

Appendix 1. Methodology

Selection of bog regions and local case studies

Our approach started with the geographical delineation of the study in relation to data availability and quality. Case studies were selected using the criteria of appropriate regions and pertinent local cases. Bogs in the early modern Low Countries ranged from vast bog landscapes to small and isolated bogs. A first action was to identify potentially suitable bog regions and to analyse if they were large and were used as commons for a long period.

We concentrated on large bog regions for two reasons. Firstly, our interest in the significance of commercial peat exploitation makes it logical to focus on large bog landscapes with substantial peat reserves, rather than small bogs with minor peat stocks. Secondly, it is a priori more likely to find sufficient relevant sources for large bog areas.

We focused on bog regions where common lands continued to exist throughout early modern times and were not reclaimed or privatised for large-scale commercial peat exploitation. This principle was ordered by research questions 1 (about the property and use rights situation) and 4 (about the long-term impact of commercialisation).

As a result, we concentrated on two large bog regions in the south-eastern Low Countries where both selection principles are met: the Peel and the Hautes-Fagnes (**Figure 1**).¹

A second action was to select suitable local cases within these bog regions, as it was impossible to sufficiently study the two entire regions in-depth. As a starting point, we used published evidence hinting at commercialisation from bog commons at different times between c. 1600 and c. 1800, and at specified locations within the regions (Barkhausen 1925; Froment 1968; Moureaux 1974; Boeije and Philipsen 2001, 2002; De Ladoucette 2009). The next step was to select suitable cases from this collection of reported occurrences. Suitable cases needed to meet two conditions. First, there had to be enough sources to answer most research questions. Second, scientific publications contextualising the functioning of common lands had to be available for the specific areas and periods in which these cases were located. These steps benefited from interviews with experts with a good overview of (archival) sources in the field of our subject.² Based on these steps, we selected the *Bakelse gemeint* (located in the Peel) and the *commune de Xhoffraix* (in the Hautes-Fagnes) as local cases (**Figure 1**). Their geographical and historical contexts are described in section 3.

¹ Most former bog regions of the western, central and northern Low Countries have ceased to function as commons in medieval or early modern times (Gerding 1995; De Bont 2008; Jongepier et al. 2011; Leenders 2013).

² We interviewed Dr Bruno Dumont (State Archives in Liège), Dr Elmar Neuß (University of Münster) and Dr Nicolas Schroeder (Université libre de Bruxelles) for the Hautes-Fagnes, and Ludo Boeije MSc (Heemkundekring H.N. Ouwering, Deurne), Piet van den Munckhof MSc (Dutch State Forestry Service), and Dr Lia van Zalinge-Spooren for the Peel region.

Overview of sources per research question

Relevant sources were identified using the online archival search engines <https://www.archieven.nl/en/> and <https://search.arch.be/en/>, and through the aforementioned expert interviews. Below is a detailed overview and discussion of the sources used for each research question.

Area-specific information on the functioning of common lands in the studied time periods and on the early modern property and use rights status of the studied bogs (research question 1) was taken from Van Zalinge-Spooren (2018) and Hansotte (1987). As Hansotte (1987) was not specific for the *commune de Xhoffraix* case, this publication was complemented by a relevant primary source published in Polain (1864).

Traditional commons scholarship has often focused on bylaws, prescriptive ordinances, and other normative sources (Brakensiek 2015: 55-6; De Keyzer 2018: 44-5). These source types were in particular of relevance to our research questions 2 and 3. However, because our questions forced us to also consider the wider historical, political, and socio-economic contexts of the studied commons, several other source categories were relevant to our analysis as well.

For the second research question, on the significance of peat commercialisation, we used archival sources with dated records of peat commercialisation. For the *Bakelse gemeint*, these consisted of lists of peat sold to outsiders, mostly including names of sellers and buyers, the amount of peat sold and its destination, but without monetary amounts (Gemeentebestuur Helmond 1613-1619). Occasionally, the lists seem somewhat unclear (cf. Boeije and Philipssen 2002). Given that the community of Bakel was ordered to register peat sales and provide the lists to the other entitled communities of the *Bakelse gemeint*, this source may underestimate the actual volume of peat sold. Still, we considered this a valuable source, since quantitative data about early modern peat commercialisation are otherwise very rare, and this source allows us to make at least a conservative estimate of its magnitude. In the *commune de Xhoffraix* case, we used the abbatial paper mill's detailed registers of individual expenses (Abbaye de Stavelot-Malmedy 1754-1793). The paper mill was in fact state-owned, but operated commercially (Kaefer 1971: 16-18). The registers contain names and residences of people who supplied peat, the volumes involved, and the remuneration they received.³ Given the reason for their production, and their high level of detail and consistency, we consider these accounting records to be reliable and complete. For every decade one archive item was randomly selected from the archive, yielding a sample of five periods (ranging from 12 to 30 months) for our analysis.

The third research question relates to motives for peat commercialisation and attitudes of other actors involved. Central to the *Bakelse gemeint* case were court documents of a lawsuit filed against Bakel by the other entitled communities (1608-1620). It was conducted before the Council of Brabant, the highest court in the duchy. The documents inform about the motives of commoners selling peat and the viewpoints of those opposed, and of local authorities as well as the judicial officials involved. The course

³ Between 1766 and 1793, those who brought peat to the paper mill received 5-11 *escalins* per cart load. This is lower than the high price of 18 *escalins* per cart load of peat fuel noted for the town of Malmedy during the severe winter of 1788 (Lacaille 1772-1802). However, these amounts were well above the 10 *patards* (c. 1.67 *escalins*) that were mentioned as the price for the mere carriage of peat (Abbaye de Stavelot-Malmedy 1754-1793). From this we conclude that the peat supply to the Malmedy paper mill was generally of a commercial nature.

of this long lawsuit has been summarised by Boeije and Philipsen (2001, 2002). Our analysis is largely based on these publications. Given the nature and background of the lawsuit documents, we cannot exclude that certain claims were exaggerated or misleading. Nevertheless, the documentation is comprehensive and reflects multiple perspectives. For the *commune de Xhoffraix case*, sources were relatively scarce. Published primary sources provide insights into the central government's attitude towards unauthorised peat cutting (Polain 1864: 354-5) and, combined with data on villagers' services to the territorial lord (Abbaye de Stavelot-Malmedy 1736-1766) and peat supplies to the paper mill, into the possible socioeconomic background of peat commercialisation.

The fourth research question concerns long-term impacts of commercialisation on the peat resources and the common-pool institutions. We based this analysis mainly on secondary sources. Boeije and Philipsen (2001, 2002) and Van Zalinge-Spooren (2018) summarised the long-term evolution and conflict dynamics of the *Bakelse gemeint* common. The latter source also provides information on the spatial progression of peat extraction. Thissen (1993) gives details about the reclamation of the *Bakelse gemeint* for agriculture and forestry after 1850. For the *commune de Xhoffraix*, Collard and Bronowski (1993) provide information on twentieth-century bog ownership and vegetation ecology, allowing us to answer this research question.

REFERENCES NOT CITED IN MAIN TEXT OF THE ARTICLE

De Bont, C. (2008). *Vergeten land. Ontginning, bewoning en waterbeheer in de westnederlandse veengebieden (800-1350)*. Doctoral dissertation. Wageningen: Wageningen University. PID: <https://persistent-identifier.nl/urn:nbn:nl:ui:32-369604>

Jongepier, I., Soens, T., Thoen, E., Van Eetvelde, V., Crombé, P., & Bats, M. (2011). The brown gold: a reappraisal of medieval peat marshes in Northern Flanders (Belgium). *Water History*, 3, 73–93. DOI: <https://doi.org/10.1007/s12685-011-0037-4>