

Dorin-Ioan RUS

**Forest Conservation Initiatives and Practices
among Transylvanian Saxons in the 18th Century**

The article focuses on the endeavors of Transylvanian Saxons to conserve forests in the 18th century. It will, thus, reveal whether this ethnic community promoted similar principles and ideas as in Western Europe on forest sustainability, as well as how the Austrian administration influenced them from 1699, when the province came under Hapsburg rule, to 1868, one year after the Compromise (Ausgleich) of 1867. However, the article will also discuss the ideas pertaining to forest conservation that circulated in the period leading up to the establishment of Hapsburg rule.

Throughout the 18th century, provincial and local authorities in Transylvania were intensely preoccupied with conserving forests through legal measures and practical endeavors. Mention should be made here of the legal requirement to reforest deforested areas, the introduction of stereotyped forest management, the banning of goats from young forests, the introduction of wood (timber) saving methods and techniques in the industry and among the population, the replacement of timber with fire-resistant building materials, measures to prevent and extinguish fires, and the introduction of fast-growing plants. All this points to the interests of the population and the authorities to save wood (timber) long before the 19th century.¹ The idea of forest conservation emerged in Transylvania in 1699.

State of the art

As of yet, no scholarly work on the Transylvanian Saxons' forest conservation initiatives and practices has been published. However, there is a considerable number of historical works on Saxon town and city forests –some of them published after 1945, others still in manuscript–written by forestry engineers. These works mainly focus on various aspects of the relationship between the urban communities and their respective forests.

1. Dorin-Ioan Rus, *Wald- und Ressourcenpolitik in Siebenbürgen des 18. Jahrhunderts* (Vienna, Paris, Brussels, London: Peter Lang, 2017), 129-131.

Mention should be made of Eduard Zamminer's study on the city of Braşov, *Geschichte des Waldwesens der königlichen freien Stadt Kronstadt* (Braşov, 1891), which can be viewed as a textbook on forestry in Transylvania as well. In 1929, the fifth volume of the *Economic History* of the Bârsa Region, edited by the historian Erich Jekelius, was published in Braşov. It includes, among others, historical studies on forestry in this Saxon region: the historian Otto Witting wrote "The History of Forestry" (*Die Geschichte der Forstwirtschaft*),² "The History of Hunting" (*Die Geschichte der Jagd*),³ and "The History of Fishing" (*Die Geschichte der Fischerei*);⁴ Heinrich Wachner wrote "The Secondary Uses of Forests" (*Die Nebennutzungen des Waldes*),⁵ Erich Jeckelius presented the "Collecting Economy among the Gypsies" (*Die Sammelwirtschaft der Zigeuner*)⁶ and Hans Kaufmes wrote "the History of Agriculture and Animal Husbandry" (*Die Geschichte der Landwirtschaft und Viehzucht*).⁷ As for Sibiu, one should point out Josef Binder's book *Geschichte des Waldwesens der Stadt Hermannstadt (Nagyszeben)*⁸ that mainly deals with contemporary issues pertaining to forests in the area. It is rather a collection of experiences from the author's professional career that spanned more than five decades (1852-1908). As regards Sighişoara, the most relevant contribution was brought by the forestry engineer Konrad Siegmund who collected all the information on the forests surrounding this town in a manuscript⁹ kept at the Transylvanian Archive in Gundelsheim. In addition, mention should be made of other works focusing on the attitudes of the citizens of Sighişoara

2. Otto Witting, "Die Geschichte der Forstwirtschaft," *Das Burzenland* 5, No. 1 (1929): 3-38.

3. Otto Witting, "Die Geschichte der Jagd," *Das Burzenland* 5, No. 1 (1929): 41-95.

4. Otto Witting, "Die Geschichte der Fischerei," *Das Burzenland* 5, No. 1 (1929): 107-25.

5. Heinrich Wachner, "Die Sammelwirtschaft," *Das Burzenland* 5, No. 1 (1929): 99-102.

6. Erich Jeckelius, "Die Sammelwirtschaft der Zigeuner," *Das Burzenland* 5, No. 1 (1929): 102-04.

7. Hans Kaufmes, "Die Geschichte der Landwirtschaft und Viehzucht," *Das Burzenland* 5, No. 1 (1929): 125-223.

8. Josef Binder, *Geschichte des Waldwesens der Stadt Hermannstadt* (Hermannstadt: Selbstverlag, 1909).

9. Siebenbürgisches Archiv Gundelsheim, A VIII 189, Konrad Siegmund, *Quellen zur Geschichte des Stadtwaldes von Schäßburg*, Manuscris, Bd. 2

toward the surrounding woodland over the centuries, such as Paul Abraham and Hans Brandsch,¹⁰ Karl Fabritius,¹¹ Adolf Höhr,¹² Grete Klaster-Ungureanu,¹³ Gustav Lander,¹⁴ Franz Lenz¹⁵ and Johann Teutsch.¹⁶ The collective work on forests in Bistrița-Năsăud County, coordinated by the high-school teacher Simion Lușan and entitled *Pădurile județului Bistrița-Năsăud din cele mai vechi timpuri și până astăzi* (Forests in Bistrița-Năsăud County from Ancient Times to the Present Day) and published in Bistrița in 2005, has an unscientific and nationalist character, neglects scholarly works and archival sources, and focuses very little on the Saxon town of Bistrița.

The analyzed authors describe the forest as an energy source, overlooking its social aspects and cultural role. One should, also, highlight their recognition of the connection between forests and agriculture, as well as the inclusion of the history of hunting and fishing – two secondary uses of forests.

In my study “Forestry and Resource Policy in 18th century Transylvania” I attempted to describe the attitudes of Transylvanian Saxons, Hungarians, Szeklers and Wallachians toward forests by comparing the Saxon town of Sighișoara with localities inhabited by the other ethnic groups that I mentioned above.

Theoretical concepts

The wood (timber) crisis prompted the authorities to develop long-term management plans for state forests for economic purposes, although the concept of sustainability (Nachhaltigkeit) –which is central to modern forestry– had not yet been clearly outlined. The implementation of the

10. La biblioteca din Gundelsheim, Paul Abraham and Hans Brandsch, *Landwirtschaft und Waldbau der Stadt Schäßburg bis 1945*, Manuscris depus în anul 1994.

11. Karl Fabritius, “Der Brand Schäßburgs im Jahre 1676,” *Archiv des Vereins für siebenbürgische Landeskunde* 1, No. 2 (1853), 220-37.

12. Adolf Höhr, “Das alte Schäßburg,” *Die Karpathen*, III, Kronstadt 1909, 3.

13. Grete Klaster-Ungureanu, “Ein Schäßburger Bienensegen,” in *Beiträge zur siebenbürgischen Kulturgeschichte*, ed. Paul Philippi (Köln-Wien: Böhlau 1974), 91-108.

14. Gustav Lander, *Der siebenbürgische Imkerverein als Bienenzucht-Abteilung der Siebenbürgisch-sächsischen Landwirtschaftsvereins* (Kronstadt: Markus, 1939).

15. Franz Letz, *Schäßburg. Monographie einer Stadt* (München: Selbstverlag, 1976).

16. Johann Teutsch, “Beiträge zur klimatologischen und statistischen Kenntnis der Stadt Schäßburg,” *Programm des evangelischen Gymnasiums in Schäßburg* (Hermannstadt: S. Filtsch, 1867), 1-80.

concept of sustainability, which ensured a durable use of forests, occurred only under the reign of emperor Joseph II (1781-90).¹⁷

Travelers who visited Transylvania in the 18th century, among them Joseph II, mention the bad management of forests in the province. The consulted archival sources indicate the dwindling wood (timber) resources around towns and mining centers that required great quantities. However, the same sources mention sprawling forests that, because of the bad and underdeveloped road infrastructure, could not be sufficiently exploited.

As regards their geographical location, forests were mostly located in the south, east and west of Transylvania, while the central and northern areas, especially Cluj County, were stuck in an almost perpetual wood (timber) crisis.¹⁸ This is why one can argue that in Transylvania there was a regional wood (timber) crisis before the issuance of the 1781 Forestry Ordinance.

The eighteenth-century European wood (timber) crisis also affected the forest-rich Hapsburg province of Transylvania. Thus, this century witnessed the publication of numerous studies that tried to find solutions to it. Most contemporary scholars perceived forests as a source of energy for the mining sector. Among them were Samuel Köleseri jr. (1663-1732),¹⁹ Jan Fridwaldszky (1730-86),²⁰ Ignaz von Born (1742-91),²¹ Johann Ehrenreich von Fichtel (1732-95),²² Andreas Xaverius

17. Rolf Hocker and Wolfgang Wessel, "Die Waldwirtschaft in Kurköln zur Zeit des Kurfürsten Clemens August," in *Eine Gesellschaft zwischen Tradition und Wandel, Alltag und Umwelt im Rheinland des 18. Jahrhunderts*, ed. Frank Günter Zehnder (Köln: DuMont 1999), 209-25.

18. Österreichisches Staatsarchiv (ÖStA), Kriegsarchiv, K VII k 341: von Preiß: Historisch-Politische Beschreibung des Großfürstentums Siebenbürgen, written on behalf of the Supreme War Council on 18 May 1771, manuscript, 1775, s.p.

19. Samuel Köleseri jr., *Auraria romano-dacica* (Hermannstadt, 1717).

20. Jan Fridwaldszky, *Minero-Logia (magni) Principatus/Transilvaniae/seu/metalla, semimetalla, sulphu/ra, salia, lapides et aqua/conscripta/a/Joanne Fridwaldsky/Societatis Jesu sacerdote anno Sal. MDCCLXVII*, (Claudiopoli, 1767).

21. Ignaz von Born, *Briefe über mineralogische Gegenstände auf einer Reise durch das Temesvarer Banat, Siebenbürgen, Ober- und Unterungarn*, (Frankfurt, Leipzig: no publisher, 1774).

22. Johann Ehrenreich von Fichtel, *Mineralogische Bemerkungen von den Karpathen* (Wien: Johann edlen von Kurzbeck, 1791).

Stütz (1747-1806),²³ and Franz Joseph Müller von Reichenstein (1740-1825).²⁴ All of them went on scientific trips to the province and later published the findings of their mineralogical research.

In 1793, the Lutheran Evangelical priest Daniel Filtsch²⁵ wrote a treatise on coal,²⁶ becoming one of the first scholars to propose the replacement of fuel wood with another type of fuel. This work, based on the findings of his research on the coal in sulfur deposits in the province, which he conducted on behalf of the Austrian authorities on 1771, is also one of the first works to discuss the wood (timber) crisis in Transylvania.²⁷ The fact that the authorities commissioned Filtsch to conduct the aforementioned research demonstrates their strong interest in forests and wood (timber) harvesting for various purposes. The publication of this work twenty years after the start of the research is indicative of the authorities' commitment to long-term research, to their need to initiate field research in an area that was almost unknown to most European intellectuals, and to their interest in combining theory and empirical research.

Another highly relevant scholarly work to forestry in Transylvania is the Lutheran pastor Johann Theophil Ziegler's doctoral dissertation, "De Re sylvestri" that he started in late 18th century and published in

23. Andreas Stütz, "Physikalisch- mineralogische Beschreibung des Gold- und Silberbergwerks bei Nagy-Ág in Siebenbürgen," *Der Gesellschaft Naturforschender Freunde zu Berlin, Neue Schriften* 2 (1799): 1-97.

24. F. J. Müller von Reichenstein, "Versuche mit dem in der Grube Mariahilf in dem Gebirge Fazeby bey Zalathna vorkommenden vermeinten gediegenen Spiesglanz König," *Physikalische Arbeiten der einträchtigen Freunde in Wien* (1783): 63-9;^[1]^[SEP] "Fortsetzung der Versuche mit dem in der Grube Mariahilf in dem Gebirge Fazeby bey Zalathna vorkommenden vermeinten gediegenen Spiesglanz König," *Physikalische Arbeiten der einträchtigen Freunde in Wien* (1784): 49-53;^[1]^[SEP] "Nachricht von den Golderzen aus Nagyag in Siebenbürgen," *Physikalische Arbeiten der einträchtigen Freunde in Wien* (1784): 85-7;^[1]^[SEP] "Fortsetzung der Versuche mit dem in der Grube Mariahilf in dem Gebirge Fazeby bey Zalathna vorkommenden vermeinten gediegenen Spiesglanz König," *Physikalische Arbeiten der einträchtigen Freunde in Wien* (1785): 34-52.

25. Daniel Filtsch (1730-83) studied in Jena and then worked as a teacher at the Gymnasium in Sibiu where he was appointed rector in 1763. In 1772 he was appointed dean in Sibiu. G. D. Teutsch, "Daniel Filtsch," *Allgemeine Deutsche Biographie* 7 (Leipzig: Duncker & Humblot, 1877), 9-10.

26. Daniel Filtsch, "Physisch-ökonomische Beurtheilung der in Siebenbürgen entdeckten Steinkohlen," *Siebenbürgische Quartalschrift* (1793): 1-28.

27. Filtsch "Beurtheilung," 5-6.

1806. It investigates the situation of Transylvanian forests and proposes new methods for the conservation and protection of oak and coniferous forests. He argues that bad management, the precarious professional training of foresters, and illegal activities seriously jeopardized Transylvania's forests.²⁸ The main focus of his work was to demonstrate how important it was for Transylvania's forests to introduce sustainable timber harvesting.²⁹

Forestation

Ordinance no. 6155 issued by the Seeberg Gubernium in 1754³⁰ highlighted the need to conserve forests and stipulated that deforested areas should be reforested. Thus, each ten-year-old boy had to plant two oak saplings, enclose them in a small fence, and take care of them until they married. However, the ordinance was not implemented.

From 5 June to 10 August 1795, Andreas Xaverius Stütz (1747-1806), who was head of the Natural History Collection in Vienna at the time, came to the province to inspect the gold mines at Săcărâmb (in Hungarian: Nagyág) and to study the extracted gold.³¹ Stütz was disappointed with the bad state of the forests, which in his opinion resulted from their mismanagement. He decried the destruction of saplings and the harvesting of young trees, as well as the lack of reforestation.³² Goat, cattle and horse herds were wreaking havoc with³³ saplings and small trees: "Where there are no goats, there are cattle and horses that, upon returning unbridled from field labor, either run to the pasture

28. De Re Sylvestri habita imprimis ad M. Transsylvaniae Principatum reflectione Dissertatio; quam pro loco inter professores gymn. Cib. Avg. Conf. solemniter obtinendo die XXIII. Aprilis Horis a X ad XII in Auditorio collegii Mai cum Adnaxis Thesibus publice defendet Ioan. Theop. Ziegler, (Cibinii, 1806).

29. For further details on the subject, see Christoph Ernst, *Den Wald entwickeln. Ein Politik- und Konfliktfeld in Hunsrück und Eifel im 18. Jahrhundert* (München: De Gruyter Oldenbourg, 2000), 91-101.

30. Siegmund, *Quellen*, no. 92, 25.

31. Andreas Stütz, "Physikalisch – mineralogische Beschreibung des Gold – und Silberbergwerks bei Nagy-Ág in Siebenbürgen," *Der Gesellschaft Naturforschender Freunde zu Berlin Neue Schriften* 2 (1799): 1-2.

32. "Those who plant trees or make others plant them are mocked." (Stütz, "Beschreibung," 41).

33. Born made a similar observation. He decried that the goat herds of nobles were destroying sprouts. (Born, *Briefe*, 96).

where they indulge themselves or take shelter from the heat of the sun in the shadow of a forest where they feed on the tender sapling shoots.”³⁴

Wood-saving strategies

i. Bricks instead of wood

Traditional house building³⁵ was one of the main causes for the over-consumption of timber and the destruction of forests. Some eighteenth-century travelers describe the wooden homes with shingled roofs as well as the wooden stables, sidewalks and roads. Wooden houses were not only very vulnerable to fire, but also badly built, as the Anonymous Latin³⁶ claims in the account of his travels in the province.³⁷ Others describe the brick- and stone-walled houses they encountered in their peregrinations. For instance, Johann Lehmann and Cristoph Seipp³⁸ describe the Saxon villages between Orăștie (Broos/Szászvaros) and Sebeș (Mühlbach/Szászsebes) with their eye-pleasing and beautifully-lined brick houses on both sides of the road: “All houses in Saxon villages have the best-quality walls and big windows, are naturally-lighted, mostly one-storied, and tile-roofed.”³⁹ According to the Josephine

34. Stütz, “Beschreibung,” 41.

35. Until late eighteenth-century, most houses of Wallachians, Saxons and Hungarians were made of wood. On their building-method, see Valer Butură, *Străvechi măturii de civilizație românească. Transilvania* (Early Evidence of Romanian Civilization in Transylvania) (Bucharest: Științifică și Enciclopedică, 1989), 96-160.

36. The “Anonymous Latin,” in fact a Franciscan friar from Glatz (Silesia), visited in 1738 a few important Transylvanian friaries and towns as secretary of the Franciscan Commissioner Rochus Ulbricht. The first translation of his travel account, *Diarium itineris ex Provinciae Bohemiae Conventu Glacensi ad Transylvaniam, No.173* 8 was published in 1872 in “Archiv des Vereins für siebenbürgische Landeskunde,” *Călători străini despre țările române* (Foreign Travelers in the Romanian-inhabited Provinces), ed. Maria Holban, 9, (Bucharest: Academia Română, 1997), 216-22; W. Wattenbach, “Diarium itineris ex Provinciae Bohemiae Conventu Glacensi ad Transylvaniam,” *Archiv des Vereins für siebenbürgische Landeskunde*, N.F., X (1872): 452-73 and XI (1873): 118-39.

37. Anonymus, “Diarium,” 120.

38. The actor Christoph Ludwig Seipp (1747-93) traveled in 1781 and 1791 between Preßburg and Sibiu/Hermannstadt. He published his first travel account *Reise von Preßburg nach Hermannstadt in Siebenbürgen* under a pseudonym in Dünkelspiel and Leipzig in 1785.

39. Johann Lehmann (Seipp), *Reise von Preßburg nach Hermannstadt in Siebenbürgen* (Dünkelspiel and Leipzig, 1785), 178-79.

Survey (Josephinische Aufnahme), Sighișoara had three churches and stone-walled houses uptown.⁴⁰

As regards the forestry policy, Joseph II tried to replace timber with stone or brick as building materials. Paragraph 32 of the Forestry Ordinance refers to forest conservation and wood (timber) saving, recommending the replacement of wooden houses, stables and sheds with beaten earth for the floors and crude non-fired bricks or rubble for the walls.⁴¹

Regulations regarding the replacement of timber with other materials in the building of houses were issued as early as 1769 in Cincu (Großschenk/Nagysink). The main reason for this was “the strong decline of forests.” The use of timber was allowed in frameworks and in the fences that enclosed the property, but only if the alternative materials were too expensive for the owner and only where it was necessary.⁴²

Brick manufacturers were allowed to use any type of low-quality wood that was hard to sell, for instance pieces of wood lying on the forest floor, as well as stumps and trees that had no other purpose.⁴³ For instance, the 1779 Forestry Ordinance of the town of Sighișoara stipulated that pieces of wood fallen on the forest floor and the wood that stayed after cuttings could be used in brick manufacturing. In addition, local roofers received tax exemptions, which facilitated the sale of their products to the citizens.⁴⁴

The first roofers in Sighișoara were mentioned in 1717 in connection with the payment of firewood for the Town Hall.⁴⁵ Each town had its own brickworks. In 1784, the local brickworks were leased on condition that the leasers deliver to the municipality 100 of the 1,000 bricks pro-

40. Annex to Kriegskarte des Großfürstentums Siebenbürgen. Drittes Buch. Worinnen verschiedene Anmerkungen über die Sectiones 151, 152, 153, 154, 155, 156, 157, 158 159 und so weiter bis inclusive 208 enthalten. In: Österreichisches Staatsarchiv, Kriegsarchiv, B IX a 715, Sektion 191, no. 9, III, 682.

41. Josephinische Waldordnung 1781, §32.

42. Fr. Schuller von Libloy, “Deutsche Rechtsdenkmäler der Siebenbürger Sachsen. B. Den MarktFlecken Groß-Schenck in concreto betreffend. (Von anno 1638 bis 1769),” *Archiv des Vereins für siebenbürgische Landeskunde* 7 (1867): 364.

43. Josephinische Waldordnung 1781, §42.

44. Siegmund, *Quellen*, 43-44.

45. Siegmund, *op. cit.*, 11.

duced. In addition, they also received free firewood from the community forest.⁴⁶

The transition from timber roofs to tile roofs was supported and encouraged by the state. On 5 July 1779, local authorities in Sighișoara ordered that the local population be provided with the firewood quantity needed in the manufacturing of bricks for domestic purposes.⁴⁷ In 1780 the Sighișoara Town Hall set the maximum prices for the manufacturing of bricks so that the local population could purchase them cheaper. Moulders who obtained cheap firewood from the municipality were allowed to ask 3 kreutzers for a brick and 6 kreutzers for a tile.⁴⁸ In general, however, production costs were low. For instance, in 1745 the manufacturing of 5,000 tiles cost 56 florins.⁴⁹

The construction of new houses was also supported by the state. For instance, in 1787 authorities ruled that the owners of burned down houses were entitled to bricks, timber, money in advance and in-kind donations, but they were forbidden to build wooden houses. Furthermore, the roofs of the new houses had to be tiled, not thatched or shingled, and only stables and sheds could be made from wood.⁵⁰ However, the state had also provided help before the 1781 law by guaranteeing transportation and by favoring the purchase of high-quality bricks.⁵¹

The use of timber in home building was generally forbidden. The Sighișoara Town Hall regularly rejected applications for wooden constructions. For example, in 1780 the application of citizen Balthes for timber was rejected on the grounds that a previous government ordinance, based on Seeberg's Ordinance, stipulated that buildings had to be made of brick, not wood.⁵²

Additional measures, pertaining to building methods, were introduced in 1793. An ordinance issued by the Town Hall of Sighișoara

46. Siegmund, *op. cit.*, 50, Protocol of 21 March 1785.

47. Siegmund, *op. cit.*, 44.

48. Siegmund, *op. cit.*, 45.

49. Siegmund, *op. cit.*, 16.

50. Siegmund, *op. cit.*, 54.

51. In 1774, 4,000 tiles were brought to Agnita (Agnetheln/Ognitheln/Szentágota) from Sibiu in order to cover the burned houses. The building of brick-walled houses was overseen by two district aldermen. Given that the building of a brick house was expensive, the citizens of Agnita were allowed to purchase tiles in exchange for fruits. (Schuller von Libloy, "Deutsche Rechtsdenkmäler," 356-359).

52. Siegmund, *Quellen*, 45.

entitled “Über die Menagierung der Waldungen” restricted the use of timber in the construction of brick- or stone-walled and tile-roofed buildings. For this type of buildings, unless they were more than three fathoms wide, citizens were allowed to use beams made from timber harvested in closed forests.⁵³

The situation remained mostly unchanged until the mid- 19th century. Outbuildings, however, were increasingly brick- or stone-walled, but most sheds were still made of wood and built at the back of the yard in order to be protected from fires. In the 19th century, newly constructed buildings had bigger windows with blinds and more rooms.⁵⁴

ii. Fences

The building of fences required a lot of timber as well.⁵⁵ They were more important for hill and upland farming than for lowland farming. Fences were, also, present in towns and villages, where they physically delineated properties and provided protection against wild animals in the proximity of wooded areas. In the analysis of fence, types it is relevant to consider each agricultural system used in the places chosen as case studies.

In hilly (pre-alpine) areas they practised a field grass economy and mostly used wooden fences that delineated pastures and property limits and prevented the cattle’s access to closed pastures.⁵⁶ On the Transylvanian Plain they practised the three-field system. Given that it alternated between ploughing and pasturing, they built only temporary, mobile and easily removable enclosures. The placement of these fences also depended on the grazing period. On the other hand, permanent fences separated yards from gardens, while woven fences mainly marked roads on agricultural lands.⁵⁷

The first known measure against the use of wood in building fences was introduced in Seeberg’s Gubernial Ordinance of 1753. It specifically banned the use oak twigs because it had a negative impact on the

53. Siegmund, *op. cit.*, 60-61.

54. Michael Ackner and Karl Johann Schuller, “Der Hermannstädter Stuhl im Großfürstenthum Siebenbürgen,” *Pittoresken Österreich* (Wien: Müller, 1840), 1-35, here 23-25.

55. Martin Stuber, *Wälder für Generationen. Konzeptionen der Nachhaltigkeit im Kanton Bern (1750-1880)* (Köln, Weimar, Wien: Böhlau, 2008), 126.

56. Butură, *Străvechi mărturii*, 88-90.

57. Binder, *Geschichte des Waldes*, 120.

development of oak forests.⁵⁸ Art. 49 of emperor Joseph's 1781 Forestry Ordinance stipulated that gardens, where mulberry trees were planted, had to be enclosed with hedgerow or small ditches.⁵⁹ Art. 31 banned the use of tree-branch fences and encouraged the use of hedge fences because they only grew in width and did not become trees.⁶⁰ The replacement of wood with hedges is also attested by toponymy. In Transylvania, the German name "Horst" or "Hurst" meant a small forest where wood for enclosures was harvested. The names "Hirschel" and "Heirschel" had similar meaning in southern Transylvania.⁶¹

Hedge fences presented several advantages: they could be easily planted, ordered in two rows and intertwined and in case they were also surrounded by a small ditch, they provided protection against the cattle.⁶² The disadvantages were that they grew slowly, needed constant care and required more space than wooden fences.

Royal Decree no. 2458 of 19 November 1783 referred to the observance of the forestry law and to the creation of hedge fences (hedgerows) and protective ditches (in Latin: *circa observantiam Normae sylvestris erectionemque vivarum saepium et fossatorum*). Local authorities were required to report to the governor on the implementation of the ordinance and on the progress of forest conservation. Transylvanian town halls, counties and districts submitted reports on their achievements in this respect. There were, however, a few notable exceptions such as the district of Bardócz where people refused to plant hedgerows and dig ditches because, they claimed, there was plenty of wood. The Gubernium demanded civil servants to compel the population to comply with the law because there was a looming wood (timber) crisis. Civil

58. Siegmund, *Quellen*, 21-22.

59. Josephinische Waldordnung, § 49.

60. Josephinische Waldordnung, § 31.

61. Wolff denies the hypothesis that the term "Hurst" or "Hürst" was related to the millet culture. Johann Wolff, "Siebenbürgisch-deutsche Waldnamen," *Korrespondenzblatt des Vereins für siebenbürgische Landeskunde* (1884): 85-90, here 88-9. The toponym can be found at Biertan/Birthälm. According to Nägler, the name "Hirsenberg," as well as "Hürsenberg," could be related to the Germanic "Hurst" (Gesträuch = shrubbery), thus indicating that in this particular place (for instance, a hill) they harvested/cut ("gehüestet") wood for enclosing the house and the yard. In addition, in his opinion, this also proves that the respective hill was once forested. Thomas Nägler, *Marktort und Bischofssitz Birthälm in Siebenbürgen* (Munich: Siebenbürgisch-Sächsische Stiftung, 2004), 32-50.

62. Josephinische Waldordnung, §32.

servants in the district of Reußmarkt wanted a ban on woven fences in fields.⁶³ However, there were also technical difficulties that made the implementation of the law more difficult.⁶⁴

In Transylvania, initiatives for the enclosure of fields with protection fences had been launched almost a decade earlier in Saxon towns. In 1775, the *Magistrat* in Sighișoara ordered based on the Gubernial Ordinances of 6 August 1775 the enclosure of fields with protection ditches for the purpose of saving wood and “a faster development of forests” (einem besseren Aufkommen der Wälder).⁶⁵

For a better implementation of the Royal Decree of November 1783, the Gubernium issued Decree no. 10093 on 5 January 1784. In Sighișoara, two sub-inspectors and two inspectors from the district of Schäßburg were tasked with implementing it.⁶⁶ From this, it can be inferred that the state organs regularly supervised the implementation of this legislation, and that owners had to abide by the law and create hedgerows or hedge fences. The following year, the Community of Sighișoara banned twig enclosures,⁶⁷ and in 1800 the same local institution ordered the replacement of wooden fences with protective ditches between neighboring courtyards.⁶⁸ Official documents and accounts released in the following period testify to the limited success of the aforementioned legal measures. In early 19th century, Ziegler decried the excessive use of wood for fences, noted that in Transylvania no wood-saving measure had been introduced, and mentioned fences as one of the causes of timber-wasting.⁶⁹

63. Magyar Országos Levéltár (MOL), Erdélyi Országos Kormányhatósági Levéltárak, Gubernium transylvanicum levéltára, Gubernium transylvanicum in politicis, Úgyratok F 46, year 1784, Nr. 7382.

64. For instance, the city of Alba Iulia spring floods damaged many streets and bridges, hindering transportation, communications and implicitly the plantation of hedgerows; in the Maros and Zarand districts, plantation was inefficient because of the improper soil; in Gherla (Armenopolis) the decree as not applied because there was no forest to protect, and no hedgerows were planted; in the Reps district they had not yet sold the necessary seeds until the date when the report on the application of the law had to be submitted. MOL, F 46, year 1784, no. 7382.

65. Siegmund, *Quellen*, 34.

66. Siegmund, *op. cit.*, 49.

67. Siegmund, *op. cit.*, 60, Protocol of 21 March 1785.

68. Siegmund, *op. cit.*, 73.

69. Ziegler, “De re sylvestri,” 21.

iii. Energy-saving stoves

One of the most important wood-saving methods was the introduction of energy-saving stoves. While in Western Europe the propaganda for the introduction of masonry stoves proved very effective,⁷⁰ in Transylvania it was quite the opposite. Until late 18th century –both in the countryside and in small towns– the big tile stove could be found in most households. In Transylvania, they built light and small-size ovens in the street, which they used for special occasions such as weddings.⁷¹

In his treaties on forests, Ziegler argues that the old heating technique was a cause of the massive consumption of wood. He claims that stoves were very different, but they generally lost a great amount of heat because of manufacturing mistakes: they were over-sized and had lateral openings. In Ziegler's opinion, glass works, and distilleries were also great wood consumers.⁷² This demonstrates that in the 18th century the European theories and practices pertaining to fire technique were unknown or very little known in Transylvania.

Only in 1805 did the so-called “Regulatory Points” (in German: Regulativpunkte) order that saving stoves be used in villages instead of the energy inefficient ones.⁷³ In addition, stoves, pipes and chimneys were built so badly that they were a constant fire hazard for the “Neighborhoods” (in German: Nachbarschaften). Therefore, they were regularly checked by local civil servants and “Neighborhood leaders” (in German: Nachbarschaftsväter).⁷⁴

70. Stuber, *Wälder für Generationen*, 107-14.

71. Joseph Haltrich, “Zur Geschichte von Sächsisch-Regen seit den letzten hundert Jahren,” *Archiv des Vereins für siebenbürgische Landeskunde*, (1858), N.F., III, no. 1, 286.

72. Ziegler, “De re sylvestris,” 22.

73. Verwaltung Siebenbürgen, *Sammlung aller vom Jahr 1795 bis zum Jahr 1805 für die sächsische Nation in Siebenbürgen von allerhöchsten Orten erlassenen Regulationsvorschriften* (Hermannstadt: Theodor Steinßausen, 1861), 74.

74. According to the fire safety ordinance issued in Mediaș in 1759 and amended in 1772 builders and potters were forbidden to build and use improvised pipes. Friedrich Schuler von Libloy, “Deutsche Rechtsdenkmäler der Siebenbürger Sachsen. Local-Constitutionen der K. freyen Stadt Mediasch. 2. Entwurf zu einer Feuerlösch-Ordnung der königl. Frey-Stadt Mediasch nach Anleitung der Wiener Feuer-Ordnung ddo. 2. Mai 1759 und nach Beschaffenheit der hiesigen StadtVerfassung,” *Archiv des Vereins für siebenbürgische Landeskunde* 7 (1867): 326-30.

Even though the population was unfamiliar with the technical innovations, one can presuppose that upon observation of the heating procedure, the optimal wood-saving solutions were found in this respect as well.⁷⁵ Furthermore, the introduction of energy-efficient stoves represented a shift in habitation culture.⁷⁶

iv. Protection against fires

Significant quantities of wood were wasted because of the frequent fires. Contemporary chroniclers describe devastating fires that occurred in various Transylvanian towns and cities. They usually started during military operations, or were caused by arson, negligence or natural phenomena.⁷⁷ The reconstruction of the gutted buildings required the harvesting of significant quantities of timber. Another measure, apart from replacing timber with fire-resistant materials, was protection against fires. It had two major components: (1) the identification and elimination of fire hazards (fire safety) and (2) extinguishing fires (firefighting).

Both municipalities and the provincial government (the “Gubernium”) introduced special measures to prevent and combat fires. The first firefighting regulation in Transylvania was drawn up in Bistrița in 1710.⁷⁸ In 1723 the “Gubernium” issued an ordinance on the prevention

75. Joachim Radkau, *Holz. Wie ein Naturstoff Geschichte schreibt* (Munich: oekom, 2007), 201-4.

76. In this period, the entire family lived in a room and gathered in front of the fireplace. In the second half of the 19th century, changes were made to the structure of the habitation; one of them was the separation of rooms, which allowed family members to live separately.

77. In April 1769 Gypsies set fire to seven of their houses in Bistrița, “[...] to make light; the great church was as bright as daylight! There was great terror. [...] The fire did not extend into the town, [...] but only obliterated the Gypsy neighborhood.” François-Xavier de Feller, *Itinéraire ou voyage de Mr. L’abbé de Feller en diverses parties de l’Europe: en Hongrie, en Transylvanie, en Esclavonie, en Bohême, en Pologne, en Italie, en Suisse, en Allemagne, en France, en Hollande, aux Pays-Bas, au pays de Liège etc.*, (Paris: Auguste Delalain, 1820), 19.

78. This piece of legislation included the following measures: The “Nachbarschaft” (Neighborhood) selected six men tasked with checking fireplaces every two months and fine those citizens whose chimneys or fireplaces were dirty. Furthermore, those citizens who caused accidental fires were also fined. Each “Nachbarschaft” had to be equipped with four spades, four fire ladders and ten leather buckets. Firefighters were allowed to demolish any wooden building that they considered a fire hazard. Citizens storing flammable materials close to the fireplace, such as hay, thatch, hemp and

of fires.⁷⁹

Another cause of fires was agricultural work. For example, in spring and autumn there were many forest fires caused by the habit of burning dry grass and leaves (in Hungarian: *avarégetés*) close to wooded areas. In order to protect forests and ensure their proper development, the “Gubernium’s” Ordinance no. 6293 of 6 August 1775 banned this activity.⁸⁰ In addition, the aforementioned Josephine Forestry Ordinance also identified this bad habit as a serious threat to wooded areas, especially in windy conditions.

The Josephine Ordinance prohibited young shepherds and servants from using fire strikers and to smoke pipes in wooded areas in spring and autumn. Apart from this, authorities employed forest rangers tasked with extinguishing fires and applying corporal punishment to younger (beating with a stick) and older (whipping) lawbreakers alike. It was strictly forbidden to set fire to dry or healthy trees, logs and wood lying on the forest floor, and to kindle fir-tree or spruce branches to be used as torches. In order to make these rules clear to everybody and to prevent anybody from escaping punishment, the law had to be published at the start of each spring and autumn.⁸¹

Authorities identified several serious fire hazards, such as storing flammable materials in the proximity of fire sources,⁸² making fire next

other similar materials, were also fined. Fridrich Schuller von Libloy, “Deutsche Rechtsdenkmäler der Siebenbürger Sachsen. 3. Anno 1710 d. 7. Aug. Sub Judicatu Generosi Domini Johannis Klein a Straussenburg. Als die Nachbarschaften unserer Königlichen Freyen Stadt Nösen eingerichtet und jedweder Nachbarschaft. Ihr Vorsteher und Vater, samt einem jungen Nachbar Vater vorgestellt wurde, sind Ihnen folgende Articul ad observandum et exequendum vorgelegt worden...” *Archiv des Vereins für siebenbürgische Landeskunde* 7 (1867): 336-37.

79. Siegmund, *Quellen*, 14.

80. Siegmund, *op. cit.*, 34.

81. Josephinische Waldordnung § 35.

82. The fire safety regulations introduced in Bistrița and Mediaș prohibited storing highly flammable materials close to the fireplace, raking and storing hay and straw in rooms, and entering stables or other flammable premises with portable lights. Von Libloy, “Deutsche Rechtsdenkmäler,” 326-30 and 348-50.

to flammable substances,⁸³ neglect,⁸⁴ engaging in activities that required the use of fire,⁸⁵ storing large quantities of wood in the yard,⁸⁶ improperly building chimneys,⁸⁷ and firing weapons in built-up areas.⁸⁸

Two devastating fires that occurred in the summer of 1788⁸⁹ in Sighișoara provided the local municipality with the opportunity to introduce the first firefighting measures⁹⁰ and to purchase firefighting equipment.⁹¹ Another measure introduced by the municipality was to provide fire victims with fir timber for roofing. If need be, the fir timber and oak timber (only if there was a surplus) could be harvested from closed forests. This set of measures, however, also mentions the need to conserve forests: “[...] for a simultaneous and efficient protection of forested areas, one must visit the closed forests and harvest all those disposable oak trees that stand too close to others and prevent their proper growth.”⁹²

The new buildings in Sighișoara had to be built according to the new

83. In 1779, the gun powder carrier had to leave the billet due to the big danger of explosion. Siegmund, *Quellen*, 42; Gun powder traders in Mediaș, were allowed to store a maximum of 12 lb. (1 lb.=0,45 kg.) in their stores. Von Libloy, “Deutsche Rechtsdenkmäler,” 326-30.

84. In Bistrița, owners that started fires by negligence were fined. Von Libloy, “Deutsche Rechtsdenkmäler,” 348-50.

85. For instance, according to the regulations introduced in Mediaș in 1759 and 1772, it was forbidden to singe slaughtered pigs in closed yards or in windy conditions. Von Libloy, “Deutsche Rechtsdenkmäler,” 326-30.

86. In Mediaș, the municipality prohibited the storage of more than 6 fathoms of wood in one place. Von Libloy, “Deutsche Rechtsdenkmäler,” 326-30.

87. Medium-sized chimneys had to be cleaned every three months and large ones every month by authorized chimney sweeps. Their cleanliness was checked by the “Nachbarschaft” leader. Local authorities prohibited wooden chimneys as well as dangerous fire pipes and other improvisations. Von Libloy, “Deutsche Rechtsdenkmäler,” 326-30.

88. The firing of weapons was prohibited in Sighișoara in 1788. Siegmund, *Quellen*, 54.

89. On 15 July 1788, a great fire engulfed Hüll and Schaser Streets; in three hours 150 houses burned to the ground and 180 families became homeless. The fire started on Hüll Street at the wooden house of a woman who had forgotten to watch the fire. She was arrested for eight days. The fire on Mühl Street started in a shed, and authorities could not determine the cause. On 22 July another fire broke out on Bajer Street and devastated the side lying between Mühl Street and the square. As a result, 80 houses were gutted. Siegmund, *Quellen*, 54.

90. Siegmund, *Quellen*, 54.

91. Siegmund, *op. cit.*, 54.

92. Siegmund, *Quellen*, 53.

building methods, which included their fireproofing. In 1791, a local senator inspected the burnt houses at Saschiz (Keisd/Szászkézd, a village close to Sighișoara) and demanded from villagers to observe the forestry law, promising that they would be provided with free timber if they followed the fire safety rules.⁹³

Firefighting consisted of various rules of conduct during fires, rules pertaining to the acquisition, management and handling of the equipment, to the signalling of fires inside and outside towns, to the safeguarding of personal possessions, etc.⁹⁴

v. Limitations to the use of timber, firewood and utilities

There had been interdictions on wood harvesting as early as 6 January 1743 when the Town Hall of Sighișoara banned the harvest and sale of oak timber and firewood.⁹⁵ The 1753 Forestry Ordinance of Sighișoara banned the use of oak as firewood, allowed oak harvesting for timber only based on a special permit issued by the Town Hall, established open and closed forests, limited the quantity of firewood allotted to the local population to only 4 fathoms per household, and banned the storage of firewood in forested areas.⁹⁶

In 1765, local authorities in Sighișoara limited the use of timber for the wheelwright, cooper and blacksmith guilds. This measure was introduced with a view to conserving the forest: “As for the future, in order to manage the local forests according to the wishes of the Community, no guild shall be allowed to harvest the necessary wood from these forests.”⁹⁷ The primary aim of the municipality was to save on oak. In addition, in 1770 local civil servants banned the manufacture of oak frames,⁹⁸ in 1771 and 1772 they compelled coopers to procure their timber from other localities because “local forests are smaller with each passing day”⁹⁹ and banned together with the Comes Saxorum the use of oak as firewood,¹⁰⁰ and from 1778 oak started to be imported to Sighișoara.¹⁰¹

93. Siegmund, *op. cit.*, 58.

94. Von Libloy, “Deutsche Rechtsdenkmäler,” 326-30, 348-50.

95. Siegmund, *Quellen*, 17.

96. Siegmund, *op. cit.*, 23.

97. Siegmund, *op. cit.*, 30.

98. Siegmund, *op. cit.*, 31.

99. Siegmund, *op. cit.*, 30.

100. Siegmund, *op. cit.*, 31, Ordinance of 19 April 1772.

101. In a report, mayor Köhler explained how the use of oak as firewood generated “the biggest and most irresponsible disorder”. Siegmund, *Quellen*, 39.

An ordinance issued by the *Magistrat* of Sighișoara in 1774 stipulated that only wood fallen onto the forest floor could be used as firewood.¹⁰² Four years later, however, it was imported from other localities.¹⁰³ In 1779 the firewood crisis was so severe that it was no longer possible to find any pieces of wood on the floor of open forests.¹⁰⁴ In spite of this, the professor at the local Catholic school received six cartful of firewood for domestic use each year.¹⁰⁵

Paragraph 46 of the 1781 Forestry Law stipulated that nobody was allowed to harvest trees for timber without special permission from the owner or the Town Hall. Timber, especially that which had not been in contact with water or snow, was harvested in December or January.¹⁰⁶ There was a forewarning to leave straight trees with fewer branches standing in certain pre-established sectors in order for them to be used later for building and manufacturing purposes.¹⁰⁷ Covering this need was very difficult for the citizens of Sighișoara, because many forests were closed and the Josephine Law stipulated that new buildings had to be built of brick or stone instead of wood. Thus, timber was allowed to be used for bridges¹⁰⁸ and only partially for buildings.¹⁰⁹ In 1791 the municipality allowed timber harvesting in closed forests for public and/or private buildings, only if the allowed quota had already been harvested in the open forests.¹¹⁰

The limitations to the use of timber extended from harvesting in certain places¹¹¹ to certain trades,¹¹² time periods,¹¹³ and tree species,¹¹⁴

102. Siegmund, *Quellen*, 33.

103. Siegmund, *op. cit.*, 40.

104. Siegmund, *op. cit.*, 41.

105. Siegmund, *op. cit.*, 43.

106. Josephinische Waldordnung, § 44.

107. Josephinische Waldordnung, § 5.

108. For example, timber was harvested to rebuild the bridge destroyed during the 1785 flood. Siegmund, *Quellen*, 50.

109. An ordinance issued by the Town Hall of Sighișoara in 1789 stipulated that in the building of sheds, stables and barns oak timber could be used only for thresholds, support beams and strips. Siegmund, *Quellen*, 56.

110. Siegmund, *Quellen*, 58.

111. Carpenters were allowed to harvest timber in certain areas of the forest or to collect wood fallen on the forest floor. Josephinische Waldordnung, § 14.

112. Wheelwrights were prohibited from harvesting timber in remote forests for fear that they might conceal logs and branches and steal useful wood. Josephinische Waldordnung, § 18.

113. Harvesting timber for shingles, grape vine stakes, beams and other similar products was only allowed in winter. Josephinische Waldordnung, § 44.

114. For timber they preferred straight, hardwood trees. Josephinische Waldordnung, § 5.

After 1784, each timber allotment was conducted only with the mayor's approval¹¹⁵ or in exchange for a fee.¹¹⁶

The population reacted by breaking the law. Therefore, the number of thefts increased rapidly. In order to put a stop to them, civil servants in Sighișoara decided to give to each guild-master a certain quantity of wood.¹¹⁷ In addition, citizens were allowed to continue making oak timber frames if the timber was procured from remote areas or ditches.¹¹⁸

In Sighișoara, where viticulture and winemaking were important to the local community, coopers faced special difficulties. Their requests for oak timber were rejected in 1785 and 1788¹¹⁹ on the ground that harvesting timber in closed forests was prohibited. In 1783, however, the local coopers' guild was allowed to harvest only two oak trees in accordance with the Josephine law.¹²⁰ Until the 19th century, firewood was the only heating source for the rural population. In Transylvania, firewood was distributed based on the right to urban citizenship.¹²¹

Firewood could only be sold with permission from local authorities. After the municipality noted that the open forest called "Kreischgrat" was emptied of firewood, the St. Urban Monastery of Sighișoara requested in 1783 the creation of a new forest where trees for firewood could be felled.¹²² Therefore, the Town Hall redivided forests in accordance with the 1781 Forestry Law and the local ordinance of 1779. The aim of this reform was "the best possible conservation of forests." Based on the new division, certain forested areas were closed, and a two-year ban on wood/timber harvesting and cattle-grazing was imposed. Firewood could only be collected in the so-called open forested areas.¹²³

115. Siegmund, *Quellen*, 49.

116. In 1783 the blacksmiths' guild in Sighișoara requested wood for charcoal from the municipal forest, which it ultimately received in exchange for a fee. Siegmund, *Quellen*, 48.

117. For example, in 1780 the coopers' guild requested oak timber for barrels since they could acquire lumber for hoops only from other towns. (Siegmund, *Quellen*, 45)

118. Siegmund, *Quellen*, 46, of 1 March 1782; in 1788 they were allowed to make vine poles of oak timber Siegmund, *Quellen*, 56.

119. Siegmund, *Quellen*, 51, 54.

120. Siegmund, *op. cit.*, 48.

121. Georg Adolf Schuller, *Aus der Vergangenheit der siebenbürgisch-sächsischen Landwirtschaft* (Hermannstadt: Verein für siebenbürgische Landeskunde, 1895), 114-115.

122. MOL F 46, year 1783, no. 5982, 14-16.

123. Siegmund, *Quellen*, 48, of 9 July 1783.

In 1787, because a significant amount of wood was stolen, the Community decreed that any amount of wood procured illegally from closed forests, such as the Wolsen forest, will be seized and stored in the local yard. A 3-florin fine was imposed for each cartful of stolen wood. In addition, “those [caught] taking firewood to pawnbrokers” would also be fined. As a precautionary measure, the municipality also hired forest rangers.¹²⁴

In 1788, the proposal to allow access to forests twice a week in order to prevent unlawful tree harvesting for firewood was rejected on the ground that “on the one hand, the population would suffer because of this limitation and, on the other, tree harvesting for firewood must be banned in summer months”.¹²⁵ In 1789, the Community decreed that only old oak branches could be harvested for firewood.¹²⁶ In order to put an end to thefts, two additional forest rangers were appointed. It was also decreed that (very likely) a cartful of firewood could be sold for a maximum of 42 kreutzers.¹²⁷

There were limitations imposed regarding the time periods when tree harvesting for timber and firewood was allowed. In 1787, the “Gubernium” decreed, based on § 44 and 46 of the Forestry Law, that tree harvesting had to be conducted only in winter and had to meet firewood, timber and lumber requirements for an entire year. Furthermore, the harvested trees had to be immediately chopped/processed and stored.¹²⁸ A 1786 Ordinance of the “Gubernium” decreed that, for a more efficient protection of forests, owners had to allow their subjects a few days for tree harvesting.¹²⁹

The great number of ordinances issued in the 18th century, which stipulate limitations of tree harvesting for timber and firewood, demonstrates that wood-saving measures were imposed through monitoring and fines. On the other hand, high wood/timber prices led to an increasing number of thefts and complaints to the authorities.

124. Siegmund, *Quellen*, 53.

125. Siegmund, *op. cit.*, 55.

126. Siegmund, *op. cit.*, 56.

127. Siegmund, *op. cit.*, 56.

128. Siegmund, *op. cit.*, 53.

129. Siegmund, *op. cit.*, 52.

vi. The ban on goat grazing in forests

Goats were the most unloved species of domestic animals due to the damage they caused to trees. The goat was considered “the poor man’s cow” given that it needed little food and a small pasture.¹³⁰ They found themselves in a controversial situation because, on the one hand, their feeding habits were harmful to forests and, on the other, they were indispensable for many people from the lower social-economic strata.

Historical descriptions of eighteenth-century Transylvania mention the local population’s great interest in goat farming in comparison to cattle farming. This century witnessed a considerable growth of the province’s population, which increased the demand for agricultural land and food, and goat farming became, for many, household the only food source.¹³¹

Cattle grazing in forests and in their proximity is first mentioned in the “Articuli Civitatis Segesvariensis,” a document issued in Sighișoara in 1608,¹³² and then in two separate regulations issued in Bistrița in 1707¹³³ and 1713, respectively.¹³⁴ The latter two regulations allowed goat and cattle grazing, but also took into account the necessity to protect wooded areas and the needs of the citizens of Bistrița.

The 1753 Ordinances issued by the Seeberg government banned goat grazing in forests and ordered that it take place on empty pastures.¹³⁵ By the time the 1781 Josephine Forestry Law was passed, many wooded areas in the province had suffered significant damage due to

130. Bernward Selter, *Waldnutzung und ländliche Gesellschaft* (Paderborn: Schöningh, 1995), 195-196.

131. In 1780 there were 411,369 horses and oxen, 21,312 cows, 79,901 calves and bulls, 662,826 sheep, 63,783 goats, and 249,312 pigs in Transylvania. (Thomann), *Siebenbürgische Landesbeschreibung. Beschreibung von Siebenbürgen*, Manuscript, Österreichisches Staatsarchiv, Kriegsarchiv, K VII 343, 40-41.

132. Siegmund, *Quellen*, 3-5.

133. In 1705, the Town Hall of Bistrița banned the herding of pigs into forests. Schuller: *Landwirtschaft*, 92-95.

134. A 1713 Regulation from Bistrița prohibited the herding of cattle onto closed fields, but allowed it onto certain fields that were guarded by a shepherd. In addition, sheep and goats were prohibited from grazing on the territory of Bistrița. Goat and sheep grazing was allowed only in those places where “there were no trees in the bud because there they could not damage them”. Von Libloy, “Deutsche Rechtsdenkmäler,” *Archiv des Vereins für siebenbürgische Landeskunde* 7 (1867): 340-6.

135. Siegmund, *Quellen*, 21-2.

goat grazing.¹³⁶

In Sighișoara a ban on grazing in closed forests had been in force since 1774.¹³⁷ The “Ordinance on the Damage to Forests and Forest Edges” (in the German original: “Ordnung der Wald und Hatterschaden”¹³⁸), issued on 20 May 1778, imposed a ban on goat farming,¹³⁹ thus aiming to protect wooded areas from irreversible damage: “The presence of goats is no longer tolerated on this territory because no forest can develop unless it is free of goats that feed on buds, thus, preventing trees from developing. As a result, all goats must be sold until the next market or else they will be shot”.¹⁴⁰ In 1779, the ban was reconfirmed following a thorough investigation conducted by a local commission.¹⁴¹ The principal aim of this ordinance was the conservation of wooded areas and the local population’s supply with the required quantities of firewood.

Emperor Joseph’s Forestry Ordinance banned livestock grazing in forests for at least ten years in order to protect them.¹⁴² Goat grazing

136. On 21 March 1760, the centumvirs of Sighișoara reported on the damage done to firewood in Bajendorf by the goats of Romanians living in Valea Crișului (in German: Kreischgrund). The same happened in 1774. Siegmund, *Quellen*, 29, 33.

137. Siegmund, *Quellen*, 33.

138. Hattert is the Saxon name for edge.

139. Such tendencies were also noticeable in other Transylvanian towns. For instance, on 3 April 1771 the Town Hall of Sebeș reported that the forests had been devastated by goat farming and that it ordered the inhabitants of the District “to sell or get rid of” all their goats until St. George’s Day. Johann Wolff, “Zur siebenbürgisch-deutschen Feld- und Waldwirtschaft,” *Korrespondenzblatt des Vereins für siebenbürgische Landeskunde* 9 (1884): 97-105, here 102; In 1784, the mayor of the town of Miercurea Sibiului (Reußmarkt/Szerdahely) declared that goats had to be exterminated because they were harmful to forests. (MOL, F 46, 7382, year 1784, Bericht des Stuhls Reußmarkt vom 12. Juli 1784 bezüglich der Beobachtung der Waldordnung).

140. Siegmund, *Quellen*, 39-40.

141. The protocol of 1 March 1779 recorded the decision of the *Magistrat* to issue a new forestry regulation for Sighișoara, written based on this commission’s report. The new division of forests was conducted based on the principle of supplying the local population with firewood and of conserving forests simultaneously. Therefore, the wood was distributed exclusively from the yearly forest plots, while the others remained closed or under ban. Those who herded their livestock into closed forests received a fine because “no cattle [was] allowed to enter, and especially goats had to be removed”. Siegmund, *Quellen*, 43-4.

142. Josephinische Waldordnung, § 38.

was especially harmful to forests because it seriously damaged and destroyed saplings (young trees). In addition, town halls had to make sure that goats were not herded into forests until saplings grew tall enough so that their branches were out of reach for them.¹⁴³ Forest huts, livestock grazing in forests, and the numerous paths that led to these huts seriously damaged forests. They had to be removed and allowed only with special permission from the respective owner or *Magistrat*.¹⁴⁴

Joseph's Forestry Ordinance was strictly observed in Saxon villages and towns. In 1784, authorities in "Großkokel" County reported that inhabitants had to be compelled to sell their goats that, according to the Ordinance, damaged the forests.¹⁴⁵ The report also hints at the inhabitants' poverty and servitude: "At Nadeş, a shepherd herded many goats into the closed forest and the viscount Benjamin Szentpáli sentenced him to receive 24 strokes in front of the community".¹⁴⁶ Public punishment reflected the authorities' resolve to implement the law and to deter potential lawbreakers.

Authorities in Sibiu, also, introduced protection measures against goat grazing in wooded areas as early as the 18th century. Thus, they decided to protect the town's wooded areas, pasturelands and arable lands by enclosing them with fences. In addition, they banned hunting in these places.¹⁴⁷

In 1773 Maria Theresa ordered that shepherds be hired in the context of a sharp increase in the number of cattle and horse thefts as well as arson cases.¹⁴⁸

The bans on goat grazing meant that many households lost their most valuable food source. At Frauendorf (Assonyfalva) –a Saxon village between the towns of Mediaş and Sighișoara– goats were returned to peasants after having been seized. However, they were ordered to sell them until the end of April, which the peasants did. On the other hand,

143. Josephinische Waldordnung, § 25.

144. Josephinische Waldordnung, § 39.

145. MOL, F 46, 5852, year 1784, Bericht des Kommitats Kükülö bezüglich der Beobachtung der Waldordnung.

146. MOL, F 46, 5852, year 1784, Bericht des Kommitats Kükülö vom 20. Juni 1784 bezüglich der Beobachtung der Waldordnung.

147. Binder, *Geschichte des Waldes*, 115-16.

148. Kaufmes, *Landwirtschaft*, 190.

other reports mention communities¹⁴⁹ that wanted to keep their goats claiming that “those who graze only one or two goats are in majority and poor” and that “they [will] keep them for milk at least until the next autumn”.¹⁵⁰ Further, they claimed that they would herd their goats to graze together with the calves and will not let them into the forest.¹⁵¹

Another type of reaction was “non-compliance” with the law. A 1784 report, on the compliance with the 1781 Forestry Ordinance in the “Großkokel” district, mentions that the inhabitants of the village of Viișoara (Hohndorf/Hiindref/Hundorf), who owned many goats “were herding them into the forest, claiming that this privilege had been bestowed upon them by the *Magistrat* in Dumbrăveni and that, apart from this institution, no one else had the right to decide on forests and goats in Viișoara”.¹⁵²

Certain forest names demonstrate their use for cattle grazing. Thus, the word “Hart” in the Transylvanian Saxon dialect designates a forest where herdsmen grazed their cattle. As a name, it can sometimes appear alone, such as the variant Huortlef (a forest located in Amnaș/ Hamlesch/Omlás), while other times it appears shortened as the ending “-ert”, such as in Jetschert and Binkert – both designating forests in the vicinity of the town of Reghin.¹⁵³ The environs of this town also includes an oak forest known as the “Goat forest” (Ziegenwald/Kerekerdő).¹⁵⁴ The origin of its name has not yet been clarified.

149. For instance Feldioara, Nadeș, Pipea, Țigmandru, Bălăușeri, Filitelnic, Măgheruș, Sântioana, Ormeniș, Hărănglab, Deaj, Idiciu, Chendu, Dorlätz (this village no longer exists), Ernea, Viișoara și Seleuș. In Rodna, the elders decided to remove goats from forests even before emperor Joseph’s 1781 Forestry Ordinance. (MOL, 5852/1784, Gubernium Transylvanicum levéltára, Bericht des Kommitats Kükülö vom 20. Juni 1784 bezüglich der Beobachtung der Waldordnung).

150. MOL, 5852, year 1784, Gubernium Transylvanicum levéltára, Bericht des Kommitats Kükülö vom 20. Juni 1784 bezüglich der Beobachtung der Waldordnung.

151. Ibid.

152. Ibid.

153. Wolff, “Waldnamen,” 87-8.

154. According to Fr. Keintzel Schön, the word “Ziegenwald” (in the Transylvanian Saxon dialect: tsiŋbăș) does not refer to goats because the German word for goat in Transylvania is “Geiß”. He argues that the word tsiŋ comes from the Hungarian word “szeg” which he wrongly translates as “corner”. Fritz Keintzel-Schön, “R.N. Ziegenwald in Sächsisch-Regen,” *Korrespondenzblatt des Vereins für siebenbürgische Landeskunde*, no. 3 (1929): 40-1. “Szeg” actually means “peg” or “nail”. There-

In his 1805 dissertation Ziegler argues that goats were a serious threat to forests and that their access had to be strictly prohibited.¹⁵⁵

vii. Other wood-saving measures

Another measure introduced by the Town Hall of Sighișoara in conformity with Royal Decree no. 2458 of 1783 banned the setting up of maypoles¹⁵⁶ “on Pentecost in churches and in the streets as well as at weddings and other events” because this practice was harmful to forests. This measure, extended over the entire Schäßburg district, targeted both Protestants and Catholics.¹⁵⁷

Conclusion

Several factors contributed to the degradation of forests: gold, silver, iron ore, copper and cinnabar mining, ore and metal melting, ship- and home-building, coal burning, rebuilding endeavors in the aftermath of devastating fires, the building of roads and bridges, timber exports to Hungary and the Ottoman Empire, goat, cattle and sheep grazing with devastating effects, and deforestation by burning in order to expand agricultural lands. One should, also, consider the significant growth of the population, a factor that led to economic development and, consequently, to the expansion and restructuring of urban settlements which, in turn, impacted forested areas. Forests were a focal point in the life of the urban and rural population alike.

The introduction of wood-saving measures was only moderately

fore, the name “Ziegenwald” could derive from the word “Zäke” which means “mosquito”. The oak forest enclosing a hilltop close to the town of Reghin was planted in 1727. Haltrich “Zur Geschichte von Sächsisch-Regen,” 280.

155. Ziegler, “De re sylvestris,” 14.

156. Maypoles had been symbols of spring until the beginning of the twentieth century. In Sighișoara they used to say, “On the 1st of May I fetched a maypole from the forest” (in the Transylvanian Saxon dialect: Um erschten Moa hadde mir es Moan eos dem Bäsch brocht). Saxon lads would place them under the window of their beloved, while the mayor, guild masters, and “Nachbarschaft” leaders expected them to be set up before their homes and in village squares. Maypoles were also used to announce a wedding. Because this custom required the felling of many trees, thus taking a toll on forests, maypoles were banned by Royal Decree no. 2458 of 1783 and then by the Forestry Act of 1857. Carl Göllner, *Im Kreislauf des Jahres. Historisches Brauchtum der Siebenbürger Sachsen* (Bucharest: Kriterion, 1987), 65-8.

157. Siegmund, *Quellen*, 49-50, Protocol of 14 March.

successful. In Saxon towns, town halls made every effort to implement the measures introduced by the central and provincial government as strictly as possible. However, the Hungarian, Szekler and Wallachian regions these measures were fully implemented only in the 19th century.