulating national allegiance. Following the revolution of 1848, the student association at the school was re-established as the General Society (*Általános Társaság*), but in 1871 students who wished to promote Hungarian culture left the society to form the Reading Circle of the Academy (*Akadémiai Olvasókör*), which was renamed the Hungarian Society (*Magyar Társaság*) in 1875. In these years, a struggle over the Magyarisation of student life raged, but interestingly, the result was not a rejection of German-based academic traditions but rather, their restructuring into a plural culture with Hungarian emphasis.

45 *A selmecebányai m. kir. Bányászati és Erdészeti Főiskola tanterve és rendszabályai* 1904, 14–8; *A selmecebányai m. kir. Bányászati és Erdészeti Főiskola programja* 1904–5, 8–9; *A selmecebányai m. kir. Bányászati és Erdészeti Főiskola tanterve és rendszabályai*: 1906, 16–8.

46 *A selmecebányai m. kir. Bányászati és Erdészeti Főiskola tanterve és rendszabályai*, 1910, 16–8; *A selmecebányai m. kir. Bányászati és Erdészeti Főiskola programja*, 1917, 16–8.

47 Pál, “Az egyetemi ifjúság haladó hagyományai, szokásai, szervezetei,” 239–43.

Jenő Zivuska (1876–1926), a student at the Forestry School of Selmecebánya who would later become a university lecturer in literary history and philosophy at the University of Debrecen, provided an intriguing account of this Magyarisation process in the Reading Circle, which he was too young to experience personally:

According to a contemporary note, a *schachtista* called Amphibia [the pseudonym of one of the students] declared the following: On December 3, the assembly meeting decided that the Schacht society was to be dissolved, and the last Schacht day was to be held on December 10, 1876. A large protest demonstration followed. In February 1877 the dissolution ceremony was held with great pomp [...]. An association from the countryside called the Society of Zipser Germans inherited the Burschenschaft's white–green–white flag with the silver inscription "Glück auf!," its books and registers. The insignia of the *Fuchs* [fox, i.e., first-year students who had gone through the initiation ceremony] was buried, and the large beer glass was broken into pieces. Romantic times were over.⁴⁸

Zivuska added that in 1877 the struggle of Magyarisers was sanctioned by decree no. 13.803 by the minister of finance, which banned all activities that were similar to those of German student associations.⁴⁹ Nonetheless, the traditional German songs survived, ultimately rendered in Hungarian only shortly before World War II. Several associations were later formed on the basis of regional identity. For example, the Zips association was bilingual, operating in German and Hungarian.⁵⁰ The main significance of these developments was that while the long-standing student rituals continued, the language in which they were conducted became Hungarian.

Throughout the period discussed here, ethnic rivalry remained an aspect of political life in the Kingdom of Hungary, which also manifested in relations between the Slovak, Romanian, and Hungarian elites in Selmecebánya.⁵¹ Slovaks formed a large group within the town and constituted the majority in its hinterland, while Romanians were a significant minority. Although

48 Zivuska, "Az akadémia ifjúsági életének története," 9–18.

49 Ibid., 13.

50 Bruckner, *Diákélet Selmecen*.

51 The clash between the Hungarian political elite and the various nationalist movements within the Kingdom of Hungary reached its peak around 1906–7, when the new government led by Sándor Wekerle launched an attack on representatives of national movements, especially those who had won a seat in the parliamentary election. See Kšiňan, *Milan Rastislav Štefánik*, 3–8.

contemporary local and national dailies such as *A Felvidéki híradó*, *Selmeczbányai híradó*, and *Selmeczbányai hírlap* contain no reports on clashes between students of Slovak and Hungarian origin in the town,⁵² there were signs of hostility towards the Romanian national movement at the Academy. In 1885 and 1888, representatives of the Youth Circle at the Academy accused some of the students from Transylvania of anti-Hungarian activism and propaganda. In the latter case, there was suspicion that a group of twenty-six students were planning to establish a separate student association and that they were reading Romanian-language journals.⁵³ Romanian students responded to the accusations in one of the national dailies:

Dear Mr. Editor,

In issue no. 167 of your respected publication, an article appeared with the title “Oláhs [meaning Romanian but in a derogatory way] at Selmec” in which serious accusations were levelled against us. We are offended that some of your colleagues passionately believe Romanian-speaking students are anti-Hungarian and that they cannot wait for the Academy Board’s penalties if necessary. Instead, they use such expressions against all the Romanian youth so that the public, which is ignorant of the case, will think badly of us.⁵⁴

Under pressure from complaints lodged with the police, news reports, and verbal threats, the council of the academy reprimanded two Romanian students.⁵⁵

These incidents suggest that the mutual solidarity and unity of the student body were important elements of the students’ identity. Hence, existing strong student bodies might have believed that new associations could create rifts and new loyalties. On another level, these incidents were the local manifestation of the policy of assimilation promoted by the Hungarian elite,

52 The content of the journals *Felvidéki híradó*, *Selmeczbányai híradó*, and *Selmeczbányai hírlap* are available online via epa.oszk.hu.

53 In 1888 the daily *Budapesti Hírlap* published the following articles reporting the incident: “Az Oláhok Selmecen” (24 June); “Az Oláhok Selmecen” (29 June); “Oláh üzelmek a Selmeci Akadémián” (3 June); “Oláh Üzelmek a Selmeci Akadémián” (9 June); “Oláhok – Selmecen” (16 June); “Oláhok – Selmecen” (21 June).

54 “Az Oláhok Selmecen,” *Budapesti Hírlap*, 24 June 1888.

55 Minutes of the Council Meeting of 8 June 1888, HU MEL A.1. c. 2. The only lengthy memoir relating to this period, that of Nándor Bruckner, makes no mention of the incident. Remarkably, he also remembered that the son of a Greek Catholic priest, Iván Alemann, received financial support from the association founded in 1867 to provide aid to those wishing to study at the Academy. Bruckner. *Diákélet Selmecen*: 19–20

according to which anyone, irrespective of their ethnic background, was able and expected to become part of the dominant student body by accepting the leading role of Hungarian language and culture and by demonstrating loyalty to the state.⁵⁶ These efforts can also be seen in the context of the competition between the elites of the Austro-Hungarian Empire: Hungarians wished to strengthen their technical education to compete economically with the Austrian lands of the Habsburg Empire.⁵⁷ Overall, graduates were likely to adopt a version of Hungarian nationalism that defined itself against other nationalisms. Hungarian nationalist politics were such that they were ready to admit anyone to mainstream Hungarian society regardless of their ethnic background if they wished to join. It must have been clear to the students of Selmecbánya that the state wished to integrate non-Hungarians to the nation-building process. In the same period, the Greek Catholic and Orthodox Romanian churches played an important role in the Romanian national movement. The Hungarian government used a number of administrative tools to keep Romanian priests out of or remove them from participating in the national movement.⁵⁸ One of the methods of increasing the loyalty of the clergy to the Hungarian state was to support the further education of the sons of Greek Orthodox or Greek Catholic priests, as we pointed out earlier.

The National Forestry Association, Professionalisation and Nationalism

As we have seen earlier, the context of the narratives of the Krassó-Szörény floods includes tensions arising from the regulation of access to forest land and the clash of development ideas. By the early twentieth century, these had become an important part of the agenda of the National Forestry Association (OEE). The association rose to prominence as one of Hungary's most significant engineering forestry depositories in the latter half of the 1800s.⁵⁹

The essence of the OEE's programme at that time was to synthesise the globally dominant German forestry science of the 1870s with Hungarian folk knowledge to create a organisation that could play a hegemonic role within the Kingdom of Hungary. The development of a Hungarian forestry language was aimed at both the displacement of German-educated foresters and the elimination of what were considered harmful peasant practices, which were attributed to the ignorance of farmers.

56 Bertényi "Haza és haladás: liberális nacionalizmus a reformkortól a 20. századig," 29.

57 Vörös, "A modernizáció és a nacionalizmus keresztmetszetében," 258f.

58 Sárándi, "A magyar állam és román egyházak viszonyának vázlatos története," 295.

59 In recent decades, several studies have tried to clarify the role of associations in nationalism. See Graeme, de Vries, and Morris, *Civil Society, Associations, and Urban Places*; Licen, "The Vagaries of Identification in the Società di Minerva of Trieste (1810–1916)."



Fig. 3.4. The headquarters of the National Forestry Association in Budapest. Alkotmány street 6 seen from Honvéd utca. Photo credit: György Klösz, 1890s. Source: Fortepan/Budapest City Archives HU.BFL.XV.19.d.1.07.145.

In essence, the jargon of forestry served as a bridge between the embrace of modernity and the pursuit of a distinct national identity. The issue was so important that the programmatic transformation of forestry in Hungary was centred around the creation of a Hungarian forestry language. While the first phase of the association's history was about countering the influence

of the imperial central government and the use of the German language, from the 1880s the focus shifted to the relationship between the Hungarian language and the vernacular.

There was no consensus among contemporaries as to whether the OEE was formed through the transformation of the Ungarischer Forstverein, an organisation founded in 1851 that used the German language but operated in Hungary.⁶⁰ By the end of 1863, the “Hungarian” party within the Ungarischer Forstverein was becoming increasingly dominant, presumably partly as a result of the attacks. The shift towards compromise was declared by Adolf Divald in the first issue of *Erdészeti Lapok* in 1864: “But what our feeble words failed to achieve, time has since matured and yielding to the irresistible power of his spirit, the association has found a path on which, even if it continues to advance, it can confidently hope to achieve its goals.”⁶¹

By the “more correct way,” Divald meant that in 1863 the board of directors became a Hungarian majority. The Ungarischer Forstverein also expressed its intention to change direction by changing its official name to the Hungarian Forestry Association in 1862 and by including Károly Wagner among the members of the board of directors. Between 1864 and 1865, the scenario was outlined in which Divald, in cooperation with the already long-established National Hungarian Economic Association (OMGE), would develop an institutional framework that would meet their objectives. The most obvious sign of the development was the forestry department organised within the OMGE. The name change and the election of the people behind the Hungarian language and the Hungarian-language forestry professional community programme as officials took place in December 1866, at the general meeting of the foresters’ association held at the OMGE headquarters.

The 1878 subscription notice to the OEE’s journal, the *Erdészeti Lapok*, gave a definition that applied not only to the journal but also to the association:

the *Erdészeti Lapok* has the very important task of serving the interests of the Hungarian forestry, which has its own special nature and needs, and to pay due attention to the scope of forest cultivation and use with its advice, following the development of scientific progress; by providing, in addition to this, proper reports on the current state of the timber business at home and abroad, in which, due to the unbiased position of the journal, the needs of both the producing forest owner and the purchasing timber

60 [Unknown author, probably Károly Bund], *Az Országos Erdészeti Egyesület története*. Bedő held an opposing view and believed that the OEE was a new organisation. Bedő, “Az Országos Erdészeti Egyesület alakulásának idejéből,” 922.

61 Divald, “Az ‘Erdészeti Lapok’ az Országos Magyar Erdőszegegyület közlönyévé váltak,” 2.

merchant are mutually appreciated, and therefore they have an excellent value of reliability for both parties.⁶²

The institutions set up within the association ensured the transfer of scientific knowledge. Since the 1870s, the association has published calls for papers on specific subjects. Although this activity was only given an institutional framework after 1876, with the establishment of the Ferenc Deák Foundation, the OEE's work had already resulted in a considerable number of publications. The first half of the 1870s saw the publication of Nándor Illés's *Erdőtenyésztéstan* [Forestry Theory] (1871), Adolf Divald and Károly Wagner's *Erdészeti Segédtablák*, Lajos Fekete and Nándor Illés's *A közerdész* [The Public Forester] (1873), Sándor Hoffmann's *Erdészeti Zsebnaptár* [Forestry Pocket Calendar] and Albert Bedő's *Erdőőr* [Forest Ranger's Theory]. The importance of Divald–Wagner's German–Hungarian dictionary, published in 1868, can hardly be overestimated. The Deák Ferenc Foundation increased the impact of the association on the scientific agenda through the prizes. Among the outcome we may list for example, the classic *Erdőműveléstan* [Silviculture] by Jenő Vadas, and Jenő Sobó's work on constructing roads and buildings for forestry enterprises, as well as several works by Lajos Fekete.

The publishing fund, which was managed by the association for a well-defined purpose, was an organisational solution that proved successful and quickly became a decisive factor in the association's operations. However, the publishing programme was not limited to the number of books published or the financial backing for them. An 1883 issue of the *Erdészeti Lapok* also sheds light on reading habits and the availability of books.

Dear Editor,

Following the beneficial provision of the High Ministry that forestry libraries should be established in the individual forestry authorities with the financial contribution of the officials we created one in the Sóvár [Tótsóvár located in today's Prešov] Forestry Department. On the basis of preliminary negotiations and discussions with the members of the specialised library, each volume of the periodicals is issued to a volunteer member for reading and subsequent oral presentation immediately after arrival... The volunteers have the right to present their individual views after an objective presentation of the subject and to shed critical light on it.⁶³

62 Bedő, "Előfizetési felhívás."

63 "Vidéki levelek," 45.



Fig. 3.5. Forestry officer in uniform, 1911. Source: Fortepan/György Karsai.

The OEE's activities in the field of language created a political community and also signalled the community's desire for professional dominance. However, the German–Hungarian dictionary edited by Adolf Divald and Károly Wagner, which played a key role in the OEE's political turnaround in 1866, was not the final word. The history of the work leading up to the dictionary, which was intended to improve on the work of Divald and Wagner, is well documented in the OEE archives. In 1882, a committee was set up within the Association to coordinate the preparation of a new Hungarian–German and German–Hungarian dictionary. This work was carried out partly in public, at committee meetings, and partly in a special section of the *Erdészeti Lapok*. The minutes of the meetings have been preserved in manuscript form and most of them have been published in *Erdészeti Lapok*. In response to the dictionary renewal programme, Gyula

Nagy (before 1850–1903) sent the following letter from Brassó (Brasov) to the editorial office in February 1883:

The forested and wooded regions of our country, with the exception of the former Szeklerland, namely: Csík, Udvarhelyszék and Háromszék counties, are almost all inhabited by foreign-speaking people, where therefore only the officials were at the bottom and called upon to use Hungarian forestry terms, respectively: whereas, on the other hand, in the aforementioned counties, the native Székely-Hungarian people have wrestled and continue to wrestle with the primordial force of nature, which desires to plant forests, and to satisfy the large-scale wood-consuming industry of the neighbouring regions from time immemorial.⁶⁴

The debate between the Sáros County Economic Association and the OEE shows that the history of the change in the forest management system cannot be reduced to a conflict of interest between the central administration and the local population in peripheral areas.

In its petition to the Ministry of Agriculture, the Economic Association of the County of Sáros stated that: “Forestry, by unreasonably restricting grazing, is hampering the livestock production of our mountain people to such an extent that they are forced to emigrate.” Historical research has shown that the region of northeastern Hungary, where the county of Sáros is located, was one of the areas most affected by emigration, and that there was an environmental and historical background to this.⁶⁵ The Economic Association of Sáros County considered the increasing presence of the state, especially the right to designate a forest as a protected area, as detrimental to local living conditions. The response of the OEE, published in *Erdészeti Lapok* no. 1 of 1902, sheds light on the fundamental problems of the Hungarian economic and legal situation at the time and also on the possible roles of the association. As Lajos Fekete put it at the meeting of the electoral board:

[It was fortunate that] the Sáros County Economic Association challenged us because it provided a way for forestry to defend itself and the laws passed in the interest of forestry. As the proposal correctly states, these laws were designed to repair and remediate agricultural damage.⁶⁶

64 “Adatok az erdészeti műszótárhoz,” 123.

65 Bodovics, “Weather Anomalies and Their Economic Consequences.”

66 “Egyesületi Közlemények,” 88.

The Board of the OEE entrusted Nándor Illés (1836–1907) with the task of conducting an investigation and writing the letter of reply in light of its findings.⁶⁷ The association considered that the fundamental problem was caused by the parcelling out of the land of the lords, which reduced the area of pasture available to the peasants' cows and, as a result of unequal power relations, the quality of the pasture. A further overarching problem was the lack of stable livestock and the preference of peasants for hard trampled land closer to the village. The association argued that the 1879 Forest Act was sensitive to grazing, as it required afforestation of barren land only when necessary to prevent collapses. The OEE's response also emphasised the legal remedies that were available in relation to the preparation of farm plans and in some specific cases.

The impact of emigration and forest management on livestock is a significant factor in the debate on pasture forest as a legitimate land use. The views expressed in the OEE were far from unanimous on the nature of pasture or wooded grassland. There was a consensus that the pasture forest, or wooded pasture, is a Hungarian specificity, a compromise resulting from the relative underdevelopment of the country.⁶⁸ The history of the image of pastures and the practice of grazing has become a major theme in the environmental history of Central Europe, so I will not undertake to present that debate here.

Around the turn of the century, Károly Kaán developed a concept of forestry and agriculture and their place in the economy, which focused on both technical modernisation and sustainable management, with the state intervening to grow the national economy. The community of professional foresters that gathered in the OEE participated in the nation-building political programme that emerged in Hungary at the end of the nineteenth and beginning of the twentieth century through the creation of new institutions of professional language and training and the scientific classification of national space and natural phenomena. This process, in its details and as a whole, is also the history of the reception of late nineteenth-century modernity in Hungary.

Conclusions

The above analysis shows that nationalist thought and politics were important constituents of the professionalisation of forestry between the

67 "Egyesületi Közlemények," 73–88; Havas, "A legelőszükség és a kivándorlás," 788–813.

68 Téglás, "A legelőkérdés erdőgazdasági és közgazdasági szempontból"; Varga, *A vadon legeltetése*.

second half of the nineteenth century and the 1910s. We can see here the link between the so-called epochal events in the Anthropocene and nation- and state-building. By treating the principles of both scientific engineering forestry and national identity as constructed narratives, we can transcend methodological nationalism while remaining within the territory of the Kingdom of Hungary, as such an analysis does not become a servant of identity formation, but neither does it deny the political significance of nationalism.

Kaán and Térfi drew the conclusion from the devastating floods in Krassó-Szörény in the 1910s that in order to achieve a national economy (i.e., a rational use of natural resources), the Hungarian state should impose more severe restrictions on the farming of local people and the labour thus freed up by the ban on goat farming could be redirected towards forestry. The relevance of this case was the fact that engineers from a Hungarian background interpreted the land use of non-Hungarian – mainly Romanian – local residents. The thinking of these two forest engineers aligned with the spirit of the times: the state administration, in the name of modernisation, was trying to administratively displace local farming practices from the national economic space, dismissing them as primitive. In the course of our study, we have tried to draw parallels between the modernisation- and state-centred nationalism of the forest engineers and the scientific study of the floods of 1910 to 1913.

This chapter has also shown that nationalist thinking had a role in the history of the institutions that played a key part in the professionalisation of forestry. By interpreting the influence of nationalist thought in the context of the institutions within which individuals operated, we have arrived at a historical relationship between scientific knowledge production and nationalism. In the context of the OEE, we have seen that Kaán himself was, by the time of World War I, a member and one of the leaders of a professional community that played a key role in the transmission of scientific results while developing its own national language and demanding that the reception of modernity occur through this channel.

Simultaneously, the emphasis has been on the diversity of experiences and reflections on Hungarian nationalism. Based on the records of the experiences of students studying to become foresters at the Selmecebánya Academy of Mining and Forestry, students and teachers of the institution interpreted Selmecebánya, a multi-ethnic and Slovak-majority region, as a place where a common Hungarian professional identity and solidarity were formed, but this did not necessarily mean the exclusion of non-Hungarians. While the norm and the expectation were that Hungarian identity should

take precedence over others, different ethnic, denominational, and regional affiliations could be part of this overall identity.

Echoing this, foresters in different regions of Hungary did not have a uniform attitude towards non-Hungarians. While Kaán was inclined to see a civilisational slope, many other foresters' activities did not show any discriminatory intent, nor did the statistical evidence point in this direction. The nationalism of the forestry profession was most evident in the insistence on the dominance of the Hungarian language. The most acute conflict arose when this ambition involved the displacement of local forest and landscape use practices, which were considered wasteful and harmful to soil erosion, and above all the reduction to the amount of land that could be used as pasture.

Professional foresters' thinking on nation-building, modernisation and nationalism thus leads to the conclusion that the history of the relationship between environmental history and state action in the nineteenth and twentieth centuries is worth exploring further.⁶⁹

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4. The Advance of the State in the Forest in and out of War, 1914–1944

Abstract: The first part of this chapter discusses the conditions for forestry during and immediately after World War I, while the second part focuses on the interwar period and the long-term consequences of the new perception of the role of the state. It also examines the experience of military invasion in the northern and southeastern parts of Hungary, when forestry would have collapsed without the labour of prisoners of war. After World War I, a number of refugee foresters found employment in the state administration and large-scale state-run programs. The lack of timber was so pressing that a new compromise was needed regarding the extent to which the central state organs could interfere with and control the management of forests in private hands.

Keywords: World War I, post-war conditions, refugees, state–society relations, private property

As researchers such as Priya Satia or Sunil Amrith have amply demonstrated, from the late eighteenth century onwards the wars associated with the rise of colonial empires and industrial activities, which were the source of the sudden surge in GHG emissions, have had a marked impact globally.¹ Micah Muscolino described the environmental history of World War II in China, Anna Olenenko and Darya Tsybalyuk have already presented studies of the environmental destruction caused by Russia's war on Ukraine.² Clearly, wars are epochal events in the Anthropocene. This chapter discusses how war and post-war conditions mattered for another epoch-making event

1 Satia, *Empire of Guns*, Amrith, *The Burning Earth*, 180–209.

2 Moscolino, *The Ecology of War*, Tsybalyuk, *Ecocide in Ukraine*. See also Olenenko and Dorondel, "In Quest of Development."

during the emergence of the Anthropocene – the professionalisation and standardisation of forestry and its practices.

The three decades between 1914 and 1944 feature key and interrelated changes in both of the facets discussed earlier: the commodification of forests and the role of nation- and state-building. Wartime and post-war shortages of timber and forests resulted in a new compromise between state and private owners regarding the meaning of private property in forests. On the other hand, the symbolic and political meaning of forests changed drastically with the peace treaty: forests came under the category of tragic loss and yet forests were to ensure the viability of the new, so-called “Lesser” Hungary.³ The first part of this chapter discusses the wartime and immediate post-war conditions and forestry, while the second part focuses on the long-term consequences of the new perception of the role of the state in the interwar period.

The Demise of Normalcy: Forests as Frontline and as Hinterland

Assessing the deforestation caused by World War I, Tait Keller posited that:

Trees provided the basic building material for wharves where soldiers disembarked, warehouses for munitions, barracks, railroad ties, telephone poles, and key airplane parts. Pit timber for coal mines, fuel wood, and pulp for paper supplies also aided the combatants’ war efforts. As a result, deforestation accelerated among the belligerents, but in an uneven fashion.⁴

The case of forestry during and immediately after World War I mirrors how normalcy broke down during the war. Historians assessing the importance of World War I in Central Europe emphasise that the pressures of war on the economy left states unable to provide for the public. Along with increased state violence, this caused the relationship between state and citizen to deteriorate, so much so that this is weighed more in the demise of the Austro-Hungarian Empire than long-standing structural problems.⁵

3 Pál, “The History of Environmental Turanism”

4 Keller, “Mobilizing Nature,” 11.

5 Bódy, “A World Lifted Off Its Hinges”; Tomka, “World War I”; Langthaler, “Dissolution before Dissolution.” Note that Laura Umbrai presents a picture where local authorities go to considerable effort to prevent famine: see *Az éhes Budapest*.



Fig. 4.1. Constructing a passage using timber during World War I, 1915. Source: Fortepan/István Fedák.

In recent works on the environmental history of World War I, there is an effort to consider how states tried to make large-scale engineered landscape change acceptable in public life.⁶

The Russian invasion, which started a few months after the outbreak of the war in the autumn of 1914, affected the operation, staff, and real estate of the Bustyaháza (today, Bustino in Ukraine) Forestry Office, an important centre of forestry along the upper section of River Tisza. Due to the proximity of the Tisza, the extensive forests owned by the treasury and the work of German and other specialist artisans operating sawing machines and ports along the river, Máramaros and Ung counties had been among the centres of the timber trade in the Kingdom of Hungary from the second half of the eighteenth century onwards.⁷ Following the success of the Russian army's military operations, weekly situation reports were prepared at the office in Bustyaháza. The report of Béla Temesváry (1860–1929), a Transylvanian-born forest engineer and then head of the forestry office in Bustyaháza, shows that the Russian attack in the autumn of 1914 was so unexpected that the

6 Kargol, "Destruction of Nature through Warfare in (Austrian) Galicia during the First World War"; Golubinov, "Oil as a Resource and Element of Defence."

7 Oroszi, "A dualizmus kori fakereskedelem," 46–52.

political leadership of Ung County fled in uncertainty, ignoring protocol and leaving behind the leaders of the forest administration, among others. Temesváry portrays himself as a more responsible leader than the other leaders, more careful with treasury documents and critical of panic:

the fleeing railwaymen and the state employees who joined them caused a great alarm in the whole valley of Ung and in the town of Ungvár [today's Uzhhorod in Ukraine], so that due to the panic that broke out [...] the possibility of the Forest Office receiving a notification from your Excellency ceased [...] at 1.30 p.m. I fled by car to Szinerváralja [today's Seini in Romania] and from there I sent the valuables by post and the documents in 8 boxes by rail to the state treasury in District IX of Budapest (Customs House) and then I travelled to the village of Vasasszentiván [today's Sântioana in Romania] in Szolnok-Doboka county.⁸

The counter-attack repulsed the first wave of the Russian invasion in the first week of October 1914, giving the locals an opportunity to assess the damage. The report on the detailed field inspection was written by József Blickhardt (1885–1969), who ranked highly in the forestry administration. According to Blickhardt's description of 1914, at the time of the first attack, there was no damage to the machinery, buildings, infrastructure, or even to the accumulated stocks of timber belonging to the treasury and forestry offices, but he did see more looting in private homes and offices. Interestingly, the investigation found that these thefts were not the responsibility of Russian troops: "The perpetrators, according to the verdicts of the court martial sitting in Csontos, were the Galician Popular Army and the Ruthenian population."⁹ The invasion resumed in November 1914 and several forest guards were forced to suspend their activities.

The withdrawal of Russian units did not mean that normality had been restored in the area. Military movements and casualty transports continued, as did atrocities. The local population and the forestry office were in a difficult situation. Temesváry's report of July 1916 paints a vivid picture of the problems and their interconnections:

For our forest enterprise, the move is obviously crippling and has a severe impact on our employees and workers. The large quantities of hay and

8 MNL OL FM K 184 B/1. 1914. 87729 1012. doboz A máramarosszigeti erdőigazgatóság jelentése hivatali működésének újból megkezdéséről

9 MNL OL FM K 184 B/1. 1916. 131050 1560. doboz Összesítő kimutatás

grass needed to feed the large quantities of horses and cattle will be requisitioned by the military on the spot [...] the people here will be unable to feed their cattle through the winter, because the hay thus taken away cannot be replaced elsewhere for any money [...] Our people are also suffering great damage from the fact that the migrating slaughter cattle have completely infected the local cattle herd with foot-and-mouth disease [...] The Royal Treasury's contracted building and firewood carriers have not been exempted from having to provide horse-drawn transport to the military [...] especially our winter hauling of pine wood will be very difficult. It goes without saying that the frequent movement of the army and especially the need for a telegraph by the military headquarters will make rafting and all other branches of the business difficult.¹⁰

The approach of winter added to the tensions arising from the scarcity of resources. In November 1916, the State Forestry Office of Bustyaháza informed the Máramaros County Government Commissioner and the Ministry of Agriculture that the military forces stationed in the county had almost completely taken control of the firewood supply, thus endangering public supplies. Béla Temesváry's correspondence with the Ministry shows that some battalions sent to the Eastern Front were trained near Bustyaháza. The presence of some 4,000 soldiers over the winter resulted in a severe shortage of space, so military units were accommodated in an increasing number of forestry offices. At the same time, the use of firewood by the army in the nearby forestry headquarters in Técső and Huszti, as well as the persistent theft of hay and food, caused daily tension. These problems could not be solved by the government commission, so the local forestry administration appealed to the Minister of Agriculture. In response to the complaint about the premises, the Minister sought to intervene by directly instructing the Government Commissioner. No file has been preserved regarding the possible resolution of the firewood issue.

One of the lessons of the above is that within a month of the declaration of war, the war appeared within Hungary's borders, in the wider northeastern region, and military presence was part of everyday life until the spring of 1917. During this period, World War I created a conflict of interest between the Austro-Hungarian monarchy's army and the Hungarian administration, as well as an identity conflict among the local population, which was ethnically diverse. In the meantime, some of the soldiers of the popular uprising units

10 MNL OL K 184 B/1. 1914. 87729 1012. doboz A máramarosszigeti erdőigazgatóság jelentése hivatali működésének újból megkezdéséről



Fig. 4.2. Army unit in the landscape in World War I, 1915. Source: Fortepan/Virág Bogyó.

stationed at the border sometimes plundered themselves, and in response, summary executions became a daily occurrence. The northeast became an increasingly unpredictable and violent border region.

The southeastern border region of pre-1918 Hungary was also a crucial area for the country's timber and forestry economy and was first hit by the Romanian army's attack in August and September 1916. The report of the State Forestry Office in Csíkszereda (today, Miercurea Ciuc in Romania) on the flight of the Romanian army reveals that the attack was expected from October 1915 and an evacuation plan was drawn up, which ordered a total of three railway wagons to transport official documents and valuables from Csíkszereda, Gyergyószentmiklós (now Gheorgheni in Romania) and Csíkszentmárton (now Sânmartin in Romania). However, the evacuation at the end of August 1916 was closer to panic and escape. According to the report of Gyula Bodor (1862–1926), the chief forestry officer from Háromszék County, who settled in Debrecen in the last years of his life and played a significant role in that town: "From mid-July, however, when the military events in Luck and Chernovitch lost their ephemeral character and increased the appetite and hopes of the lurking Romania for easy prey, our situation

began to become alarming.”¹¹ The forestry office in Csíkszereda left the city on the evening of 28 August 1916 by train, at the same time as the other state officials. The administration of Csík County was temporarily moved to Debrecen, and the counties of Hajdú and Szabolcs were also designated to temporarily receive refugees.

One of the forms wartime shortage took was the scarcity of labour. Contemporary documents reflect the conviction of contemporaries that agriculture and forestry would have collapsed without the labour of prisoners of war. In April 1917, the Liptóújvár (now Liptovský Hrádok in Slovakia) Forestry Office lodged a lengthy and ultimately successful petition against the Minister’s ordering one hundred POWs to work on the harvest.¹² In the summer of 1917, the Forestry Directorate of Besztercebánya (Banska Bystrica in Slovakia) on the other hand, requested that eighty-five prisoners of war found unfit for forestry work be exchanged for seventy suitable ones. However, they were not given the opportunity to complete the transfer. The forestry offices that responded to the Ministry’s June 1917 manpower transfer plan requested that they be allowed to keep at least some of the prisoners of war.¹³ The replies show that the prisoners worked in almost all kinds of jobs, including logging, hay harvesting, railway track repair, haulage and saw-milling, and there was even a shoemaker in the Tótsóvár (now Solivar in Presov, Slovakia) area. The exception was the forestry department of Bezdan (in Serbia) where it was felt that “the prisoners of war, by being employed without interruption in the work of felling timber, have lost all interest in this work and, moreover, find it almost insurmountable difficulties in obtaining food [...] if the prisoners of war were withdrawn from logging work for a certain period and employed in agricultural work, their desire to work in logging would return.”¹⁴

There are also archival records of prisoners lacking basic supply in several forestry offices. The lack of bedding and boots was a problem everywhere in the autumn of 1917, and in the Fernezely (now Firiza in Romania) prison camp belonging to the Nagybánya (Baia Mare in Romania) office, bedbugs were so rife that the military command in Kassa (present-day Kosice in Slovakia) raised the issue; it was reported in correspondence with the Ministry:

11 MNL OL K 184 A/3 1916. 132682. 1538. doboz See also Csíki Lapok, 1918, 7 September.

12 MNL OL FM K 184 B/1. 1916. 4039. 1560. doboz. Hadifoglyok foglalkoztatása az állami erdőgazdaságokban

13 MNL OL FM K 184 B/1. 1916. 4039 1560. doboz. Hadifoglyok foglalkoztatása az állami erdőgazdaságokban

14 MNL OL FM K 184 B/1. 1916. 1560. doboz. 4039.

For the purpose of exterminating the bedbugs, the barracks were covered with planks and the lying scaffolds were dismantled, boiled in hot water and limed, the most thorough method of extermination was adopted, and although all the bedbugs were not destroyed, they were controlled enough so that it was possible for the prisoners to stay in the barracks during the winter. Of course, one of the prerequisites of this was that the guards should be responsible for the cleanliness of their own compartments and the prisoners' part of the barracks.¹⁵

Post-war in Forestry: Scarcity and Refugees

In the first few months of 1919, several forestry officials were sent out to convince workers of depots and timber mills that the communist regime would ensure that they receive payment and that workers should continue to provide essential resources regardless of the political situation. The context of these efforts was the severe shortage of firewood and timber in the winter of 1918 and 1919 that continued in the following years.

At the beginning of 1919, it was an equally difficult question to foresee what would happen to the occupied areas and the state forestry employees working there.¹⁶ From the end of 1918, the military occupation of the country and the secession of certain territories left forestry administrators with a number of urgent questions to answer. On the one hand, they had to decide what behaviour the ministry's management expected of the staff in the areas concerned, and on the other, how the supply of staff could and should be ensured. It was lower ranking employees who received the most direct threats. For example, in the last days of 1918 the forestry office in Orsova, the important multi-ethnic border town along the Danube, reported large-scale appropriation of wood and timber and also that the guards of the timber depots received brutal death threats from self-appointed Serbian and Romanian groups including being skinned alive.¹⁷ In the same period, between November 1918 and February 1919, the forestry administration staff had to declare in several ways, in accordance with the extent of the occupied territories, whether they wished to remain in the new administration that was to replace the Hungarian state, if the representatives of the new power

15 MNL OL FM K 184 B/1. 1916. 1561. doboz 4039 II..

16 Gál, *Selmeci-soproni diákélet*.

17 MNL OL FM K 184 B/1. 50017. 2146. doboz

so allowed.¹⁸ The formation of national councils, a typical institution of the post-war months, sometimes took place very early in time, in the days following the armistice with Italy. For example, the head of the State Forestry Office in Balassagyarmat, which refused to hand over the office in Korpona, described the situation in a report to the Minister of Agriculture, Barna Buza, on 9 November 1918.¹⁹

A further wave of equally desperate reports came in January 1919, in connection with the forced swearing-in. These occurred because during the armistice period, before the signing of the peace treaty, some officials refused to take the oath, so as not to give the impression that they were already *de facto* recognising the borders imposed by the occupying army. The official report in the last days of January were stressed the loyalty dilemma and detailed the course of events, and also outlined what the actors of the time considered to be rational outcomes and solutions.²⁰

A number of refugee foresters found employment in the state administration and large-scale state-run programs. There were three broad areas of work: expanding the network of railway lines serving the exploitation of forest resources; taking part in the distribution of timber (chiefly firewood) among the population under conditions of timber shortage; and the large-scale afforestation effort of the 1920s. The clearest evidence supporting the argument that the arrival of refugees was in fact the main driver behind state-financed projects and institutions in these years is a confidential circular, issued by the Council of Ministers of 1 October 1919. The prime minister ordered that in order to ensure the permanent employment of civil servants entitled to refugee benefits, vacant or new posts should be filled by refugee civil servants.²¹ The prime minister also requested information on job vacancies in the Ministry of Agriculture. In his reply letter of 31 October 1919, the ministerial councillor Kálmán Péch reported that in the forestry sector, refugee employees were to be employed in the woodworking plants to be established in the forests and islands along the Danube. It was the duty of another institution, the Office of Timber Sales (Faértékesítő Hivatal), to manage the the post-war shortage of wood and timber.

It is worth going through the context of each of the three main projects mentioned above. Eight persons worked in the construction department of

18 Szeghy-Gayer, "Former Hungarian civil servants"

19 MNL OL FM K 184 A/4 1918. 182513. 1943. doboz A balassagyarmati állami erdőhivatal jelentése

20 MNL OL FM K 184 B/1 1911. 50947 2151. doboz A gyulafehérvári járási erdőigazgatóság távirati jelentése

21 MNL OL FM K 178. 5056/1919.

the Ministry of Agriculture, the one responsible for building narrow-gauge railway lines facilitating extraction. Some documented examples of the shortage are the felling of trees in Budapest, as recorded in the register of trees planted by the municipality of the capital.²² As mentioned in the first section of this chapter, Heribert Loványi, who was a forest officer in Visegrád after World War I described the link between shortage in the capital and activities leading to landscape change:

In 1919, the firewood shortage was so severe that there was not enough firewood to bake the bread needed for the hospitals, and since the railway network was not functioning, firewood could only be transported to the capital by water. It was then that the People's Commissariat came up with the idea of producing the firewood needed in Visegrád [...]. I took it upon myself to extract the quantity with workers from the surrounding area. This I started to do with great effort and this was also true for moving the logs which I solved with a sledge for lack of cart-horses. To transport the supplies to the Danube, I thought of an industrial railway, which was built in Lepence. [...] During these two years, I delivered 70 barrels of firewood and I was fully up to the task.²³

Writing in 1925, a contemporary statistician, Zoltán Szöllősy, made it clear that the ownership pattern aggravated the fuel and timber shortage in post-World War I Hungary: 63.9% of forests were part of large estates, even though the weight of estates above one hundred acres fell by 5% between 1918 and 1925. Only 5.4% of forests were state-owned. To be sure, there were large differences between regions and counties: figures varied between less than 50 and 95 per cent. Szöllősy pointed out that forested areas were mainly forest stands located between land used for agricultural purposes; moreover, most trees in these stands were relatively young and had not come close to the end of their rotational cycle. Indeed, it was one of the main challenges that management had to plan for areas that had been considered marginal from the point of view of the timber economy and that sometimes were only used as hunting grounds.²⁴

A remarkable source, written by Károly Soós (1891–1973) gives us insight into what it meant that new, previously less valued areas needed to become the main sources of resource exploitation:

22 BFL IV 1517: Registry of trees planted, by district and street.

23 SOE KL 104: Loványi Heribert, *Pályafutásom 1898–1958* (manuscript), 26.

24 Szöllősy, "Az erdőterületek megoszlása," 148–54.



Fig. 4.3. Train running on the narrow-gauge railway near the town of Spišská Nová Ves (Igló) in Czechoslovakia, 1933. Source: Fortepan/Dezső Bor.

The Forestry Estate of Miskolc had been part of the former State Forestry Office of Sóvár (Solivar) and had a meager importance before World War I. Actually, it only supplied the city of Miskolc and the needs of the Iron Works of Diósgyőr. After the world war, however, it became the

only state-owned forest estate in Upper Hungary and gained national importance. It became necessary to shift to a fuller and more regular exploitation of the estate in order to counter the shortage of wood and timber. Both production and transportation capacity are needed to reach its maximum potential. For doing so, at the request of [Károly] Kaán, government commissioner for timber supply, a forty-kilometre-long railway track was constructed from 1919 and during the subsequent years. For the time being it was only for freight transport. Ferenc Modrovics, forest engineer, who later became a university professor, supervised the construction personally.²⁵

From these sources we can see that the timber shortage was grave and real and it existed independently of the presence of refugee foresters.

The same is true of the Office of Timber Sales. A further sixteen foresters worked for this office for some time. This office was established between May and June 1917 in response to the transition to a war economy during World War I and was disbanded in 1923.²⁶ Although archival material of the Office of Timber Distribution has not survived, its organisation in the period 1919 to 1920 can be traced from the collection of autobiographies of the forest engineers. In light of the above description of the changing role of Miskolc, a closer look at the locations of the branches of the Office of Timber Sales allows us to make sense of the new topography of the state forestry. There were important centres in southwestern Transdanubia: besides the seat of Tolna County, Szekszárd, there were also offices in Gemenc, Kalocsa, and Paks along the Danube, in Feketeerdő in Szigetköz, and in the Northern Central Mountains in Parád, Putnok, and Recsk. Employees of the timber sales office received delivery of timber from Romania in Lökösháza.

It was clear to many that land-use patterns had changed so much, and the lack of timber was so pressing, that there was a need for a new compromise about how far the central state organs could interfere with and control the management of forests in private hands. In fact, this was not an entirely new realisation. Top officials of the Ministry for Agriculture had believed that the terms of the Forest Law of 1879 would not lead to sustainable forest management and initiated legislative change since the end of the nineteenth century. Law XIX of 1898 brought about additional levels of state forestry administration and granted the right to the state to overtake the management of forests owned by village communities and municipalities. During

²⁵ SOE KL 104.

²⁶ Szijj and Ravasz, *Magyarország az első világháborúban*, 236.

World War I, the draft of a proposed new forest law appeared, and had this come to force a regime of tighter control of privately owned forests would have set in. Although World War I pushed the draft off the agenda, decrees were issued that significantly limited the right to cut trees.

Some of the resettled foresters played a role in the post-1918 afforestation campaign. However, we should see this campaign in the context of a long history of reversing the desertification of the Great Hungarian Plain by a large-scale afforestation programme. This plan had nearly two hundred years of history by the 1920s. Debates intensified in the 1860s due to severe droughts and in the 1870s due to devastating floods in the Great Plains. Yet the legal framework that Károly Kaán proposed, which came into force in 1923, meant a culmination and intersection of a high modernist perspective, and reflected Keynesian economic thought as well as a degree of environmental consciousness. As deputy secretary for Forestry at the Ministry of Agriculture, Kaán stressed that the interaction between conscious and large-scale investments serving the purposes of landscape change and the changes of the biology of a certain area was the key to sustainably improving the standards of living. The law, passed in 1923, became an actual programme in 1927, but Kaán had already started the programme years earlier, in late 1918. By 1921, there were afforestation branches in Kecskemét, Szeged, Debrecen, Nyíregyháza, and Eger, and local agents for afforestation in twenty-one locations.²⁷ As a result of these efforts, the proportion of forest cover in the Trianon area increased by 0.8% in eight years.²⁸

Moreover, it was Károly Kaán's comprehensive programme that manifested in the afforestation campaign of the Great Plains of Hungary. Kaán saw the interaction between state investments in the national economy and ecological changes resulting from conscious landscape transformation as an organic whole. For him, this interaction was the key to making the new framework sustainable (in the twenty-first-century sense of the word) and also for meaningful improvement in the quality of life. As Kaán wrote:

The climate of the countryside will be different if small and large patches of forest, like so many sponges, slowly evaporate the atmospheric moisture that so quickly rises in the unforested [...] After knowing what I have just outlined, it is not difficult for me to prove that we hope that our large-scale

27 Oroszi, "Az alföldfásítás a két világháború között Magyarországon," 12.

28 Bartha and Oroszi, "Az alföldfásítási programok története, különös tekintettel a természetvédelem kérdéskörére," 34–63.

action to plant the lowland forests will produce very considerable results in terms of public health and economy [...] All these works are, in any case, in the best direction and are efforts which are intended to promote a certain consolidation of our economic life.²⁹

Thus, data about the participation of refugee foresters in afforestation is of particular interest for our initial dilemma, and to understand the impact of state succession on major events of environmental history we turn to the group of a dozen people who worked, at least briefly, in afforestation campaigns between the two world wars.

In the second half of the 1920s, the Forestry Directorate of Debrecen seems to have been an important place of employment for expatriates.³⁰ This probably had to do with the city being the seat of the regional Forestry Directorate, a superior supervisory level of forestry administration, and with its location, reasonably close to both the Romanian and the Czech borders. Looking at their birth dates, places of birth, and the location where they took part in the afforestation campaign tells us that afforestation might have occurred at different stages of a career. For those who worked in afforestation in their early twenties, this was likely to be among their very first assignments. As such, this typically short-term occupation could mean professional advancement. In short, working at an afforestation site did not have a specified and usual timing in foresters' career paths. For the refugee foresters, it was the territorial annexations sanctioned and guaranteed for Hungary by the Third Reich and Italy between 1938 and 1940 that marked a high point in their career.

Overall, the state-employed refugee foresters leaving their posts encountered a situation in which the weight of state sovereignty over forests was diminishing as state-owned forests in post-Trianon Hungary shrank by an order comparable to that in the nineteenth century. However, while the role of the state in forestry was expanding in 1918, there were also symptoms of a temporary loss of state competences. Thus, the case of forestry is part of the history of marked expansion of ambitions on behalf of the state to alter patterns of resource extraction and environmental conditions. This latter aspect is a worthy subject of future research on the link between post-World War I transformations and environmental history.

29 Kaán, "Az erdőpusztítás közgazdasági következményei," 141–51.

30 Dékány, *Trianoni árvák*, 115, 314–15; SOE KL 2.c. 1085/1920, 1963/1920, 322/1921, 591/1921, 386/1921; SOE KL 401: papers of Krippel Móric.

New Boundaries between State and Proprietors and the New Geopolitical Imaginary

The interaction between water engineering and forestry thinking was important to the history of the notion of the Carpathian Basin.³¹ This term refers to the area that is also called the Pannonian Basin, and differs from the Pannonian Biogeographical Region in that the Carpathian Basin is meant to include Transylvania and the Eastern and Southern Carpathian ranges as well. One of the cornerstones of the official Hungarian diplomatic position on the Trianon borders was that the hydrography of the Carpathian Basin, the condition of its forests, and the well-being of its human communities were interdependent and thus should not be partitioned factors.³² Foresters as a group – not directly because of the influence of the geographer, diplomat, and politician Pál Teleki, but according to a geographically based argument – considered it not only unfair but also irrational and unsustainable that a situation existed in which Hungary and the Carpathians were not part of the same state. After the armistice agreement of November 1918, the basic element of the petitions on territorial issues that Hungarian professional organisations addressed to the victorious allies was that the economic life of the Carpathian Basin would be paralysed if future territorial solutions ignored the hydrographic, ecological and geographical unity of the region.

The idea of the Carpathian Basin thus emerged in forestry thinking in terms of flood risk, wood shortages and the retention of skilled personnel to deal with the loss of territory in the country. Logically and chronologically, the third aspect was the attempt to change the climate of the Great Plain, which gained new impetus between 1919 and 1922 and was intertwined with the ideas of hydrological engineering.

The Great Hungarian Plain afforestation program, enacted in 1923, sought both to alleviate the acute and expected chronic shortage of wood and to increase the resilience of farming to periods of water scarcity. In developing the model, Kaán did not, of course, rely solely on his own observations. He was not alone. Among meteorologists Ferenc Sávolgy in particular shared this view. Kaán's ideas about the historical ecology, forest cover, and waterlogging of the Great Plain appear exaggerated in the context of current scientific thought, and imagined the relationship between soil water levels and the

31 Balogh, "The Concept of the Carpathian Basin"; Pál, "The Second Hungarian Conquest."

32 Prinz et al., *Pro Hungaria*. See also Hajdú, "A magyar földrajztudomány és a trianoni békeszerződés"; Hajdú, *Magyarország történeti államföldrajza*, 113–23.

physiological processes of trees too schematically, while underestimating the importance of grasslands.³³

Post-war afforestation in Hungary has a broader historical context: in British and French colonial territories of the Caribbean regulation provided for the preservation of belts of forest which, it was argued, ensured that rainfall would not be reduced as a result of deforestation and thus that desiccation would not occur.³⁴ The work of Károly Kaán and his contemporaries on the history, causes, and reconstruction of the water supply in the Great Plain can be seen as a modality of this way of thinking, shaped by the idea of the Carpathian Basin. However, implementation was slow. The chief problems were, on the one hand, the world economic crisis, which deepened after a brief stabilisation in the mid-1920s, and on the other, expropriations.³⁵

The growing role of the state in industrial investment, hydropower construction, and forestry endeavours prompted a rethinking of land tenure rights. The history and content of the Hungarian Forest Act of 1935, or Act IV of 1935, is a case study in the compromise between private property and state interests. The debate on the law is an important source because it was the result of lengthy preparation. As in the previous Forest Law of 1879, the advocacy of the OEE played an important role in the preparations. Two hefty volumes provide an insight into the negotiations. The first contains the versions of the texts produced within the OEE and their detailed justification, while the second covers the parliamentary debate on the draft law, including the debates in the House of Representatives in November 1934 and the Upper House in February 1935.³⁶ From these sources, it emerges that the differences between the profession and forestry stakeholders were not identical with the main issues in the political debate. The 1935 Forest Act is essentially the story of the making of two different compromises, of which the one between the direct stakeholders – the administration, forest owners, and those involved in processing and trade – seemed to be the more important to contemporaries. It is clear from the debate and the outcome that by 1935 forest policy, at both the ministerial and the association level, had incorporated the basic premise of Károly Kaán's 1923 paper: it had changed the nineteenth-century categories that had set rigid limits to state intervention.

33 Molnár and Biró, "Az Alföld erdei."

34 Fressoz and Locher, *Chaos in the Heavens*.

35 Oroszi, "Az alföldfásítás," 82–94.

36 "Az 1935. IV. t.c. egyesületi tárgyalásai: Törvénytervezet az erdőkről." See also "Az 1935. évi IV.t.-c. törvényhozási tárgyalások."

The text of the law made concessions about the obligation to prepare a forest management plan and listed a number of cases when a wooded area should not be considered forest. Paragraph 9 states that: “In addition to concerns for the public interest in regular forest management, the interests of the owner shall be given fair consideration.” This differed notably in approach from that of 1918 to 1923. For example, Article 2 of Act XVIII of 1923, which transformed the forest administration system, stated bluntly that “the Minister of Agriculture is the supreme authority for forestry matters and as such exercises the supreme supervision and governmental control over all forests, barren areas and natural monuments located in the territory of the country.”

The most heated episode in the parliamentary debate on forest law was also the result of differences of opinion on private property rights. The Social Democratic opposition, led by Anna Kéthly, wanted forest owners to designate safe routes for hikers to cross their land. However, this went against the rigid, exclusivist conception of property held by the parliamentary majority of the time and did not become the rule. In the Upper House of the parliament, the law was discussed in far fewer debates, with the President of the OEE, Kelemen Waldbott, presenting the draft. He stressed its compromise nature from the outset.

Landscape, Discourse and Deprivation: The Case of the Forestry Workers around Debrecen

The history of state-regulated afforestation in Hungary contains specific, yet telling episodes. One example is the case of the occupational group called *vákáncsos* in Debrecen. Debrecen was in a special position in terms of the afforestation programme. The formal territory of the city was one of the largest in the country, and in fact it connected several landscape units: it was located at the junction of the Hortobágy, Nyírség, and Bihar plains, and it included the Gúti Forest, the largest forest in the lowlands.

From the 1880s, poor families mostly from other settlements came to the vacant land around Debrecen, and undertook the afforestation tasks under contract with the city, while trying to support themselves by taking advantage of the forest. The artist and poet János Géczí's description tells that they may be identified with their relation to forest soil and the way these workers used it:

These lands are home to different plants, which are differently arranged according to the seasons and water flows, not to mention the mentality

of their cultivators. For on the patches of forest soil mixed with sand, the *vákáncsos* used to grow melons, the *kotus* grew celery, nowadays peppers and cabbages, and their smell varied accordingly.³⁷

The life of the *vákáncsos* and the official measures taken in their regard created a natural and social environment in which tree species that were considered valuable played a leading role. Despite quantifiable achievements, the work and way of life of the *vákáncsos* became one of the paradoxes of forestry in Debrecen in the late nineteenth and early twentieth centuries. Although their work seemed essential to the forestry work of Debrecen's forestry plan, by the 1910s the concept was associated with images of poverty and illegality.

The 1920 forestry plan for the forests of the city of Debrecen shows that the relationship of the institutions controlling and organising forestry had an ambivalent connection with forestry workers. On the one hand, it was considered that without the *vákáncsos* it would not be possible to prevent the destruction of the forests, but on the other hand, authorities wanted to react to the internal contradiction in their way of life by increasing control rather than by changing contractual relations. By 1939, the official forestry position was simplified: "Great steps have been and are being taken to phase out the other very important factor contributing to forest destruction, the *vákáncsos* system. Whereas in 1924, the sixth year after the state took over the forests, there were 850 *vákáncsos* families, today there are 195."³⁸

The history of the *vákáncsos* in and around Debrecen between the two world wars shows that the evolution of public discourse can directly influence the forms of landscape transformation and the possibilities of its actors. The contemporaries who created the discourse always came from outside – the *vákáncsos* hardly ever spoke or wrote about themselves. An instructive narrative node is a report in the October 1920 issue of the *Pesti Napló*, which, in addition to the common narrative that the *vákáncsos* were predominantly poor residents of Debrecen, reported a more exotic alternative, which the journalist said was shared with him by a teacher in Haláp:

There is a type here, the *vákáncsos*. Zola should have his pen here, to describe the filth, the misery, the terrible poverty that exists here, twenty kilometres from Debrecen and fifteen kilometres from the Oláh [Romanian] demarcation line. These planters and deforesters get a few

37 Géczi, "Sétáló árnyék." 116.

38 MNL HBmL VI.226.M. kir. Forestry Office, Debrecen 3.k.



Fig. 4.4. Carpenters at work in Novoveská Huta (Iglóhuta) (Czechoslovakia) in Horská ulica, 1933. Source: Fortepan/Dezső Bor.

acres of land for free from the city of Debrecen. They have to plant it with black locust trees and grow pumpkins and potatoes among the saplings as long as they can. In winter they clear the forest. They live underground in holes.³⁹

In this narrative, the lack of culture is explained by their proximity to Romania, while the driving forces are the black locust saplings that have to be planted and reared and the need for food for the people doing the work, which they have to provide for themselves. The gender difference in the diet of the families of the *vákáncsos* and the miserable conditions of the *vákáncsos* are illustrated by a brief newspaper report in 1936 that “near Debrecen, on the Hármashegy, the *vákáncsos* planting the forest found a woman unconscious and lying in rags. She never regained consciousness for a moment. [...] The woman, emaciated to the bone, was taken to the Debrecen clinic in a life-threatening condition.”⁴⁰ Likewise, a political daily newspaper, *Friss Újság*, which was fond of shocking stories, based a report on a data collection in a 1938 issue: the journalist highlighted the

39 *Pesti Napló*, 20 October 1920.

40 *Friss Újság*, 6 January 1935.

role of poor diet when presenting the *vákáncsos* family as people who kept a household diary and lived consciously.⁴¹

The negative connotations of the daily discourse were echoed in the widely read and highly influential *A magyar Alföld. Gazdaságpolitikai Tanulmány* (The Great Hungarian Plain: A Study in Economic Policy). The volume was written by the oft-mentioned Károly Kaán, who during and after World War I outlined a new paradigm on the relationship between state, landscape transformation, and national economy. Kaán devoted several pages to pointing out that the city of Debrecen was making inappropriate use of its particularly large territory, and that by focusing on livestock farming it was not only incurring a loss itself, but was also causing a significant loss of potentially available national income. Within Kaán's critical argument, the *vákáncsos* were given an important role, as they were exacerbating the damage caused by animals to the forest, instead of reducing the backlog of afforestation that had accumulated over decades of excessive livestock farming in relation to forest management standards, their original task:

According to the official census of 1924, 850 of these “reforester” heads of household, with 3,877 members, 210 horses, 22 foals, 783 cows, 73 young cattle, 247 calves, 273 pigs and 1,036 piglets under one year old, lived in the urban forest areas that were under plantation and needed to be protected from both man and beast.⁴²

In essence, Kaán argues that by making the *vákáncsos* indentured quasi-servants instead of employing them as day labourers, the city was responding poorly to the scarcity and relative expensiveness of its labour force. In 1931, Kálmán Kovássy (1873–1963), one of the forest engineers who returned to Hungary after the Trianon Peace Treaty and who became a prominent figure in the public life of hunting and bird protection at the time, clearly blamed the state forestry for the alleged excesses of the *vákáncsos*, by which he meant constant attempts at profiteering, the backlog of afforestation, and the unsuccessful innovation in terms of insufficient forest closure.⁴³ In the 1930s, a short ethnographic study by István Balogh describes the *vákáncsos* as a group of people viewed with suspicion by the professional urban forestry, for they were potential perpetrators of forest theft.⁴⁴ In short, the discourse

41 *Friss Újság*, 13 February 1938.

42 Kaán, *A magyar Alföld*, 281.

43 Kovássy, “Debrecen erdőgazdasága,” 321–23.

44 Balogh, “A *vákáncsosok*,” 144–57.

on the *vákáncsos* went from being polyphonic to unidirectional during the 1920s and 1930s, when they were increasingly regarded as suspect, harmful and abnormal, and it was almost taken for granted that the system had to be dismantled.

Environmental Issues, Conservation and National Landscape

The political compromises over property rights after the Treaty of Trianon, and the changing relationship between state and non-state political levels, also shaped the history of landscapes that were seen by contemporaries as being in environmental crisis. The complexity of the landscape around Debrecen and of human activity here is illustrated by the fact that the forest areas near the city included some of the first in the country to be placed under state protection in 1939. In his description of the forests around Debrecen, Rajmund Rapaics, one of the most important Hungarian botanists of the twentieth century, pointed out that black locust was spreading due to the planting of black locust and the displacement of oak, and that black locust woods were less valuable than oak.

Among the trees that have been planted or are going wild, the *Robinia pseudoacacia* [black locust] is the first to be mentioned, which is now well established here. There are stands of it in a significant area, but there are also *Robinia pseudoacacia* trees everywhere in the woods. Once established, it is almost inextinguishable. Its branches burst forth richly, and with each cutting it gains more and more ground, at the expense, of course, of the oak, which is more difficult to sustain and suffers from the grazing animals. The botanist is not very pleased to see the inexorable occupation of space by the black locust, for it spreads like weed, and hardly any of the rich undergrowth of the oak rarely wanders into the acacia. For the black locust woods have hardly any humus, so that the field vegetation tends to give up space there, and the shade repels them, leaving the weeds free to take up their abode.⁴⁵

The aforementioned Kálmán Kovássy claimed that the decline of oak was due to the regulation of the River Tisza, the decrease in groundwater levels caused by the draining of marshy areas, forest litter collection, and new pests. It was therefore clear to the scientific community of the time that

45 Rapaics, "A debreceni homokterület," 129.

the remaining oak stands were becoming relict and that their protection was urgent. The granting of protection at state level was made possible by Title 6 of the Forest Act of 1935.

The Forest Act was a highly important step for the nature conservation movement. It reinvigorated the movement that had begun in Hungary at the beginning of the twentieth century and reflects the effects of the post-war situation. Among these effects, we shall underline that some areas of biological value within the new borders only became known to the public in the 1920s. At the same time, science was gaining a better understanding of the place of individual species within each habitat type.

As Sándor Oroszi has shown in his monograph on the history of nature conservation, research by the staff of the Institute of Ornithology played a key role in this. Their work led to a reassessment of many species previously thought to be pest-like, and even to a more nuanced concept of what pests were.⁴⁶ The research capacity of the Institute of Ornithology was channelled towards the Lake Balaton issue, which was a focus of the conservation movement and a site of conflict at the time. The geological formations of the northern shore of Lake Balaton, the biodiversity of the reed beds of Lake Balaton, and the value of the bays were already receiving significant scientific attention following the research programme of Lajos Lóczy, one of the founders of the school of natural geography, in the 1910s. However, efforts to declare parts of Lake Balaton protected were intensified immediately after 1918 because of new environmental damage. In addition to hunting, the birdlife of Kis-Balaton was threatened by drainage to increase the amount of arable land, while the demand for raw materials for road building led to an increasing number of interested parties applying for permits to extract basalt from the Balaton highlands.⁴⁷ Domonkos Wettstein, in his monograph on the architecture of Lake Balaton, shows that, among the environmental problems of the resorts, changing water levels and winter ice pressure played an important role in the growing demand for a general zoning plan. Between 1929 and 1931 the Balaton Management Committee was established, which included many civilian members, with the aim of developing a regulated – sustainable, so to speak – Balaton resort area.⁴⁸

Apart from the issues of Lake Balaton, the other main shaping factor of the natural landscape of the period was the designation of tourist routes, the most important of which was the blue sign that became the basis of

46 Oroszi, *A természetvédelem története*.

47 Schenk, "A kócsag hajdani és jelenlegi fészkelőtelepei"; Oroszi, *A természetvédelem története*.

48 Wettstein, *Balaton építészet*, 32–59.



Fig. 4.5. Timber depot of Kerekhegy near Miskolc in the Bükk Hills, Hungary, 1940. Source: Fortepan/Bendegúz Zsembery.

the Blue Tour (Kék túra). The use of this route played a major role in the nationalisation of the landscape within the post-World War I borders. The journal *Turisták Lapja*, which was launched in 1889 and was part of the Hungarian Tourist Association, formed before the outbreak of World War I, kept the issue of the ownership of Slovensko, formerly Upper Hungary, on the agenda after 1920. Many articles emphasised that tourism could play an important role in ethnic politics and the struggle for identity by engaging in the competition for the nationalisation of the landscape. In the 1938 anniversary issue, for example, one author saw a conscious Czechoslovak policy behind the events: *“the number of Czech-Moravian local branches at the end of the world war was 56, at the end of 1931, 260, but the increase in the number of shelters and tourist buildings is almost exclusively in the Highlands, i.e. here the association is carrying out planned colonisation work*



Fig. 4.6. Hungarian labour unit (chiefly consisting of conscripted men labelled Jewish) constructing a wooden house along a forestry railway line in the area of River Visó in the Maramures Mountains (Northeastern Carpathians), 1940. Source: Fortepan/dr. István Szántó.

*very assiduously involved in the interests of tourism!*⁴⁹ In the spirit of the fight for and through natural values, the most important Hungarian cave explorer of the era, Hubert Kessler (1907–1994), a Saxon of Sibiu by origin and, reported in an issue for the journal's jubilee year edition that he had succeeded in removing an iron grate in the Aggtelek cave, thus realising the adjustment of several hundred metres of the boundary.⁵⁰

The Hungarian Tourist Association and the Hungarian Carpathian Association organised the St Stephen's Tour in 1938, the year that transformed the political climate in Hungary. As Gyula Zsembery (1877–1957), a finance lawyer and a multifaceted public figure, summarised at the closing event in Esztergom:

The whole journey is one thousand kilometres. We have divided it into two stages of 500 kilometres each, with our teams leaving from the borders of our truncated homeland at around the same time and reaching the meeting point in the heart of the country from both sides at exactly the same time. This meeting took place a week ago today at Dobogókő, near the oldest shelter in the territory of our truncated homeland, in the presence

49 Blasovszky, "Turistautánpótlás és propaganda."

50 Kessler, "Részleges határkiigazítás az Aggteleki-barlangban."

of Minister Géza Bornemisza and almost all the important leaders of our tourist society, [...] We ask the Almighty to grant us Hungarians that our next St Stephen's tour may cover the whole country of our King St Stephen!⁵¹

The history of nature conservation between the two world wars is therefore much more than a cultural history: it opens a window on the fundamental issues of the era, showing that not only have environmental problems been with us for a long time, but so has the way we think about them. It also reveals that the map of places and regions of high biological value had been shaping public opinion for more than a century.

Jewish Business in Timber and the Holocaust

From the second half of the 1930s, anti-Semitism and related legislation, and ultimately the Holocaust, caused ruptures in the history of commodification of forests, with many episodes of brutality and murder. Looking at the larger picture, economic historians have revealed that from 1942, the confiscation of land owned by people classified as Jewish became one of the pillars of economic policy in Hungary.⁵² Gergely Kunt has recently pointed out how telling local histories of resource use reveals the relevance of anti-Semitism in environmental history.⁵³ Local-level analysis tells us much about the interaction between the history of commodification of timber and anti-Jewish legislation and the attempt to exterminate people labelled Jewish.

From the meticulous research that Krisztina Kelbert carried out on the Jewish community of Szombathely, we know that between the mid-nineteenth century and the Holocaust this town in Western Hungary was home to many successful Jewish families.⁵⁴ A number of business people entered the timber market due to the vicinity of forests in western and southwestern Hungary, as well as in Slavonia. An outstanding example of this is the business of the Geist family. Lajos Geist opened a timber depot in Szombathely and installed a steam powered sawmill which produced 22,000 tons of firewood and other products in the 1880s. Employee numbers

51 Zsembery, "Beszámoló a Szent István zarándokltról."

52 Tóth-Bartos, "Birtokpolitika Észak-Erdélyben."

53 Kunt, "Equality Drowned in Thermal Water."

54 Kelbert, *Szentől szemben*.

varied between thirty-five and fifty.⁵⁵ When Lajos's sons, Sándor and Jenő, joined the firms it became a joint business and took the name Lajos Geist and Sons. Their portfolio extended to brick making in 1906. Fifty-five employees made 172,000 bricks per year in a circular furnace. The steam bath he set up in general partnership with Zsigmond Berger was a response to the expanding demand for services related to hygiene in the modernising city. It opened in 1893 and later bathtubs and a swimming pool were added to it. The steam-powered mill that belonged to the Berger and Geist Co. stood on the same plot and operated with eighteen workers around the turn of the century. Its capacity reached 2,000 tons per year. By the 1940s, the Geist family had a rich past and the future looked promising as well. Yet family members Otto Moser and Hermina Geist, Ernő Geist, the widows Mrs. Jenő Geist and Mrs. Lipót Geist, and the lawyer Tamás Geist were all deprived of their rights and possessions, along with fellow victims who were on the notorious Jaross list of 4 April 1944. They were moved to the ghetto of Szombathely among the wooden planks and then perished as passengers of the death trains or in forced labour service on the front – being Hungarian noblewomen and noblemen.

Another success story that turned to cruelty was that of the youngest of the Weiner children, Manó Weiner, who changed his family name to Vályi in 1906. Having completed his education, he started working at Lajos Geist and Sons.⁵⁶ After two years of military service, he took up employment with Sándor Spitzer and Sons, a firm in Dombóvár. Following the outbreak of the Great War he returned to the army and soon became a decorated hero, having led a critical counterattack with four hundred soldiers in Serbia and been wounded in Italy. Shortly after his wedding, Manó opened a timber depot. He dealt in lumber, lime, cement, parquetry, board, firewood, and all kinds of building materials. Sándor Vályi recalled this period in his memoir:

Shortly after the war my father, with some help (from Jenő Geist of Szergény) founded a timber wholesale business in the outskirts of the town, on Rumi Road, where we had a beautiful house near the warehouse and my mother had a pretty vegetable garden and even a poultry farm. [...] There were also dogs and cats and for a couple of years a stork had a nest in the courtyard. [...] The business went relatively well in the 1920s, it provided a calm and secure living for the family. It even expanded to cover neighbouring counties. This prosperity lasted until the Great

⁵⁵ Kelbert, *Szentől szemben*, 402–13.

⁵⁶ Kelbert, *Szentől szemben*, 320–35.

Depression of 1929–1932, when so many businesses went bankrupt in the construction sector that it swept away the family business as well.⁵⁷

Manó Vályi was a notable person in the city's public life during the interwar period. He was active in a number of associations and societies, such as the Szombathely Group of the National Veteran Alliance, the Old Fighters' Association of Szombathely, and the Merchants' Association of Szombathely. As a distinguished military officer of the reserves he was a regular guest at city and county events. On 31 December 1944, a gendarme and members of the National Special Accountability Unit (a unit formed in November 1944 with the purpose of "uncovering phenomena threatening the realisation of the goals of Hungarism"), comprising some youngsters wearing Arrow Cross armbands arrested them.⁵⁸ Manó spent three months in custody and suffered torture on several occasions at the hands of the gendarmes and Arrow Cross militants, who used numerous devices including electricity and rubber truncheons. On 31 March 1945, Allied forces liberated the three members of the Vályi family, the parents and Sándor. The other two brothers, Péter and Gábor, survived the Holocaust doing forced labour in the Army. Yet violence had harmed all of them.

Post-war developments during the period of land redistribution also reflect the extent and importance of the concept of Jewish property in claims making and altering land-use throughout the 1940s. Thus on 22 June 1948, the inhabitants of village Terpes in Heves County asked the Ministry of Agriculture to grant them the ownership of pastures and forest stands that were at that point state-owned, but had been confiscated from Jewish persons during World War II.⁵⁹

Conclusion

The chapter has discussed several ways in which forestry conditions in World War I and afterwards contributed to the emergence of the Anthropocene epoch. Beyond revealing the extent of the destruction and flight in the area of forestry from the autumn of 1914 onwards, the first part of the chapter foregrounded the extensive presence of forced labour in Hungary. War disrupted commodity flows and labour markets, destroyed forests (both

57 Kelbert, *Szentől szemben*, 328.

58 Kelbert, *Szentől szemben*, 332.

59 MNL OL XIX-K-1-gg 181. doboz Birtokügyek

as a result of economic demand and in battlefield violence), and provided an opportunity for foresters to establish themselves as important resource managers crucial to the national project. The chapter then turned its focus to why post–World War I state successions are events that environmental historians should consider. One reason why the history of foresters as a professional group constitutes a connection between the history of political conditions and that of environmental change is that the movement of refugees arising from state succession was linked to changes in institutions and politics of forest management. These new policies involved afforestation, infrastructural projects, and changes in the law. The dilemmas of the post-war period regarding the redrawing of legal boundaries between private and public interests, as featured in the work and legislation initiated by Károly Kaán and eventually the new Act of Forestry of 1935, were important for the history of commodification of forests.

The example of the *vákáncsos* shows how inequality, social exclusion and environmental history intertwined in the history of afforestation, which was one of the key landscape-change programs of the interwar period. The chapter also demonstrated that foresters played an important role in developing the notion of the Carpathian Basin, which in turn informed landscape-change efforts in forestry and hydrology for a century to come. Moreover, forested areas and regions had a key role in turning irredentism into a lived experience through tourism.

The interwar period, the Horthy era in Hungary, was a period when the use of energy, the use of natural materials, and the use of the landscape, as well as the related legal, institutional, and physical infrastructure, underwent a major change of scale. These changes paved the way for Hungary's increasing carbon emissions and overuse of various natural resources. In other words, during the Horthy era, Hungary was also on the global path of the Great Acceleration that the scientific consensus had anticipated since the second half of the 1940s.

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5. Forestry Programmes between Stalinism and de-Stalinisation, 1945–1956

Abstract: This chapter argues that the afforestation campaign between 1949 and 1956 forms a juncture of Stalinist Sovietisation, de-Stalinisation during Imre Nagy's government, and changing local conditions in Hungary. It is therefore organised into sections discussing each of these interactions, beginning with an outline of the relationship between the regime's attempts at Sovietisation and the efforts of the National Forestry Association. The focus then turns to the way forestry-related regulations of the Nagy government contributed to the general goals of Nagy's programme of July 1953, and what this meant for the history of afforestation. The last section looks at how afforestation influenced the relationship between farmers and regional forestry enterprises just before the decisive wave of collectivisation.

Keywords: afforestation, Stalinisation, de-Stalinisation, propaganda, rural history

Stalinist Environmental Policy and Global Historical Change in Central Asia and Central Europe

The afforestation programme in Hungary involved many stakeholders and was the most ambitious forestry undertaking in the entire socialist era. Article 33 of Act XXV of the 1949 Five-Year Plan proclaimed that logging should go up by 300,000 cubic metres, and 50,000 cadastral acres of new forest should grow in Hungary's Great Plains – big goals with which the afforestation programme fit closely.¹ Two years later, a decree of the Council

¹ Law XXV of 1949. A Magyar Népköztársaság Első Ötéves Nép gazdasági Tervéről For full text see jogkodex.hu

of Ministers (1029/1951 (XI. 30.)) required all forest enterprises to start an afforestation campaign, with the aim of increasing the proportion of forested land to 20.3% by 1970.²

Though it was not included in the volume on the history of European forests edited by the well-known historical geographer Charles Watkins and forest ecologist Keith Kirby, the Hungarian afforestation programme is a clear example of how local environmental, social, and political history, changing scientific knowledge around the world, and changing geopolitical relations after 1945 all come together.³ This chapter considers how environmental history can be discussed in relation to an era in which opposing political regimes claimed to have fundamentally different answers to the question of what the right way to manage resources was. Afforestation is also an excellent field of study for analysing the history of the era of the Great Acceleration, since it is important not to treat this period in complete isolation from those that preceded it. In other words, it is important to highlight aspects that link the phenomena of the Great Acceleration to earlier decades. Like its Czech counterpart, which also began in 1948, the Hungarian afforestation programme is a mirror of both epochal changes and centuries of continuity.⁴ By the 1940s, knowledge about the role of forests in keeping soils fertile had been developing for several centuries. Accepted technologies for soil conservation with trees were greatly influenced by the fight against desertification in remote or tropical areas of empires.⁵

Afforestation is not the same as reforestation of clear-cut areas or areas that are barren and threatened by soil degradation. In contemporary understanding, afforestation was chiefly about creating forest strips that would protect agricultural land and pastures by preventing damage from wind and flooding. Land unsuitable for agriculture could also be converted into forests. The third main objective of afforestation was to beautify roadsides and urban areas and to protect roads and railways from snow.⁶ Among the most typical examples of afforestation in the 1950s were forest belts planted on agricultural land to stop soil erosion, change microclimatic conditions, and thus increase agricultural production. Riverbanks were also a primary area of afforestation. It is important to note that afforestation also required seed collection and management, nurseries, and techniques to develop these

2 The decree was published in the Appendix of Babos, *Erdőtelepítés és fásítás*.

3 Kirby and Watkins, eds., *Europe's Changing Woods and Forests*.

4 Olšáková and Štanzel, "Kafkaesque Paradigms," 63–67.

5 Fressoz and Locher, *Chaos in the Heavens*, 22–33; Warde, *The Invention of Sustainability*, 228–64; Grewe and Hölzl, "Forestry in Germany."

6 Babos, *Erdőtelepítés és fásítás*, 146.



Fig. 5.1. Marian Reismann's photo titled "Tree planting at Zsámbok", 1953. Courtesy of the Savaria Museum of Szombathely.

nurseries. The conditions under which certain species of trees were grown had to be assessed, and it was necessary to find out which varieties of certain species and mixtures of trees were best suited to the conditions. As a result of afforestation, it was also possible to produce timber for industrial use.

An anonymous author writing about the Soviet model in the *Erdészeti Lapok*, the most important channel of communication within the profession, pointed out the following in early 1949:

The emphasis is not on afforesting 6,000,000 hectares of land, but on the fact that Soviet economics is looking at the question in its context. The Soviet economists were able to establish that in order to increase agricultural production significantly, huge areas of land must first of all be afforested, partly in the form of windbreaks and partly in the form

of protective forest belts. These break up the drying power of the winds, prevent the migration of sand and, after a certain period of time, change the local soil conditions, thus providing the opportunity to create a much more productive agricultural crop. But this plan can only be implemented in a socialist state. The need for afforestation may arise elsewhere outside the Soviet Union, but it is safe to say that afforestation on this scale will not take place anywhere because the political, social, professional, and technical preconditions are not in place.⁷

A poster of Stalin pondering over the afforestation map of the area around the Caspian Sea in the Soviet Union conveys the message that afforestation was of strategic importance to the Soviet Union. Stalin's grand plan to transform nature emerged in the autumn of 1948, barely a year after the post-World War II famine that indirectly caused the deaths of hundreds of thousands of people in the Soviet Union.⁸ It was precisely in the wake of this famine that the task of creating heavy dams and battalions of trees rose high on the agenda of the political machine, viewed as the correct means of securing victory over natural disasters. A series of slides published in 1951 shows that the Hungarian Forestry Research Institute closely followed the ideas behind the afforestation of the Soviet Union.⁹ The slides reflect that its creators believed that tree belts were needed to contain sand and prevent desertification, in Hungary, too.

Our task of reforestation is the same as that of the Soviet Union. Only in size our plain is dwarfed by the great Russian plain [...]. The broader main protective belts must be planted perpendicular to the direction of the prevailing winds, in such a position that their protective effect extends over the whole area of our Plain. According to Géza Lány's suggestion, we should establish our protective forests in the northeastern and eastern parts of the country in the form of circular arcs bending from east to north up to about the height of Szolnok, and in the parts of the country to the west and south of this point in the form of circular arcs bending from north to west.¹⁰

7 *Az Erdő*, 1 January 1949.

8 Ganson, *The Soviet Famine of 1946–47*; Wheatcroft, "The Soviet Famine of 1946–47"; Főcze, "Két malomkő között."

9 "Erdőgazdaságunk," OSA Virtuális Diamúzeum <http://dia.osaarchivum.org/public/index.php?fs=2501&search=2&page=> (accessed 1 March 2025).

10 Luncz, "Országfásítás tervgazdaságunkban."

The historiography of the destruction of forests in this period brings us to the dilemma that characterises the environmental history of the Cold War period in general: while some research concludes that environmental destruction took place under the influence of the Soviet Union, there are many historians who also deduce other processes from the archival records of the period. Focusing on the post–World War II East German state, Arvid Nelson concludes that the reparations imposed by the Soviet Union between 1945 and 1954 resulted in a level of deforestation far worse than that which occurred during Nazi industrialisation and World War II.¹¹ Other researchers, such as Paul Josephson and Doubravka Olšáková, have also concluded that the decade caused immense environmental damage in the Soviet Union and in the Central European countries subjected to its ideas. In their work, Mária Palasik and Zsuzsanna Borvendég presented the afforestation programme as an example of late Stalinist Lysenkoism, or pseudo-scientific willfulness, which was exceptional in that, unlike other projects, it was successful.¹² At the same time, Stephen Brain, Andy Bruno, Elena Kochetkova, Kate Brown, and Viktor Pál posit that many of the large investments that were considered specifically communist were variants of responses that were widespread globally in the era. Indeed, these researchers argue that in the Soviet Union, scientists and engineers formulated a complex environmental management strategy, and that some of the transformations may have been more sustainable than solutions in the “Western” market economies.¹³

Sovietisation, and the so-called Great Stalin Plan for Nature Transformation within it, had a special significance for the environmental history and environmental disasters of the whole of Eurasia.¹⁴ One of the main focuses of the intervention of the Great Stalin Plan was to meet the water needs of Central Asian cotton production. The destruction of the Aral Sea is a famous example of large-scale river diversion.¹⁵ Another primary goal of the Great Stalin Plan was to utilise the rivers for energy production, with the fertile Fergana Valley, situated at the intersection of Kyrgyz, Tajik, and

11 Nelson, *Cold War Ecology*, 42–43.

12 Palasik and Borvendég, *Vadhajtások*, 53–54; Josephson, “War on Nature as Part of the Cold War”; Olšáková, “Environmental History, East European Societies, and Totalitarian Regimes”; Josephson, “The Stalin Plan for the Transformation of Nature, and the East European Experience.”

13 Kochetkova, *The Green Power of Socialism*; Brain, *Song of the Forest*; Brown, *Dispatches from Dystopia*, 97–133; Bruno, *The Nature of Soviet Power*, 73–77; Bruno and Pál, “Socialist Environmental Holism in the Soviet Arctic and the Plains of Hungary.”

14 Cheng Li and Yanjun Liu show that impact of the Great Stalin Plan to Transform Nature and its afforestation element was also fundamental for forestry in China in the same period. Cheng Li and Yanjun Liu, “Selling Forestry Revolution.”

15 Peterson, *Pipe Dreams*.

Uzbek territories, serving as the central location. The rationale for the power plants was reconsidered in the years following Stalin's death, and they were subsequently built to serve as the energy source for the construction of aluminium plants.¹⁶ The key point to take from the environmental history of Central Asia during Stalinism is that afforestation was part of the core of Great Stalin Plan.

Contemporary journals in Hungary, Czechoslovakia, and Romania occasionally reported on land-use changes in Central Asia. News stories reported on all the aspects of rapid transformation in Uzbekistan and Tajikistan, and they presented these as examples of how people living in Soviet-dominated regions were benefiting. For example, in late 1952, Zoltán Vécsey, one of the founding editors of the popular Hungarian scientific weekly *Élet és Tudomány* (*Life and Science*), spoke enthusiastically about the successful transformation of the Fergana Valley into a fully-fledged oasis, preserved by various tree species, including poplars:

Out of a world of cracked tachyres and stunted wormy bushes, the desert has become the largest man-made oasis the Soviet Union has ever known. Trees cast shadows. Along the arches, long rows of poplars, yews and mulberry trees. Along the roads are crowns of oak trees. The fields are covered with cotton fields and lucerne fields.¹⁷

News reports on botanical gardens in Central Asia highlighted the link between afforestation and forestry research and experimentation, and the vast area covered by experiments with particular tree species. In April 1951, the Hungarian daily newspaper of Romania published an article by a certain V. Ulianovskaya on science in Soviet Tajikistan, in which the author stated:

In the capital of the Republic of Tajikistan there is a botanical garden of the Academy of Sciences. In it you can find the southern palm, the rubber plant, as well as the northern plants. The institute's second botanical garden is located in the Gorno-Vadakhshanskaya province, 2,320 metres above sea level. This garden produces peaches, strawberries, apples, pears, tobacco, and other fruits. Thousands of seedlings from the garden are given to the surrounding kolkhozes. The people of the Pamir Hills appreciate

16 Roberts, "A Controversial Dam in Stalinist Central Asia"; Roberts and Féaux de la Croix, "Big Dam Biographies in Central Asia."

17 Vécsey, "Fergana, a boldogság völgye," 820.



Fig 5.2. Propaganda poster by Viktor Govorkov (1949) showing Stalin with his shelterbelt plan. The text reads “и засуху победим” [= “We’ll conquer drought, too”]. Source: Wikimedia.

and lovingly tend their botanical garden. More than eight kilometres of irrigation canals have been dug to water the garden.¹⁸

We learn that the city of Khorog had been home to a botanical garden since the 1940s, a key experimental station for the cultivation of fruit varieties and fast-growing trees used in Tajikistan’s agriculture during the Soviet period. Given the water scarcity in the region, the town of Khorog, at the confluence of glacier-fed rivers, was strategically located along the route across the Pamirs, a key point in the establishment of Russian control over Central Asia and the maintenance of Soviet power. The truly unique forestry research and practices in the Soviet Union were far from being limited to pseudo-scientific “Lysenkoist” principles.¹⁹ Moreover, although the concept of the Iron Curtain refers primarily to division, in post–World War II Hungary new ideas about biological sustainability, land use, and landscapes were

¹⁸ *Romániai Magyar Szó*, 1951. április 18. 4.

¹⁹ Besides the published papers of the 1931 Second Congress of the History of Science and Technology edited by Bukharin (*Science at the Crossroads*), and Helena Sheehan’s classic work *Marxism and the Philosophy of Science: A Critical History*, see also Wall, “The Case for Folk Valuation of Plant Genetic Resources” and Schönfelder, “The Good, the Bad and the Pochoved”.

embedded in global patterns. The Fourth World Forestry Congress, held in Dehradun, India, in 1954, put afforestation on its agenda in the context of food security and rural–urban relations. The FAO Director-General, in his address to the Congress, declared:

Windbreaks and tree shelters are no longer of negligible importance; on the contrary, research on their value and sometimes grandiose field projects are increasingly coming to the fore; but the farmer, even the smallholder, is increasingly interested in having a small afforestation on his farm, even a single tree or a single border that can generate a useful income in a few years.²⁰

Afforestation was directly intended to serve agricultural production and, through the involvement of local inhabitants, the history of afforestation is also part of rural history. The period between 1945 and 1957 was intense and dramatic in rural areas. In Hungary, from the spring of 1945 onwards, forest administration was both the scene and the imprint of the sudden top-down revolution in land tenure and of the tensions and professional insecurity that inevitably followed at the local level, as well as the effects of Stalinist engineering programmes and de-Stalinisation. The post-1945 history of land reform and collectivisation was one of the most violent aspects of the state socialist system, often leaving a lasting generational trauma in the countries where collectivisation was implemented.²¹ As with the interwar land reforms in Romania and Czechoslovakia, the Hungarian example was more about undermining the financial base of targeted elite groups than about creating a viable agricultural economy.²² In the field of forestry, changes came early, while fighting was still raging in many areas of the Transdanubian region. The government decree of mid-March 1945 on the abolition of large estates decreed that forest areas exceeding twenty cadastral acres should be nationalised and then transferred to state forestry enterprises. These changes were made within a decade of the compromise between forest owners and the state, which was reached between the two world wars, and only two generations after the dramatic transformation of the legal framework for land use in the 1860s, when serf and landlord status was abolished. Thus, forestry related

20 "Messages to the Fourth World Forestry Congress" *Unasylyva* 8, no. 3 (1954): <http://www.fao.org/docrep/x5372e/x5372e04.htm#TopOfPage> (last accessed 1 March 2025).

21 Sorin and Bundeanca, *Countryside and Communism in Eastern Europe*; Iordachi and Bauerkämper, eds., *The Collectivization of Agriculture in Communist Eastern Europe*; Lampland, *The Value of Labor*, 203–22.

22 Csikós, Horváth, and Kovács, eds., *A vidék szovjetizálása*, 59–90.

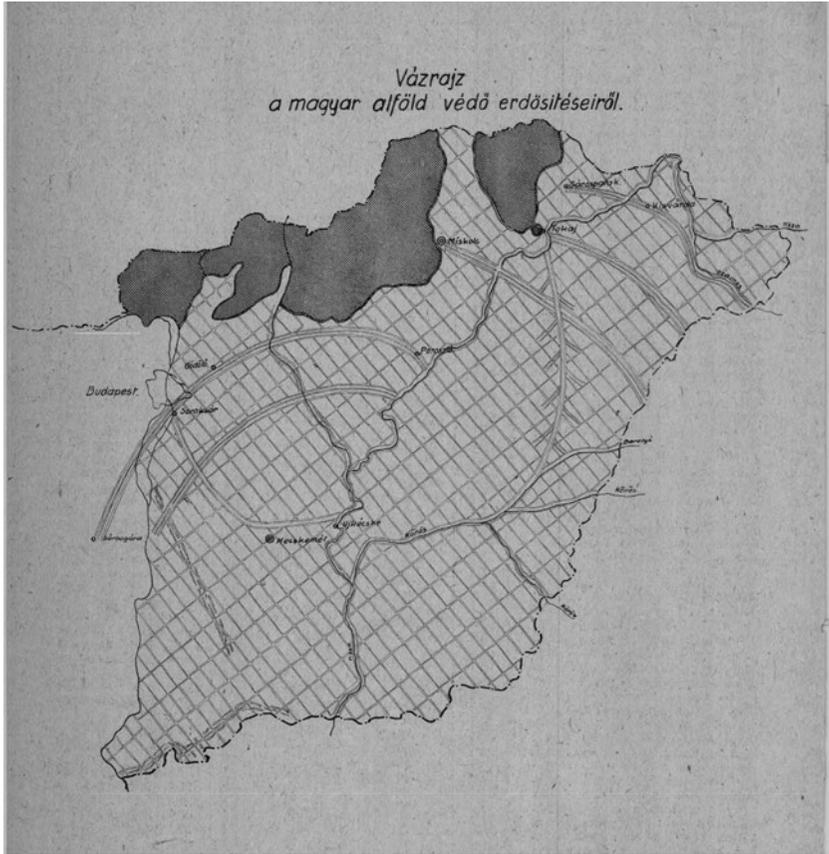


Fig. 5.3. Géza Lány's plan for the afforestation of the Great Plains of Hungary. Source: Géza Lány: Alföldfásításunk a szocializmus perspektívájában. *Erdőgazdaság*, 2 (23–24): 12.

provisions introduced cannot be bypassed or skipped over in the discussion of land consolidation.

The Afforestation Programme as Politics

The afforestation programme was at the intersection of pre- and post-World War II forestry programmes and the political demands of Stalinism in the late 1940s and early 1950s. Publications in favour of large-scale afforestation argued that the pre-war political and economic systems were mainly responsible for the depletion of forests, as capitalism saw forests as a source of income rather than as an integral part of the growth of productive capacity. However, textbooks and studies explaining the forest economy of the new

regime have regularly noted that in the period between the two world wars, several personalities devoted decades of research to afforestation.²³ The proposals that appeared in 1948 and 1949 included the idea that formal powers to establish state committees and administrative posts to coordinate afforestation should be derived from the 1935 Law on Forests and Nature Conservation (Law No. 4 of 1935). János Magyar's model for the implementation of a country-wide afforestation scheme also drew on studies from several decades earlier.²⁴

Emphasising the role of the work competition between individuals in Stalinism, Martha Lampland suggests, based on a letter sent to Ferenc Erdei, that the competition to collect oak acorn was the first mass movement in Hungary to be called into being by the Rákosi regime.²⁵ By the autumn of 1949, the afforestation plan was a programme targeting all citizens, with particular emphasis on the participation of the younger generations. Amidst the institutional anarchy surrounding the demand for growth in numbers, Rákosi's one-party state derived its own authority from just such programmes advertising the schism with the "old" system, as well as a spectacular Sovietisation. As a result, the afforestation programme was an arena for competition between different organisations that wished to become politically relevant actors in mobilising citizens. The propaganda activities and language may seem exaggerated to the point of being grotesque.²⁶ For contemporaries, participation in or exclusion from these activities could mean the difference between deprivation and a career. Due to the political importance of propaganda, participation in campaigning was a possible means of advancing in the administrative hierarchy and gaining political credit and reputation. Consequently, personal and institutional conflicts arose. Although the OEE presented itself as the main protagonist of the afforestation campaign in 1949, it nevertheless found opponents within the administration.

Erdészeti Lapok announced in 1949 that "on Sunday, 16 October, Forest Day, young people – boys and girls – marched in exemplary order to the forest of Iron Gate, where they launched the five-year national afforestation plan by planting a forest section named after Mátyás Rákosi."²⁷ The headmaster

23 *A mezőgazdasági szakképzés tankönyvei.*

24 MNL OL K- XIX-A-16-a 8710/1949.

25 Lampland, *The Value of Labor*, 293 n. 32. The reference that Lampland gives is MNL OL 76. 54/56. 35. 1949.aug.3.

26 For the contemporary propaganda language, see Tóth, "A falun teljes erővel dúl az osztályharc, s még nem dőlt el, hogy ki-kit győz le."

27 "Az esztergomi erdésziskola jubileumi ünnepeiei," *Erdészeti Lapok* 85, no. 11 (1949): 264–65.

of the school, Ödön Kollwenz, a distinguished member of OEE, sent an official letter to the members informing them of the upcoming celebrations for the twenty-fifth anniversary of the school. In fact, the OEE had been active in promoting tree planting even before the official launch event in September 1949, and it had been its main supporter.²⁸ The association asked journalists to help build a network of local councils willing to participate in the afforestation campaign. It was thanks to this effort that the topic was also featured in a radio programme “Singing Forest Walks” produced by renowned radio journalist Zoltán Kilián.²⁹ Sándor Jabláczy, the secretary of the association, sent letters to the nationalised publishing companies, asking them for advertisements and additional copies of the brochure on tree planting.³⁰ As a result of such networking efforts, the association established direct contact with local councils that expressed an early interest in afforestation.

In August 1949, the OEE organised its first post–World War II assembly meeting in Szeged, the largest city in the southern Great Plains of Hungary, where it publicly expressed its intention to play a major role in the coordination and planning of afforestation.³¹ In his opening speech, Lajos Haracsi, the president of the association, pointed out that the association’s most important task was to carry out propaganda work among the country’s workers and farmers and to make them understand that everyone would benefit from increasing the area covered by wood from 12 to 20 per cent. Haracsi posited that this was to the advantage of those involved in agriculture, as afforestation would offer protection against aridity and protect arable land, while it was also in the interest of industries as timber was a valuable material. Moreover, the population at large would benefit as forests were also places for leisure and recreation. In the second part of his speech, Haracsi discussed the tree species to be planted in the Great Plain. Reflecting on Vilyams’s theory of geographical zones, he stressed that the Great Plains were part of a larger geographical area stretching as far as eastern Ukraine and Russia, dominated by oak, maple, birch, and ash.³²

The presidency of the association drew up various plans for the creation of a social movement for afforestation. In a long circular letter, the association asked the local councils for contacts as part of the plan to set

28 WKK OEE, vol. 1/1949, no. 236/1949.

29 WKK OEE, vol. 1/1949, no. 172/1949.

30 WKK OEE, vol. 1/1949, no. 201/1949.

31 The original plan was to hold the conference in Szilvásvár, as the local forestry department had volunteered to host it, but as a symbolic gesture, it was moved to Szeged to emphasise the importance of afforestation in the Great Plain and the association’s awareness of this issue.

32 “A szegedi ülés jegyzőkönyve, 1949. augusztus 15,” WKK OEE, vol. 2 (1949).

up a distance learning network based on a model known from Finland. The plan also included a series of lectures and a tree-planting campaign, organised jointly with craft cooperatives, along the road from Budapest to Szeged that would have been called the “Kossuth Avenue.”³³ In May 1949, the association published an appeal in *Erdészeti Lapok*:

Even in the smallest village there should be a man appointed to look after the forest. In the coming years, trees should be planted wherever possible. For this we need everyone’s help according to their abilities. In the spring, *Pravda*, the largest Soviet daily newspaper, spent weeks discussing and debating the position of Russian biology. By publishing our five-year plan, we want everyone to contribute, discuss, and work on its implementation, because the forest belongs to the community and is everyone’s business. Please, if you have any ideas and will to create or protect even a single tree, please contact the National Forestry Association.³⁴

However, very few high-ranking officials from state institutions attended the meeting in Szeged. This demonstrated resistance to the OEE’s targeted role. In a letter dated late September 1949, a member of the association noted: “As far as afforestation in the country is concerned, it is a pity that the mass organisations have been squeezed out of this field, although it was promising and we had high hopes for it.”³⁵ Indeed, the government set up a Committee for the Afforestation of the Country, which formally approved the plans drawn up on the basis of the models received from the Soviet Union and set up a network to mobilise local society from October 1949.³⁶

In May 1949, Sándor Jablánczy, secretary of the association, argued that a separate forestry department was needed within the Ministry of Agriculture to ensure that forestry had sufficient autonomy. As Jablánczy wrote:

we need to create a forestry department that has adequate autonomy. Only such a forestry department can work in a spirit of principled cooperation with the people’s democracy. The forestry officer forced to work within the narrow framework of a department of plant cultivation, a field where he is a stranger, is a solution fraught with bureaucratic difficulties.³⁷

33 See the programme of the working group on social implications, WKK OEE, vol. 2 (1949).

34 Osváth, “Erdőgazdaságunk a tervgazdálkodás útján,” 110.

35 WKK OEE, vol. 2 (1949), no. 268/1949.

36 Benedek, “Makgyűjtés-országfásítás,” 217–18.

37 Jablánczy, “A magyar erdészeti közigazgatás szerepe,” 111.



Fig. 5.4. Peeling logs of poplar trees at a state forestry enterprise in Pest County, 1970.

Source: Fortepan/István Péterffy.

István Osváth, a major figure in the forestry administration of the time, held views contrary to those of the association on the place of afforestation, mobilisation, and knowledge within the system.³⁸ In December 1949, Osváth echoed Rákosi's stance on experts, arguing that mentioning professional expertise frequently indicated a lack of political vision.³⁹ The disagreement took a more dramatic form two years later. At that time, István Molnár, head of the Forestry Centre, informed the association that the Ministry of Agriculture had banned the publication of *Erdészeti Lapok*. In the final issue, the editors were forced to issue an apology for a sentence in an article written by Vilmos Farkas, a forester and university professor. The article in question contained a conclusion that argued against the involvement of non-professionals in forestry administration.⁴⁰

Under these circumstances, the government's decision to launch a campaign called the Week of Trees was an opportunity for the OEE to prove its usefulness to the economy and the regime. The Week of Trees was held in March or April each year between 1952 and 1957. The effort was a national

³⁸ Osváth was appointed Deputy Director of the Forest Centre on 1 April 1949. At about the same time, Osváth became a member of the editorial board of *Erdészeti Lapok*, which was brought under closer control.

³⁹ Osváth, "A Szovjetunió erdőgazdálkodása és a magyar erdőgazdasági fejlődés összefüggései."

⁴⁰ Madas, "Gondolatok az Erdészeti Lapok jubileumán."

campaign based on a series of local events. It was a particular advantage for OEE that by 1953 it had an extensive network of some fifty regional offices throughout the country. These local groups reported their activities to the association's headquarters. The reports from 1955 survived in greater numbers. In that year the events of the week mostly coincided with the "Month of Soviet-Hungarian Friendship," for which extra commitments were expected from the scientific associations. In mid-April 1955, the Praesidium of the National Forestry Association instructed the local groups to report in detail so that the Association's staff could prepare a long list of achievements. The local groups reporting emphasised their cooperation with organisations interested in afforestation, including grazing committees, the Dolgozó Ifjúság Szövetsége (DISZ) (Working Youth Association), and pioneers.⁴¹

The representative of the local group in Kecskemét, in the Great Plain, reported that:

I have sent to each of the councils of the towns and villages belonging to the Agricultural Enterprise various propaganda posters, poems, and technical leaflets on the importance of tree planting, with the aim of presenting them to the population and local youth and mass organisations at celebrations to be held in accordance with the instructions on the organisation of the Week of Trees. I have also informed the councils that they can obtain the necessary tree planting material for the festive tree planting ceremony on request from the nearest forestry office. We personally contacted the county Pioneer and DISZ organisations and the Head of the Department of Education to ensure the success of the celebrations.⁴²

Others, such as Recsk in the Mátra Mountains in northern Hungary, focused on local impact, reporting how many plants of each species were planted in different places and which villages were active. In their own publication, *Erdőmester*, the regional forestry director complained that afforestation was generally seen by staff as a marginal or ancillary task, rather than the most important one. Nevertheless, some awards were given out to local residents in 1955.⁴³ One of the large forestry departments in Transdanubia,

41 In the 1950s, grazing committees were bodies responsible for coordinating the use of pastures. They were made up of representatives of local government, DÉFOSZ (National Federation of Working Peasants and Agrarian Workers), and various types of cooperatives.

42 WKK OEE, "Fák Hete," vol. 3 (1955).

43 *Erdőmester*, 1955.

the Zala County, emphasised the ceremonial aspects: “In Palin, director Jenő Schneider gave a lecture to the pioneers and teachers of Palin on the love of the forest and its importance for the national economy, and presented the pioneer team with a 500 HUF cash prize and a commemorative medal for the successful reforestation in 1954.”⁴⁴

In summary, in the course of the campaign for the afforestation of the country, the organisations, leaders, and members of the forestry sector tried to understand and define for themselves the type of activism the regime expected of them, and to prove their utility to the Sovietising regime by fulfilling these expectations. The afforestation of the country was an opportunity for professional organisations and youth organisations to demonstrate their ability to work together to meet the goals of the economic plan. At the same time, the 1950s afforestation campaign was also a field of conflict between the accepted ideas of governance. While some high-ranking officials expected everyone to endorse the idea that the ubiquitous rule of the Magyar Dolgozók Pártja (Hungarian Workers’ Party) could override all expertise and professional competence, some foresters interpreted loyalty and a culture of criticism more boldly, demanding predictability and a degree of autonomy. In their view, this still meant they accepted that the political sphere had become Sovietised and that the situation would not change.

Stalinisation and De-Stalinisation in One Country

The forestry decrees issued by the Council of Ministers in Hungary in the spring of 1954 reflect the search for a balance between the professional-scientific consensus on the benefits and limitations of afforestation and the welfare changes in rural policy that Prime Minister Imre Nagy considered to be the cornerstone of his policy. The background to the decrees was one of the most dramatic events of the twentieth century: the political shift and power struggle that unfolded in the Soviet Union, and consequently in the countries of the Eastern Bloc, following the death of Joseph Stalin. In Hungary, as is well known, the first step towards de-Stalinisation was taken with the appointment of Imre Nagy as Prime Minister in June 1953, and subsequently with the de-emphasis on large-scale industrial investment, the abolition of internment camps, and the rethinking of the regime’s role in the agrarian and rural society. For years, the forced organisation of agricultural cooperatives was removed from the list of political priorities, and

44 WKK OEE, “Fák Hete,” vol. 3 (1955).



Fig. 5.5. Young lady sitting on top of the signboard of village Mátraháza, near the peak Kékes-tető in the Mátra Hills (Heves 1955, Source: Fortepan/Mihály Szent-tamási).

the objectives of forestry were also given a new perspective. De-Stalinisation did not mean the end of afforestation. Rather, it changed the rural context of the campaigns.

The first related decree of the Council of Ministers (1028/1954), signed by Imre Nagy, aimed to increase the role of mass political organisations and local administrations in the afforestation programme. However, the May decrees gave forestry a new framework. The second decree (1038/1954), officially entitled “Improving the supply of timber,” was mainly a reflection of the shortage of firewood: diseased trees classified as rotten in the interior of municipalities could be felled, and firewood was to be provided to the owner in place of felled wood deemed to be of industrial quality. Decree 1040/1954 of the Council of Ministers, much cited in professional circles, outlined the forestry programme over several pages, while Decree 1089/1954 gave the forestry administration relative autonomy within the Ministry of

Agriculture by establishing the National Directorate General of Forestry.⁴⁵ The former decree (dated 27 May 1954), “On the measures necessary for the development of forestry production,” stated that there was a link between the unpopularity of afforestation and the violent transformation of ownership: the rapid takeover of public and communal forests by the state had significantly reduced the supply of wood to the population. The severe restrictions on the use of wood in non-state-owned forests, groves, and tree plantations, and the introduction of compulsory wood supply made the population disinterested in afforestation. In addition, the decree made concessions to the rural population in the area of the so-called secondary uses (i.e., grazing and gathering), and also provided for an increase in the professionalism of felling, a reduction in plantation style planting, and demanded a rapid increase of the area of black locust and poplar stands. The text as a whole expressed a desire for normality and did not introduce any drastic new measures compared with established forestry practices. It was an attempt to change the dictatorial daily routine, which was heading towards anarchy, into a predictable and professional one, both in the forestry sector and in the relationship between the forestry administration and the rural population.

Trees and the Afforestation Programme as Local Experience

The interaction between scientific and traditional forms of knowledge often creates a tension. Classic works on the nature of modernity, such as James C. Scott’s *Seeing Like a State* and Timothy Mitchell’s *The Rule of Experts*, found that resistance to the programmes of modernisation carried out by centralised government were a global phenomenon. Hungary was no exception. By looking closely at a micro-region, Gábor Máté shows how local knowledge, dramatic and violent power shifts, and modernisation programmes created new local-rural landscapes in the second half of the twentieth century.⁴⁶

Forestry activities interfered with the villagers’ agricultural activities. There were centuries-old conflicts, as well as those that emerged with the

45 The nomenclature of ministerial departments responsible for forestry had changed a number of times since 1946. The Hungarian State-Owned Forestry Enterprises (Magyar Állami Erdőgazdasági Üzemek – MÁLLERD) was a department of the Ministry of Agriculture between 1946 and 1949. It was formally responsible for managing state owned forests and for supervising the activities of regional forestry enterprises. . From 1952 to 1953 forestry issues were under the Ministry of State Enterprises and Forests (Állami Gazdaságok és Erdők Minisztériuma – ÁGEM).

46 Máté, “Táj és kollektivizálás”; Máté, “A vízhasználat átalakulása az államosítás és a tévesztés következtében.”



Fig. 5.6. Logging timber at Csévharaszt in Pest County, 1972. Source: Fortepan/István Péterffy.

new authoritarian regime. The right to graze livestock in areas designated as forest has been in question since at least the second half of the nineteenth century. According to a cartoon in the May 1955 issue of the *Erdőmester*, the most prominent issue related to agriculture was illegal grazing in the forest. According to the cartoon's narrative, despite the damage caused by cattle in the forest, foresters ignored the presence of livestock because they were profiting from it. In fact, several foresters were given land near the forests around Parád in Heves County. The unit had about eighty hectares of arable land scattered around the villages, which the foresters managed.

Forest management also limited villagers' access to acorns on which to feed their pigs. After the afforestation campaign, oak was scarce, so nurseries had to be expanded in all regional forestry areas. Another long-standing problem was the issue of wild animals becoming pests that were damaging to agricultural produce. In 1949, a disagreement arose between the villagers of Parád and the county foresters over the extent of the damage caused by wild boars and the need to hunt them. Wood theft and poaching did not appear to be a major problem, despite the general state of scarcity. At the same time, tensions emerged around the issue of private property. Until the nationalisation of forests was completed, foresters had the power to grant or refuse permission for individual farmers to cut down trees in their forest parcels. During 1949 and 1950, the decision was often negative, on the grounds that too much wood had been taken in previous years. In addition,

the State Forestry Department stamped wood belonging to the village community if it was still in the forest.⁴⁷ The most important development that worried the local farmers was the property deed drawn up in May 1949, which listed all the interested parties and the location of their forest property. The document foreshadowed a further change in ownership, namely the loss of private property.

The way local communities reacted to the changing politics of forest land tenure in 1953 reflects both the experience of oppression in the Stalinist (Rákosi) era in Hungary and the perception of the liberation from Stalinism. The folder entitled “Property Rights Issues” (1945–1954), preserved in the archives of the Forestry Department of the Ministry of Agriculture, indicates that Nagy’s appointment and the fall of Mátyás Rákosi were news when some of the village communities applied for the restitution of the forest land and pastures they had “voluntarily” offered. By the summer of 1953, the forestry administration was uncertain about the validity of the “offers” made during the Rákosi era. For example, in the case of the inhabitants of a village in the north of the country, near the industrial town of Ózd, the ministry’s official suggested to the forestry administration that it would be better not to accept the offer: “In view of the government programme, we will examine whether the offer of the village, which owns the forest, is still timely.”⁴⁸

In August 1953, in another village, also in the north of Hungary, the community of owners asked for their forest back, claiming that it had been badly managed since the state had taken it over and that they had not received the timber they were owed.⁴⁹ Another case from a village in southwestern Zala County is noteworthy because it shows how rural residents internalised scientific ideas of land management and used this knowledge and the language of Sovietisation to oppose the intervention of the state forestry, which they perceived as damaging. In Kerkafalva, the local residents demanded their former pasture be returned to them because the cooperative had allegedly mismanaged it by cutting down the trees in the pasture. In their complaint, they explicitly stated that, in their view, mismanagement meant that the cooperative ignored the principles of the soil classification and management system developed by

47 MNL HML XXIX, 1521, 3. doboz, no. 331/1949.

48 MNL OL XIX-K-1-gg 184. doboz, Folder no. 61, “(Birtokügyek) Serényifalva ügye, Földbirtokrendezési főosztály az Erdészeti Főosztálynak 1953. VII. 15.”

49 MNL OL XIX-K-1-gg 184. doboz Folder no. 61, “(Birtokügyek) Diósjenői birtokosok közösségének ügye a Földművelésügyi Minisztérium Erdészeti Főosztályához, 1953. VIII. 14.”

one of the Soviet Union's most prominent scientists, Vasily R. Vilyams.⁵⁰ The Kerkafalva case was filed a few weeks before Stalin's death, indicating the willingness to resist interference in agricultural practices. The case also underlines the importance of local history, as Kerkafalva was a tiny community with a particular identity and socio-cultural history: the village was composed of descendants of former nobles rather than former serfs, and was a Protestant community in a Catholic region. Their experience in defending their autonomy may have contributed to their willingness to write a complaint. Moreover, Mark Pittaway amply demonstrated that Zala County was one of the most difficult areas for the Hungarian Workers' Party. This was for several reasons, including recent negative experiences with the Red Army and the consequent resistance to the political aims and propaganda activities of the pro-Soviet Union parties, and the tradition of autonomous trade unions in the oil mining areas.⁵¹ The case of Kerkafalva also brings us to another conjuncture of the early 1950s: individuals or groups tried to protect trees or protested against cutting trees outside forests, when they considered such acts harmful and illegal. It is worth highlighting at least two types of cases: those where complaints about trees show that communities used the concepts of sabotage and black-marketeering to remove certain individuals from positions of power, and those where the purpose of the complaints was actually limited to the protection of a particular tree or tree line.

In addition to issues related to tree felling and property rights, one of the main forms of encounter between the forestry and the surrounding villages was the work done for the forestry ever since the forest administration was established in the nineteenth century. This relationship reflects the changing boundaries of peasant life and the changing political and economic environment of the 1950s. The area around Parád in the northern part of Heves County is an important area in terms of forestry. In the nineteenth century, it was one of the estates of the Károlyi family, a prominent aristocratic family. After the emigration of the "red count" Mihály Károlyi and his family, the estate became state property, and for most of the interwar period it was managed by the Ministry of Culture and Religious Affairs, Education Fund Management. Thus, the forest management in the area is particularly well documented and can be traced back to the 1880s. In 1949, the forests of Parád belonged to a nationalised regional forestry enterprise

50 MNL OL XIX-K-1-gg 184. doboz Folder no. 61, "(Birtokügyek) 1953. I. 22."

51 Pittaway, *The Workers' State*, 52–84.



Fig. 5.7. The cover photo of the 25 May 1954 issue of the journal *Erdőgazdaság*. Female workers on the way to a tree nursery.

based in nearby Reस्क (a place also known for the nearby forced labour/ internment camp during the Rákosi regime).

Labour force was hired from nearby villages for felling, moving, and loading timber. The low pay of workers was a source of constant friction between the forestry management and village authorities in the 1950s. Some

cart owners were unwilling to transport timber and others refused to work as loggers.⁵² In 1950, a team leader of the forestry directorate reported that the felling of a black locust tree stand near the village of Szajla had to be suspended because even the best woodcutter, János Maruzs, was not earning enough so that he decided to become a bus driver.⁵³ The forestry enterprise tried to compensate for low wages by regulating and improving the living conditions of workers who had to stay away from home for long periods. Occasional distributions of bacon and wheat are reported, especially in 1950 and 1951, the years when rations had to be reintroduced.⁵⁴

Women's work in nurseries was a common form of temporary employment, with contracts usually for one year.⁵⁵ According to a list drawn up in March 1951, thirteen of the fourteen people employed in the nursery were young women between the ages of sixteen and twenty-two.⁵⁶ In 1952, the person who achieved the best result in tree planting was Anna Oravec from Szajla. She is said to have planted 210 pine trees, which was 172 per cent of the norm. When fewer plants were left, the leader who was shamed for failure on the same sites was also a woman.⁵⁷ The management of the Recsk forestry department spoke of the afforestation campaign launched in 1949 as a representative investment. They were accustomed to planting new trees in areas that have been felled and also in places that foresters deemed to be failing or unsustainable (degraded) forest stands. However, they had not previously been responsible for extending the afforestation of grassland or planting trees along roadsides. These latter activities became part of the annual plan from 1949 onwards. Of all the regular forestry tasks in the Parád area, nursery work was the easiest to combine with the new afforestation efforts. The nursery work process was regulated in great detail in 1950 and consisted of dozens of steps. This list was published the same year that the brigade system was introduced.⁵⁸

From the late 1940s onwards, the work process and the idea of creating work units (brigades), as well as the long descriptions of their organisational structure and tasks, were driven by political considerations: everything had to correspond to the way the regime wanted to represent its place in the world. Responsible leaders were expected to combine the "struggle

52 MNL HML XXIX, 1521, 3. doboz, no.15/1951.

53 MNL HML XXIX, 1531, 2. doboz, no. 116/1950.

54 MNL HML XXIX, 1521, 2. doboz, nos. 304/ 1950, 455/1950, 356/1950, 31/1950.

55 MNL HML XXIX, 1531, 2. doboz, contract dated 20 January 1951, and no. 468/1952.

56 MNL HML XXIX, 1521, 2. doboz, nos. 8/1950, 10/1950, and 603 568/1952.

57 *Erdőmester*, April 1955.

58 MNL HML XXIX, 1531, 2. doboz, no. 157/1951.

for world peace” with responsibility for meeting the targets. Reports that were not “politically conscious” were openly criticised at official workers’ meetings.⁵⁹ In addition, the party organisations, the police, and the forestry administration cooperated in the selection of cadres. Those who wanted to make a career had to produce their own handwritten resumes, proving that their families were poor and that they had not owned land under the old regime. The questionnaires assessed candidates on the basis of statements about their activities in trade unions or party and other mass organisations, their membership of cooperatives, their foreign travels, and their military service.⁶⁰

Conclusion

Since the Hungarian afforestation programme of the 1950s was initiated under Soviet influence, the history of the Hungarian afforestation programme is an appropriate way to explore the interplay between the nature of the political system, and the history of the environment.

Stalinist Sovietisation and, later, de-Stalinisation influenced the mode in which the Hungarian afforestation programme impacted forestry and rural society. In the context of the Rákosi regime, the national afforestation programme was one of the occasions when the National Forestry Association, which had been in existence for almost ninety years, could prove its worth. The association’s leadership tried to take advantage of this opportunity and took the initiative in both the development of professional implementation and social mobilisation. However, this was no guarantee that it would avoid confrontation with the party leadership.

Through the awarding of prizes to outstanding local tree-growers and a typically socialist work competition, as well as festive events, afforestation became a locally relevant event. At the same time, a number of processes associated with afforestation, like the management of tree nurseries, the care and fencing of young trees, as well as the clearing of degraded forest areas and forestry work related to transport were not novelties for villagers. These tasks provided work opportunities for some villagers, especially women and day labourers, but they also put pressure on scarce equipment and working hours. The relationship was strained by the compulsory, or only apparently

59 MNL HML XXIX, 1521. Minutes of meeting dated 20 September 1950, 12 March 1952, 9 August 1950, and 1 September 1950.

60 MNL HML XXIX, 1521, 3. doboz, no. 399/1949; XXIX, 1531, 2. doboz, no. 4032/1950.



Fig. 5.8. Village inhabitants riding bicycle to work near Kunszentmiklós, 1949 Source: Fortepan/Márton Ernő Kovács.

voluntary, offers of land in the wake of land distribution and the constant possibility of new demands from the state forestry.

The aim of the Imre Nagy programme, which took the form of a decree in the forestry sector in the spring of 1954, was to maintain and popularise the afforestation campaign. Imre Nagy and the government saw afforestation as an important investment for the country's long-term food supply and soil health. At the same time, the new regulatory framework was intended to loosen the grip of the control activities present in the forestry administration.

In terms of the long-term environmental impact and sustainability of afforestation, the interaction between soil conditions and the development of certain tree species (especially black locust and poplar on sandy and saline sites) had been the subject of forestry research throughout the state socialist period and into the twenty-first century. In the 2000s it became scientifically accepted that the main means of soil conservation in the Great Plain was not the reforestation of the area, but the partial restoration of grassland and wetlands. At the same time, forest strips, which are the main purpose and result of afforestation, have proved to be a sustainable landscape element, serving the purpose of soil conservation but also providing shelter for wild animals.

In the final analysis, the positive outcomes of the afforestation programme carried out between 1945 and 1957 were not chance events. Rather, its success

was due to the continuity of knowledge accumulated, and detailed plans prepared for implementation before and after 1945. The hindrance was not the scale of the activities or the goals but political anarchy arising from fear and the need to adjust to the demands of non-expert cadres.

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6. Human Lives and Tree Species in Experiments: The Case of István Bánó's Work with Pine Species

Abstract: By foregrounding the interaction between tree species, researchers, and the institutional context of their research, this chapter aims to elucidate the roles of science and actors within scientific research that have been at play during the Great Acceleration phase of the Anthropocene. Presenting researchers of the post–World War II decades as obedient soldiers of either Stalinist violence or modernist ideology is an unrealistic picture. The pine project shows that one of the specificities of environmental history in state socialist Hungary was the way research sites emerged in conversation with personal biography, limitations on freedom, the regime's political goals, and transnational knowledge production.

Keywords: Scots pine, forestry research, Lysenkoism, international contacts, disciplinary measures, aesthetics

Looking at the landscape in many hilly regions of Hungary, such as the ones near the villages of Szajla and Bükkszék and the town of Pétervására in Heves County, one is left in little doubt that the state socialist regime had some success in increasing the area covered by pine species. Although Scots pine, or *Pinus silvestris*, is not indigenous, it dominates many slopes in Northern Hungary.¹ Articles published in contemporary forestry journals in the late 1950s make it clear that the change was already visible in that period: “We were particularly impressed by the large-scale afforestation of the coppice forests, which include a wide range of coniferous species,

¹ While it is widespread in Hungary, *Pinus silvestris* is one of the species under serious threat from increasing aridity and heatwaves. Thus, the stands made up of this species do not have a long or bright future.



Fig. 6.1. Conifer cones of *Pinus sylvestris* at the botanical garden of Kámon. Photo by Edina Tóth, August 6, 2025.

such as larch, Scots pine and other pine species. [...] The results we have seen are telling evidence both of the correct choice of species to plant and of the correctness of the method used to convert low-value forests into coniferous forests.”²

2 Dimitroff, “Magyarországi tapasztalatok,” 427.

An archival document that discusses planting so-called “Szombathely-Cikota 2” type Scots pine seeds in the vicinity of the above-mentioned northern villages creates a link between the landscape of Northern Hungary and research carried out in the western part of Hungary, specifically, locations close to the city of Szombathely.³ *Cikota* is a place name referring to a pine plantation near the village of Acsád, which has close links to forestry research carried out in the botanical garden of Kámon, in the outskirts of Szombathely.

This chapter investigates the background to the changes to the landscape in state socialist Hungary. By foregrounding the interaction between the tree species, the researchers, and the institutional context of their research, we can analyse this episode in order to understand the roles of science and actors at play in scientific research during the Great Acceleration phase of the Anthropocene.

When one talks about biological research in the Socialist Bloc in the 1950s, it is impossible to escape the influence of Trofim Denisovich Lysenko, the iconic figure of Stalinist science. Lysenko carried out his first research experiments with tomato and sugar beet in the early 1920s. Characteristically for a regime that silenced everything that did not suit current Stalinist policies, he went on to develop a pattern of biological thought based on socialist ideals of behaviour, such as self-sacrifice, cooperation, and the belief that acquired characteristics are inherited. For these thoughts to be convincing, Lysenko had to deny the existence of genes and he did so. As he wrote in a volume celebrating Stalin as an inspiration for science:

Stalin’s doctrine of gradual, hidden, imperceptible changes leading to rapid, radical qualitative changes enabled Soviet biologists to prove the fact of qualitative changes in plants, the transformation of one species into another. Scientists and agronomists have discovered certain rye seeds, true rye seeds, in wheat plants that are apparently no different from ordinary wheat plants.⁴

As mentioned in the previous chapter, there is a growing body of evidence to support the argument that Nikolay Vavilov was not the only researcher who diverted from Lysenko’s line of thinking, and that Soviet science produced lasting paradigms in fields such as soil science, forestry, and landscape management. Regarding Hungary, Viktor Pál emphasises how Hungarian

3 MNL HML, XXIX 1521. 2. doboz 234/1950.

4 T. D. Lysenko, “Sztálin és a micsurini agrobiológia,” 386.

researchers built on a holistic view of the environment and society and developed it further. Pál also points to the influence of Western-style environmental protection, starting in the early 1970s.⁵ Below, I focus on individual researchers who designed and imagined the landscape that tree species would constitute and seek to situate them within the institutional framework of their research in state socialist Hungary, while bearing in mind implications for the Eastern Bloc. As a result, we will get a closer view of the Great Acceleration of resource exploitation, and its specificities in the socialist world. This approach will also highlight the role of biological features of tree species in historical analysis.

Institutionalised forestry research was not a novelty in Hungary at the end of World War II, having been part of the pool of state-run research institutes since 1897. A prominent forester of the pre-World War II era, Zoltán Mihályi (Máyer), was key to the continuity of forestry research specialising in pine species between the interwar and post-war periods. His doctoral dissertation, “The question of origin in the case of the Scots pine plantations of present-day Hungary, from the point of view of seed testing,” was published in 1936 in *Erdészeti kísérletek*, the journal of the research institute then based in the border town of Sopron. As an additional aspect of continuity, we may note that researchers of the Scientific Forestry Research Institute (Erdészeti Tudományos Intézet, ERTI) were graduates of the Forestry College of Sopron, an institution with centuries of tradition that hosted renowned professors.

ERTI had many tasks, including mapping forest stands and developing machines and techniques for felling and transporting timber. One of its most salient tasks was to facilitate afforestation, including seed and seedling production. In 1954, ERTI submitted a research agenda outlining activities for the upcoming planning period and somewhat beyond.⁶ The appearance of pine species in ERTI’s research programme in 1954 shows that the species were part of mainstream science policy, since afforestation was seen as crucial for protecting agricultural produce and for producing raw material for the timber industry. The research agenda of 1954 built on existing expertise, experience, and research undertaken at the research centres; its novel aspect was proposing to scale up ongoing work in a comprehensive and sizeable effort. Eventually, ERTI’s agenda would create new links between economy and landscape. Moreover, elements of this agenda, including decades of afforestation-related research and

5 Pál, “Towards Socialist Environmentalism?”

6 MNL OL XXVI-K-3 42. doboz

publications, contributed to improvements in the quality of governance of the area of forestry activities.

Although most of what follows is focused on the activities of István Bánó, he was not alone in researching pine in this period. For much of the 1950s and 1960s, László Szőnyi, an expert on the recultivation of mining areas who had many years of teaching experience, was head of the silvicultural department at ERTI. From the late 1960s, he became a leading figure in provenance studies. István Bánó and the even younger József Retkes were experts in dendrology, botany, and plant breeding, but their activities took place at different locations. Vilmos Mátyás was based in the seed laboratories at Ráckeve, Bánó was based in Kámon, and Retkes worked for him as a research assistant until 1970; meanwhile, Szőnyi worked at the ERTI headquarters, often visiting locations in the Kiskunság region and the Mátra Hills. By the time the agenda of Scots pine research was submitted in 1954, Bánó had been managing Kámon's botanical garden for nearly a decade. Bánó was a native of Vas County and he graduated as a forester in 1943, at the age of twenty-six; in the immediate post-war period, he was an employee of Szombathely's forestry.⁷ In 1953, ERTI took over the garden at Kámon because it still had a valuable pine collection, despite the destruction wrought by the war.⁸

Bánó's practices are embodied by his "work diary" that he kept from 1953 until at least 1973. The existence of such a diary indicates a mindset centred on time management, efficiency, and output when it came to human work. These notebooks contain records for every working day and record activities along with the number of hours spent on them. If he had to travel, Bánó underlined the destination with red or blue marker.⁹ From the archive of Bánó's papers, we can discern both the aesthetic and the engineering aspects of the nature–culture relationship that were present in his activities.

From an aesthetic point of view, Bánó expressed affection for the trees he worked with in his co-authored book about the Kámon botanical garden.¹⁰ In his other private letters, he often juxtaposed family issues, for example, seeing his children grow up, with the development of plants during spring. Acknowledgment of natural beauty has been part of environmental thinking since at least the Romantic era. However, the change that Bánó referred to

7 Szendi, *Kámoni*.

8 Szendi, *Kámoni*.

9 For the importance of work diaries as historical sources for the period, see Both, "Egódokumentumok és biográfia," 132–33.

10 Bánó and Retkes, *A kámoni*.



Fig. 6.2. Wooden bust of István Bánó at the entrance of the botanical garden of Kámon. Photo by Edina Tóth, August 6, 2025.

in the mid-1960s is a sign of a new shift: the arrival of the human ecology approach.¹¹ In his own view, Bánó was not only a forest scientist but also a horticulturalist. This professional identity implied not only botanical

¹¹ The breakthrough events of human ecology include the Sixth International Forestry Congress in Madrid, 1966, the Stockholm Declaration of 1972, and the Seventh International Forestry Congress in Buenos Aires, 1973.

expertise but an affective attachment to plants. He shared this sentiment with Eusebiu Stefan, a Romanian horticulturalist and forester who visited Bánó and Kámon on a number of occasions in 1967 and 1968.¹² Stefan asked for plants and seedlings for the purposes of building up a dendrological park at Gurahont in Arad County that could serve as a training and research centre for forestry students.¹³ Eusebiu Stefan's postcards to Bánó often depicted flowers and, given Bánó's passion for stamps, it was not a coincidence that the postcards also bore stamps depicting mountain landscapes, snakes, or hunting dogs.

Remarkably, one of Bánó's lasting legacies also relates to the way he sought to express his political identity, this time through the botanical garden at Kámon. In the spring of 1957, he planted fifty-six shrubs in a central part of the garden to commemorate the revolution of autumn 1956. In fact, this garden was the first monument to the revolution. For ERTI, Lány's forced retirement in late October 1956 brought turmoil in the spring of 1957. The new interim director, Gyula Partos, started work in April. In his diaries, Bánó interpreted the revolution of 1956 as a time of upheaval. On 23 October, he spent the working day at Sárvár. The next day he wrote only a few words in his diary: "24 October. The world has collapsed – writing a paper – 5 November I began to reorder the office. Monthly summary." He added: "And the rest of the year has passed amidst much worry and thinking."¹⁴

Bánó was a forestry engineer by training and this also shows in his work diary. The way he recorded and managed his work and the way he projected the function of the seed orchard suggests that he believed that the role of science was to produce better suited landscapes, and that it had the capacity to do so. The kind of landscape change that afforestation aimed to achieve, and the programme for increasing the area of pine forests, expressed a specific commodification of national space: producing valuable seeds, increasing the agricultural output, and thereby the volume of timber that forestry enterprises gained, processed, and sold in various regions of the country. Bánó believed that the key to realising his pine research projects was to establish a spatial order of trees that he called *plantage* (which he

12 ERTI f: Letters exchanged with Eusebiu Stefan.

13 By this point, Gurahont had been known for its timber-related industry for more than half a century. In 1902, it was the venue of the annual general assembly of the National Forestry Association of Hungary, where visitors were introduced to the latest timber transportation technology. The dendrological park still serves as a research centre attached to the University of Oradea.

14 ERTI h, 5 November 1956.

sometimes spelt phonetically in Hungarian as “plantázs”). A plantage may be large enough to be called a planted forest; however, there are many other types of tree plantations, so plantage is better translated as *seed orchard*.¹⁵ A pine seed orchard is the outcome of a series of steps undertaken with the aim of selecting and propagating trees with the best inherited qualities, and it requires setting up research spaces as a network of sites reflecting the process. The rationale behind developing such a network tells us much about what planned landscape change and contemporary modernity meant for researchers and how they locally adopted, internalised, or transformed the notions of modernity. The seed orchard that Bánó had in mind was designed to induce and accelerate natural processes to help realise landscapes that were closer to ideal economic conditions, raising productivity in agriculture and industry. Although Bánó did not invent seed orchard technology for pine seeds, alongside his colleagues he fine-tuned the process to the needs of the Hungarian economy.

In the 1960s, Bánó attributed the idea of establishing the seed orchard in Hungary to Imre Babos and to the demands expressed by István Tömpe, head of the forestry authority in 1951. However, Bánó was also aware that the idea was much older and originally came from Carl Syrach-Larsen, a forester working in Denmark. In his publications, he referred to related work published in Sweden in the late 1940s.¹⁶ In 1954, Bánó argued that only a seed orchard allowed for the propagation of selected so-called *plus* trees (also called elite trees) which in turn facilitated the multiplication of the seeds produced, the identification of ecotypes, and the improvement of seed quality. Bánó added that the seed orchard would serve as the venue for future hybridisation experiments as well, since it would include all relevant species and the technical conditions for hybridisation.¹⁷ From 1954, then, Bánó actually worked on three pine projects: one preparing the large-scale production of large quantities of high-quality pine seeds, another conducting experiments with exotic tree species, and a third experimenting with hybrids.¹⁸

Bánó's published papers and diary entries highlight the specific topography of his work: this was the general vicinity of Szombathely and another town, Sárvár. Bánó's initial experiments started in the outskirts of Sárvár at a site known as Bajti, twenty-five kilometres to the east of Szombathely. Sárvár

15 See Evans, *Planted Forests*; Mátyás, “Erdészeti,” 142–48.

16 Bánó, “Conifer Seed Orchards.”

17 Bánó, “Egy erdeifenyő anyafa.”

18 MNL OL XXVI-K-3 42. doboz



Fig 6.3. Lines of *pinus sylvestris* and *picea abies* at the clone archives section of the botanical garden of Kámon. Photo by Edina Tóth, August 6, 2025.

had been the location of a botanical garden since the nineteenth century and was one of the research stations of ERTI. Bajti was the location of well-known poplar experiments;¹⁹ it was also the site where researchers experimented with the offshoots of selected plus trees and assembled a collection, or clone

19 Koltay and Kopecky, "Óshonos nyáraink."

archive. The location of the actual seed-producing plantation was uncertain. At first, it was established near the village of Salköveskút, but it was later abandoned and relocated to Cikota, an uninhabited site near the village of Acsád. Moreover, Bánó travelled frequently to various other locations to collect branches for grafting and to gather seeds in forested locations such as Szentpéterfa (Petrovo Selo, in Croatian) and Pornóapáti. (These villages are few kilometres away from the border with Austria.)²⁰ The pine project, along with programmes related to poplar, transformed Bajti and Cikota from barely known toponyms to important research landscapes. It also redrew regional maps of botany research and lent national and, as we shall see, transnational importance to regional varieties and local work methods.

Pine seed experiments induced landscape change in other regions and locations of Hungary, too. Bánó often supervised park development in the Transdanubia region. He was worried about the deteriorating state of some of these parks, and his role was indispensable in planning and maintaining those near Kőszeg and the more distant Agostyán (near the town of Tata). Thanks to Bánó's personal network, seedlings grown at the Kámon arboretum spread across the country and beyond, contributing to the newly established botanical gardens in Eger (Northern Hungary) and Arad County (in Romania). The letters that Bánó exchanged with personnel at other research centres of afforestation, such as Mátrafüred and Kunadacs, show that afforestation projects aiming to stop soil erosion or turn sandy areas into soil also drew on the pine seed orchard project.²¹

A Research Project within the Eastern Bloc: Career, Power and Genetics

Changes of science policy across the Socialist Bloc were among the factors influencing forestry policy in Hungary. Transnational aspects of the pine project situate ERTI's work in the attempts of the "Socialist Bloc" to catch up with the "West" in terms of technology.²² Moreover, the history of the pine

20 Bánó mentioned the closeness of the border in letters exchanged with his former colleague throughout the 1950s and 1960s. He provided addresses of those who managed to settle in Austria and also mentioned a colleague who attempted to go to Austria but was intercepted and arrested in early 1956. See Letter to Jenő Kovácsévics 1962 and Letter to Jenő Kovácsévics, 30 January 1956.

21 ERTI c, 7 July 1956.

22 On the dilemma of catching up, see Kalmár, "Korporatív, szovjet, hybrid," 39–40; Mitrovits, "Lehetséges volt-e legyőzni a kapitalizmust?," 109–36.

project highlights windows of opportunities brought about by certain major Cold War events. At these junctures, a focus on the transnational shows how the emergence of spaces of research intertwined with personal biographies.

ERTI's research agenda of 1954 did not name international partners. Despite a history of pre-war international involvement in Hungarian forestry, ERTI's collaboration with international organisations was made difficult by the fact that between February 1949 and May 1950 Hungary had left even those UN agencies of which it had been part (including WHO, UNESCO, and FAO), despite not yet being a UN member state.²³ This step was formally part of the Soviet allies' protest against the UN's policy towards China.²⁴ In this period, Eastern Bloc countries signed a number of bilateral agreements that facilitated cooperation in areas such as medicine, veterinary medicine, and food security.²⁵ However, international contacts in forestry were few in the early 1950s. The International Union of Forestry Research Organizations (IUFRO) is not a UN agency, though it is the major international forestry organisation outside of world congresses; however, Hungary's IUFRO membership was uncertain, too. Hungary and other Soviet-dominated countries returned to UN agencies in 1955. The majority of the UN member states, however, did not see Kádár's administration as a sovereign government between 1957 and 1962 – the year that Hungary eventually disappeared from the agenda of the Security Council.

ERTI researchers began to report their experiences at study trips and conferences organised abroad after 1954. The fact that ERTI started building up its international relations in 1955–56 was not an isolated phenomenon or a unique venture by its management: October 1956 was a landmark in scientific policies in the Eastern Bloc. This was not due to the revolution in Hungary; rather, it may be attributed to the Berlin Accord, signed on 5 October 1956 – two weeks before the uprisings – as a result of a meeting whose explicit goal was to intensify scientific cooperation among Comecon countries and to include Albania, North Korea, Vietnam, and China in this network. This accord created few institutions; a coordination conference would be held every two years and a chief coordinator for research problems was added to the agenda. Comecon and Berlin Accord structures integrated slowly. In September 1962

23 The Hungarian Forestry Research Institute was active within IUFRO from the late nineteenth century; Hungary had been set to host its congress in 1914 before World War I intervened. Budapest was eventually the venue of the Second International Forestry Congress and the Ninth IUFRO Congress in 1936.

24 For background on membership issues in UN agencies, see Chayes and Chayes, *The New Sovereignty*, 75–78.

25 Burton, Mark, and Marung, "Development," 103–6.

a permanent working group for scientific and technical cooperation was set up within the framework of Comecon's Agricultural Permanent Committee.²⁶ The reports that each researcher at ERTI had to submit on the question of what constituted state-of-the-art research reflected a new impetus for international cooperation that was on the rise in the early 1960s.²⁷ At the height of Cold War tensions in 1961, Béla Keresztesi participated in the Thirteenth IUFRO Congress in Vienna and established several contacts.²⁸

Indeed, in the early 1960s, ERTI started establishing more intensive contacts with international organisations and foreign partners, which may be seen as a sign of a new era and of success during *détente*. In this period Bánó went to Graupa, near Dresden, for a specialist conference on seed-producing plantations. The plantation system was still new technology at the time and Bánó felt his work at Kámon was state of the art.²⁹ Bánó had reason to feel confident about his achievements since between 1961 and 1963, he and his co-authors had published two important articles in the journal of ERTI that summarised their results from the seed orchard.³⁰

The GDR was not only another people's democracy: its institutions, such as the former Royal Saxon Academy of Forestry at Tharandt (by then integrated into the University of Dresden) and the Royal Prussian Higher Forestry College at Eberswalde, were historic centres of European forestry research, while the research station at the German Academy of Agricultural Sciences at Graupa was a new initiative. Bánó was anxious before his departure, not because of the international situation, but rather due to his insufficient knowledge of German.³¹ The contacts that Bánó (and Szőnyi) eventually made at the event proved lasting. From 1961 onwards, we find a number of letters arriving from East German and Finnish foresters, and some from Norway and Sweden as well. Most importantly, some of the leading figures of GDR's forestry institutions recognised the importance of Bánó's results and innovations. Hans Schönbach, the leading seed researcher at the Institut für Forstpflanzenzüchtung of the Academy of Agricultural Sciences in Graupa visited ERTI in 1962 and again in 1964.

These deepening contacts and more frequent visits proved to be a turning point for both the pine seed orchard project and Bánó's career. The outcome of the visit was a joint research project devised to compare the influence of

26 MNL OL XIX-K-9-1160. doboz

27 MNL OL XXVI-K-3 20. doboz, A világszínvonalról készült jelentés.

28 MNL OL XXVI-K-3, 12. doboz Jelentések nemzetközi eseményekről

29 Bánó, "Plantázis napok," 423–24.

30 Bánó and Marjai, "Erdeifenyő oltványok."

31 ERTI e, 23 August 1963.



Fig. 6.4. A row of *Pinus sylvestris* at the clone archives section of the botanical garden of Kámon. Photo by Edina Tóth, August 6, 2025.

different ecological factors on yields. In order to do this, the same experiment was set up in Hungary and the GDR. The experiment extended to Douglas fir and larch besides Scots and spruce clones. Records used by ERTI researchers today show that in the same period, the *Pinus nigra* clone archives at Kisunymom reached a new level of transnational cooperation. Clones arrived from various locations in the Mediterranean region, such as

Cyprus, France, Spain, and Italy.³² Arguably, the success of ERTI's early pine projects culminated in early September 1966, when Section 22 of IUFRO, pertaining to tree plant biology, held a seminar in Hungary. The event involved thirty-five foresters from various European countries: Belgium, Bulgaria, Czechoslovakia, Finland, FRG, GDR, Ireland, the Netherlands, Norway, Poland, Romania, Sweden, and the UK. Twelve of the thirty-six papers dealt with the Scots pine seed orchards in Hungary, mainly those in the vicinity of Sárvár and Szombathely. Bánó briefly introduced the Hungarian pine seed orchards and the German-Hungarian Scots pine seed orchard experiment that began at Kámon and Kisunyom, another location south of Szombathely, in 1965.

Paradoxically, international successes went hand in hand with Bánó's major personal career crisis. The crisis started at the same time as Schönbach's visit to Kámon. As director of ERTI, Keresztesi initiated disciplinary action against Bánó for reasons the Bánó papers leave unclear and of which ERTI's archives at the Hungarian National Archives hold no document. In a letter to Jenő Kovácsévics, Bánó mentioned that there were issues with catering during the professor's visit. At any rate, Bánó could not overcome his resentment for many years to come, and considered leaving ERTI. He was serious about his plan since he asked for Aladár Halász's help in finding a suitable new position.³³ Based on the few letters they exchanged, Halász and Bánó appear to have been family friends. Halász held a high ranking position in the late 1960s, as deputy director of the Forestry Directorate at the Ministry of Agriculture. Bánó expressed his criticism of Keresztesi's leadership in comments in the margins of articles published in ERTI's official newsletter and in similar handwritten remarks written on the pages of the regional daily, *Vas Népe* – voicing dissent for his own sake and perhaps for posterity. Although his disillusionment lingered on for years, Bánó retired from ERTI only in 1975.

It is probably these circumstances that left Bánó rather pessimistic about the future of Kámon in general by late 1971. As his retirement grew near, he was mainly concerned with how to take projects further. On the surface, Bánó's concerns about the future of Kámon and his seed orchard project were unfounded, since in 1970 Keresztesi and Szőnyi submitted another research agenda that explicitly focused on work related to pine species. The agenda asked for a budget allowance to extend the project into a special programme, the so-called pine target programme (*fenyő célprogram*).³⁴ The ministry

32 This information is courtesy of László Nagy, ERTI, Sárvár.

33 ERTI j: Letters exchanged with Aladár Halász.

34 MNL OL XIX-K-9-I, 111. doboz



Fig. 6.5. Trunk of a *Pinus sylvestris* tree at the clone archives of the botanical garden of Kámon.
Photo by Edina Tóth, August 6, 2025.

endorsed this programme requesting only minor alterations. In the same year, the timber industrial complex at Szombathely became fully operational. This development and technological change made it possible to diversify the pine timber cycle and to introduce new materials for Hungarian industry.

Yet Bánó's retirement was soon followed by rapid and adverse changes. On the one hand, global economic crises brought budget problems in Hungary

and much of contemporary Europe. Large investments became scarcer and international cooperation waned towards the end of 1970s. Moreover, the biology of Scots pine also proved more complicated than expected. During the 1970s and 1980s, provenance studies confirmed that climatic background – mainly temperature – influence the characteristics of Scots pine the most.³⁵ It turned out that trees originating from the Dnipro plains in Ukraine do best in Hungary, which meant that the seed exchange with German areas would have been only a second-best option, even if the research programme with Graupa had continued.

Conclusion

The experiments with species and varieties of pine reflected several features of the state socialist era: as such, they brought together the long-term political goals of the regime, financial constraints arising from Hungary's global position, Comecon policies of catching up, personal goals, interpersonal conflicts, and affinities fuelled by new social concerns, transnational science, and international organisations.

Scientific research on and researchers working with pine seeds were key elements of the programme of afforestation throughout the 1950s and 1960s. The duration of the pine project coincided and interacted with several major changes at the national, regional, and global level. From the late 1950s onwards, the key objective of Soviet-led Comecon was to catch up with the West. The 1960s and 1970s also saw the perception of forests and ecology more generally changing at a global level. These two global developments interacted with the economic reforms of the mid-1960s in Hungary that were to re-establish economic and social sustainability and increase growth rates.

In Bánó's and his colleagues' work at Kámon, crisis periods such as 1961 were times in which transnational contacts intensified. The period between October 1956 and Spring 1957 also exemplified how multiple chronologies worked: mass emigration of forestry students and professors with Kálmán Roller, former ERTI director in focus, a tense meeting of directors that resulted in Lány's fall a few months later, coincided with the Berlin accords that led to transnational scientific exchange within Comecon. The later history of the seed orchard was interwoven with the economic crisis of the late 1970s and 1980s.

35 Máttyás, "Erdészeti nemesítés és erdészeti genetika," 145.

At the centre of pine research conducted by István Bánó and his colleagues was the pine seed-producing seed orchard. Their choices and personal networks were not solely dependent on the will of the regime. The seed orchard came into being and kept changing as a result of researchers' aims to increase the efficiency of seed production so that the national landscape as a whole would become more conducive to agricultural and industrial productivity. However, Bánó did not simply imagine his work as a way of "transforming nature," as it was known in Lysenkoist-Stalinist propaganda on agricultural research. Bánó and his colleagues aimed to produce knowledge about plant biology rather than change plants radically. Moreover, Bánó internalised a view that placed emphasis on human–plant interactions, and he defined humanity as a species that is able to appreciate this relationship. In his work routine, Bánó applied the methods of scientific management; however, his affective attachment to plants and other people informed his choices.

The pine project had a tangled history, influenced by some areas that were not part of the geography of the Iron Curtain: Scandinavia, international organisations, and the GDR as the main partner in place of the Soviet Union. ERTI profited from the pine seed orchard project through international reputation and collaboration, and visits by leading scientists from the GDR resulted in a contract that came under Comecon cooperation, thus increasing the project's budget and political scope.

It is unrealistic to present researchers from the post-war decades either as obedient soldiers of Stalinist violence or as advocates of modernist ideology. Bánó was resentful of the humiliation he suffered when the ERTI's director initiated disciplinary procedures against him. His handwritten notes show that he did not accept internal structures and hierarchies without resentment. Processes taking place across borders and international cooperation between institutions shaped Bánó's experiences at Kámon and with the pine project, and vice versa. Indeed, the pine project shows that one of the specificities of environmental history in state socialist Hungary was the way research sites emerged in conversation with personal biography, limitations on freedom, the political goals of the regime, and transnational knowledge production.

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Conclusions

In February 2024 the official body of geological sciences, the Subcommittee on Quaternary Stratigraphy, rejected the proposition that the Earth has entered the Anthropocene epoch; nevertheless, it is one of the tasks of historians to address the history of activities that can potentially trigger an anthropogenic catastrophe, and to increase the visibility of alternative modes of economic production that actually existed, conflicts that unfolded, and decisions that were enforced. Forestry as a subject is particularly promising for those who address the Anthropocene as part of history. Environmental concerns and the large-scale commodification of forests, often with state participation, have gone hand-in-hand since at least the mid-eighteenth century. Moreover, forestry as a field of knowledge encompasses the study of dendrology, the science and mathematics of mensuration, and economic ideas about profit, value, and labour. The development of the standardised methodology of forestry has a global history within which both the experience of colonialism and the Cold War were important epochs.

Modern history offers many examples of commodification, wherein living beings such as trees are converted into property and cease to be part of the “common pastures.” This process entails the exclusion, deprivation, and subjugation of human communities and results in social, economic, and legal inequalities and economic practices; as such, rights associated with private property are not in fact “natural” and determined, but rather, historically conditioned.

One of the influential theses that William Cronon has put to environmental historians holds that commodification is one of the most common and significant forms of hybridity. It shows how various “natural” substances and organisms – some of which do not exist without human activity – become measurable, unitised, and standardised commodities whose supply chain penetrates deep into the “natural” environment. The framework imposed by a management plan creates a so-called “second nature”, as such plans are based on an ideal age and species distribution, a planting and harvesting regime that facilitates geometric calculations, the installation of transport infrastructure, and the rigid separation of livestock and forestry. Thus, landscape and species assemblage that may appear natural and sustainable may in fact be significantly more fragile than previous forms of management. The theory and calculation of the value of forests, the ways in which timber is sold, and the infrastructure for moving timber interact with the concept of the national economy and result in the commodification of forest areas.

The dramatic acceleration of changes in agrarian and property law in the mid-nineteenth century played a decisive role in forestry regulation, and thus in the development of the forest's second nature. The advent of forest laws was linked to the changes in land tenure structures of the nineteenth and twentieth centuries through cadastral surveys and enclosure. Hence, categories of property rights that had also been established with regard to forests at the turn of the twentieth century, and their state-imposed application, were key elements of the emergence of the Anthropocene and should be viewed through this critical lens.

Looking into the large-scale mapping and managing of forests in the past leads to the historicisation of knowledge and its various forms, including the links between traditional or indigenous ideas and practices and scientific understanding or canonised professional operations. Thus, one of the tasks of this book has been to explain the interplay between the vision, the politics, and the actual unfolding of forestry practices that, when applied at a large enough scale, become factors that change landscapes in unprecedented ways. This book is an attempt to bring archival evidence into fruitful conversation with theoretical insights about the historical role and reality of capitalism, the state, commons, and individual horizons. Moreover, this approach incorporates the impact of nationalism and the state socialist regime into the history of the Anthropocene in Central Europe.

Having placed the history of the professionalisation of forestry in conversation with the history of capitalism, exploring the history of nationalism and of state socialism brings us closer to understanding the planetary change we are living through. This is mainly due to the many ways in which the commodification of forest areas interacted with the history of professionalisation. The study of forestry in the nineteenth and twentieth centuries overlaps with the history of Hungary's expansion of its ecological footprint, the overuse of resources, environmental degradation, and scientists' attempts to adapt.

In global terms, the late-nineteenth-century Kingdom of Hungary and independent Hungary occupied a semi-peripheral position all the way through the period of the Great Acceleration and during the Cold War became part of the so-called Socialist Bloc dominated by the Soviet Union. In this, Hungary's position resembles that of many other countries globally. Chapters 2, 3, and 4 above have demonstrated how the history of commodification was related to political ecology from the mid-nineteenth century up until World War II. The bureaucracy of the central state was indispensable for bringing about a regime of property rights in the Hungarian part of the Habsburg Empire after the Compromise of 1867. Professional groups implemented and supervised the standardisation of goods and authorised practices of land

use. The nationalist political elite integrated professional associations and institutions into its overarching programmes, including the effort to shape the national language. The example of forestry in Hungary highlighted the links between the institutionalisation of professional advocacy and the concept of a national economy. This book treats nation-building and nationalism, as well as the question of autonomy within empires, as key aspects of the history of resource exploitation. Paying attention to the figure of the forester also highlights how local-level events fed back into decisions sanctioned at higher levels of administration. The responses to the critical shortages and enemy presence during World War I were fundamental in changing the relationship between state and society. This translated first into a new and drastic paradigm shift in the forestry policies of the early 1920s and then into a new compromise between state and private owners. The new programmes that emerged during this period also produced new subalterns or put existing subordinate groups under increasing pressure.

The analysis in this book also makes it clear that scientific research and knowledge production in the context of forestry were closely linked to both commodification and politics, a link that became even stronger in 1945. The history of afforestation in post-World War I Hungary shows clearly how this link had an impact on everyday life. Moreover, this is also an optimal case for studying the relationship between decades-long continuities of practice and sudden political changes. In the countries that were defeated in World War I, such as Hungary, the idea of reconstruction was linked to the need for state-planned and organised landscape transformation, and the most important stage of that process was the afforestation of lowland areas, along with building irrigation canals. The most influential Hungarian engineers and thinkers of the time believed that the lack of water caused by the lack of forests in the Great Plain created a bottleneck for development across the whole country. While the inter-war programme of afforestation of the Great Plain was set back considerably by the Great Depression in the early 1930s, it would be a mistake to conclude it was insignificant. In the late 1940s, a more ambitious afforestation programme was launched. Although contemporary propaganda stressed the gap between Rákosi's regime and the preceding one, the afforestation campaign relied on experiments that began in the second half of the 1920s, on the expertise of foresters who managed the experiments, and on new varieties produced in research carried out before World War II.

Looking at the history of afforestation and related scientific forestry research opens up a new perspective on the circulation of foresters' experience, experiments with and ideas about trees at the Eurasian level. When researching the history of the specificities of afforestation and forestry

programmes of the post-1945 era, it is worth going beyond an assessment of how far foresters avoided Lysenkoist notions coming from the Soviet Union. Asking how large-scale anthropogenic interventions and research results actually impacted one another in Western Europe, Central Europe, Central Asia, and South Asia is likely to yield more insight into the specificities of the Anthropocene in each region. The history of plantation programmes in state socialist Hungary shows that even with decades of thorough research and a century of experience of species and engineering planning, the outcome of landscape transformation cannot be controlled. The outcome is influenced by factors that cannot be anticipated at the time of planning, be it politics, individual career goals, or even the behaviour of the species.

The main narrative strategy of the book was to present events taking place at the local level in relation to the specific way in which histories of commodification, nation-building, and knowledge production interacted in certain regions, with forests and trees as embodiments of this phenomenon. Landscape transformation represented an interface with the contemporary relationship between politics and society, as well as with actors articulating non-expert or traditional knowledge, typically at the local level.

To those who lived through them, the events that constituted the emergence of the Anthropocene epoch – be it the professionalisation of fields such as forestry, the legislation promoting the private management of land, or the introduction of new tree species – all seemed mainstream and quickly became the norm. Landscape change and environmental degradation were often drastic but they seemed to be steps on a road that would lead somewhere logical and better. One of the key lessons of the Anthropocene revealed by the history of forestry in Hungary is that so many common acts and schools of thought have major environmental consequences. Yet such risks are reduced if we see and imagine the world as if nature existed – to paraphrase Donald Hughes's classic definition of environmental history.¹ After all the stories we have heard, the takeaway from the numbers and tables in the registry book cited in the opening pages of this study is exactly what Hughes, Eva Horn, and Hannes Bergthaller also made explicit: if we want a less deadly Anthropocene, we need to care about the survival of the web of life instead of focusing our attention on our own species. The final conclusion is arguably a Central European concern, evoking the spirit of Lucian Boia: when it comes to canonised knowledge, we all need to doubt the frames of reference laid before us and search for alternatives before believing.

1 Hughes, *An Environmental History of the World*, 6–7.

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