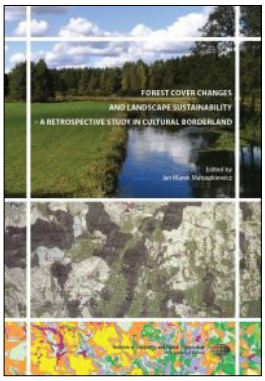
Forest Cover Changes and Landscape Sustainability – A Retrospective Study in Cultural Borderland, ed. by Jan Marek Matuszkiewicz, Institute of Geography and Spatial Organisation, Polish Academy of Sciences, Warsaw 2020, 397 pp.

Changes in forest cover have long been associated with the ebb and flow of European civilisation, as symbolised by landscape colonisation. Ever since Tacitus, woodland has been the barbarian antithesis of culture,



and any advance in agricultural land clearance was for a long time seen as something to be encouraged, especially in that hallmark of the High Middle Ages called the Great Clearances. More recently, however, deforestation has taken on a much more problematic image as essentially the symbol of the destruction of nature by humans; and any number of empires and civilisations from Easter Island to the Maya are claimed to have owed their downfall to cutting down their forests (and somehow preventing regeneration, one should add). Historical geographer Michael Williams' vast survey *Deforesting the Earth* is a chronicle of this process on a planetary scale. On the flip side of the coin, reforestation is now seen as a universal means to mitigate the effects of global warming, including far-fetched plans, such as the Great Green Wall in the Sahel.

There are many ways to study forest cover change, including palaeoecological sources and methods (e.g. pollen analysis or anthracology) as well as historical ones. The collection of essays under review here, entitled *Forest Cover Changes and Landscape Sustainability – A Retrospective Study in Cultural Borderland*, has chosen the second option and the well-trodden path of historical GIS. Under the editorship of Jan Marek Matuszkiewicz, this book was written by ten authors joining forces in various combinations for the individual chapters, of which there are fourteen. Published by the Institute of Geography and Spatial Organization of the Polish Academy of Sciences, the book appears to be the translation of an earlier Polish version, even though the exact relationship between the two works is not specified in detail. In any case, with the Polish text already available for local audiences, the English version has been clearly intended for an international readership. It is, therefore, with this in mind that I have read through the 396 pages of the volume. At this point, I am afraid, I need to mention the quality of the English in the book, which varies between the individual chapters but in general leaves a lot to be desired, starting with, alas, the very title.

After the rather cursory Introduction, which says little about why the book was written or what the reader may expect from it, Chapter One explains the physical and geographical characteristics of the study area, which includes some 2800 km^2 in what used to be the Polish-Prussian borderland. Chapter Two introduces in great detail the historical and recent maps available for the area and the process of selecting those suitable for the target analyses. This being a border area with

somewhat different mapping traditions on either side of the boundary, locating sufficiently homogenous datasets was a great challenge, and its author (Jacek Wolski) must be congratulated on his remarkable effort. The generally positive experience is somewhat spoilt only by tell-tale spelling errors in some of the original German expressions ('nafse' instead of 'nasse', 'hultung' instead of 'huttung'). Chapter Three informs the reader how the maps were processed in GIS. Chapter Four brings in the concept of potential natural vegetation, arguably the most influential product of twentieth-century phytosociology (a particularly European way of plant community description). Potential natural vegetation connects the geological and environmental characteristics of a site with what is known about plant community assembly and succession to create an essentially static image of vegetation cover that would develop if people somehow disappeared overnight. Potential vegetation maps have been produced in many regions and resolutions, and a very detailed map was created for the present volume with exhaustive supporting information even though I could not interpret Table 4.3 in its current form. Chapter Five introduces the results on forest cover change obtained from data described in Chapters Two and Three. As basically expected, deforestation peaked in the late nineteenth century and was followed by afforestation, especially in the early years of the communist regime, similarly to other countries in the region. Chapter Six neatly connects the previous two chapters to examine which habitat types changed the most. Already this chapter introduces the concept of 'sustainable landscape', which will assume high importance in later chapters. Chapter Seven, one of the longest in the book, analyses landscape changes in an original, if somewhat technical manner, focusing on various types of decrement and increment. Chapter Eight is a traditional narrative history of the area and, as such, provides welcome background information to the study site. Chapters Nine and Ten deal with wild animals in the region and were, for the present reviewer, among the most interesting in the entire book. Reconstructing animal pressure for periods before modern statistical surveys is a major challenge and the general conclusion of the chapter that current high animal numbers are historically unique is very significant. Chapter Eleven analyses forest landscape development from the perspective of ecological services, a concept that gained high political importance especially through the Millennium Ecosystem Assessment of 2005. Chapters Twelve and Thirteen continue with sustainability and use select rules from the Rio Declaration, human ecology, and Polish legislation to evaluate much of the data described in previous chapters in a complex manner. Chapter Fourteen rounds up the book with a short evaluation of landscape sustainability using less formalised methods inspired by the NATURA 2000 system.

There is clearly a huge amount of work behind this volume. The combination of various disciplines from cartography to history to ecosystem service analysis and the meticulous and time-consuming processing of the sources effectively make this bit of Poland one of the best-studied areas in the whole of Europe, offering many opportunities for thought-provoking comparisons. In this context, I think it is a pity that the authors did not put more emphasis on presenting their findings in an international context. There are exceptions (such as Chapter Eleven by Andrzej Affek), but I generally feel that much of the material was the English version of texts prepared for a Polish audience. This naturally has its own niche in scholarship but appears to be somewhat of a missed opportunity for the present volume. To name but a few topics: 'forest transition' is a central theme in international research describing the

change from deforestation to net forest area growth that happened from the 19th century onwards practically everywhere in the global north. Clearly, the Masuria-Kurpie case forms parts of this global trend, and I would have very much welcomed an interpretation of the results in this context. Potential natural vegetation is a tried-and-tested system; however, there have recently been many heated debates around the concept (especially 'climax' vegetation), its historical contingency as well as its potential uses and misuses – it would have been again very instructive to read how the results of the present volume may contribute to these discussions. The term 'forest' is far more problematic than the present volume suggests, to bring another example. No ink has been spared in recent literature on making a difference between contemporary landscapes, where the forest–non-forest boundary is sharp and preindustrial landscapes, where it was often difficult to tell where one land cover ended and another one started. This – combined with coeval mapping techniques – naturally affects any results gained from historical maps. Without relativizing the volume's conclusions, it would have been useful to see these matters discussed in the same amount of detail (especially regarding interpretation) as was devoted to the 'accuracy' of various maps.

Another important issue for a volume of this type is whether or not it works as a whole. Here I think the authors (and especially the main editor) did an admirable job. Inevitably there are unnecessary repetitions (the sets of maps used to detect forest cover changes are described several times, both Chapters Eleven and Twelve start off by referring to the Brundtland Commission, etc.), but the book reads well as a whole: the data-oriented chapters at the beginning merge seamlessly into the more analytical ones at the end. Once again focusing on an international audience, I think it would have been better to place the historical chapter somewhere at the beginning because non-Polish readers will find the intricacies of Polish history difficult to comprehend, and the historical outline presented in Chapter Eight would have made understanding the rest of the volume much easier. At the same time, many of the chapters can also be read as stand-alone essays as well, undoubtedly a useful feature for a volume of this size and complexity that few will read from cover to cover. In general, I do recommend the volume for all those interested in historical geography, forest change and sustainability studies. Making the results of this significant effort by a large group of Polish scholars available in English is a welcome addition to a growing body of literature on the historical relationships between forests and human societies. ■

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