

Effective arguments for ecosystem services in biodiversity conservation – A case study on Finnish peatland conservation



Eerika Albrecht ^{a,*}, Outi Ratamäki ^b

^a Department of Historical and Geographical studies, University of Eastern Finland, P.O. Box 111, FI-80101 Joensuu, Finland

^b Law School, University of Eastern Finland, P.O. Box 111, FI-80101 Joensuu, Finland

ARTICLE INFO

Article history:

Received 11 March 2016

Received in revised form

30 August 2016

Accepted 15 September 2016

Keywords:

Argument analysis

Ecosystem services

Biodiversity conservation

Peatlands

ABSTRACT

Political and socially constructed arguments about values and benefits originating from ecosystem services (ES) may improve the effectiveness of biodiversity conservation. In this article we show how effective biodiversity conservation is dependent on stakeholders' rhetorical skills and their ability to introduce persuasive arguments for the target audience. We present a case study of a lengthy conflict to protect a mire area located in Eastern Finland. We follow locally constructed arguments and analyse their effectiveness with different audiences. Research data consist of interviews, newspaper articles and legal documents. Employing content analysis, we study the ES identified by different stakeholders and analyse the effectiveness and sources of arguments presented on behalf of those services. We differentiate between legal and political effectiveness as many ES arguments were effective in sustaining the prolonged conflict locally but ineffective in administrative courts. Legislation and scientific evidence are identified as the main sources for an effective argument in legal proceedings. This case is an example of how local residents require support from scientists in order to formulate effective arguments for legal audiences. Valid arguments for legal institutions are based on the protection of individual species or biotypes whereas political processes are more responsive to local ES valuations.

© 2016 Elsevier B.V. All rights reserved.

1. Introduction

Recent ecosystem services (ES) literature emphasizes the need to broaden the valuation language beyond economic or ecological values (Hauck et al., 2013; Gómez-Baggethun and Martín-Lopez, 2015; Jackson and Palmer, 2015; Combetti et al., 2015). One way to approach this is to pay more attention to the empirical analysis of the social construction of ES. In this article we investigate the role of arguments in the valuation of the ES. Political and socially constructed arguments about values and benefits originating from ES may improve the effectiveness of biodiversity conservation (Primmer et al., 2015; Bugter et al., 2015). Our approach does not only reveal the political nature of ES valuation but is also relevant in terms of understanding why and how people value biodiversity and what it means to them in local human–environment systems (Fisher and Eastwood, 2016; Vihervaara et al., 2012, 59).

In this paper we show how ES can be valued and identified in various ways by different stakeholders but also how challenging it is to present these arguments in political and legal arenas. It has been discussed how ES discourse translates scientific arguments on ecosystem functions and biodiversity to the public and policy

makers but remains ineffective in legal proceedings as current environmental legislation aims at biodiversity conservation or reduced environmental pollution (Newig, 2007). Political structures and norms, e.g. legal norms, pose restrictions regarding what will be considered a valid argument, which values will be discussed or handled in policy-processes and ultimately how one can construct an effective argument.

This article introduces and analyses a Viurusuo mire which is a raised bog of 360 ha located in eastern Finland (see Picture 1). A peat mining company (Vapo Ltd) applied for an environmental permit for peat extraction at the Viurusuo mire in 1995 which resulted in 18 years of conservation conflict. Our investigation focuses on the battle between different valuations of ecosystem services and specifically evaluates the effectiveness of the arguments presented on behalf of those services. We will show how formulating the 'right' kind of arguments is highly dependent on the audience to which the argument is targeted at and on the socially constructed context where the arguments are presented. Viurusuo is a good case to analyse the contested ES arguments out of two reasons: first, the conflict lasted long and thus it is possible to analyse the endurance and adjustment of the arguments over time; secondly because peat is a contested natural resource as its energy use has high impacts on biodiversity and alters the balance of ecosystem services (ES) provided by peatlands.

* Corresponding author.

Peatlands provide various ecosystem services, such as flood management and control, agricultural land, room for recreation, etc. (Kondelin et al., 2006). Peat extraction causes trade-offs as increases in one ES category reduces provisions for other ES categories (Martín-López et al., 2014; Rodríguez et al., 2006). Other ES are degraded when a mire is drained and transformed into a peat extraction site. In this paper we use the term mire which is commonly used as a sub-category for peatlands (Lindholm and Heikkilä, 2006; Chapman et al., 2003; Seppä, 2002). In Finland mires and peatlands cover about one-third of the land area (Korhonen et al., 2008). More than half of the 9.3 million hectares of peatland has been drained for agricultural and forestry purposes since the 1950's (Lindholm and Heikkilä, 2006). Peatlands are still under pressure as Finland is the number one peat extractor in the world with about 60,000 ha under exploitation (Ylönen and Simola, 2012; Chapman et al., 2003). The main mire types in Finland are aapa mires and raised bogs (Laitinen et al., 2007).

This article contributes to the ES valuation literature by analysis of arguments and their effects. In our study we record the ES identified by the major stakeholders during the 18-year conflict over the conservation of Viirusuo mire. Further on we investigate how local people value ecosystem services and what kind of role their argumentation had during the conflict to protect the Viirusuo mire. Additionally, our case demonstrates how scientific knowledge feeds to real-world decision making in a local conservation conflict. Our research questions are: (1) what kinds of ecosystem services did the stakeholders of the Viirusuo conflict identify and what were the arguments used in defending the importance of these services, (2) what arguments were effective and how, and (3) what were the sources of effectiveness in the argumentation? (Fig. 1).

2. Arguments and their effectiveness

In our analysis we use argumentation theories and the concept of effectiveness. We approach argumentation analysis as presented by Perelman and Olbrechts-Tytecas (1969). In their work

the purpose of argumentation is to convince the audience and induce them to change their convictions. Perelman and Olbrechts-Tytecas analyse the ways to make arguments more persuasive by focusing on rhetoric. The practitioner of argumentation is referred to as a rhetor, who is skilled in rhetoric and capable of varying the type of argumentation according to the audience: "Knowledge of an audience cannot be conceived independently of the knowledge on how to influence it" (Perelman and Olbrechts-Tytecas, 1969, 23; Long, 1983, 110). Our analysis does not go into a detailed analysis of the rhetorical tools used by the stakeholders but the idea of audience is relevant here..

The rhetorical approach focuses on argumentation as a process of producing an effect (Van Eemeren and Grootendorst, 2004, 1984). Arguments are evaluated on the basis of their effectiveness, which is gained by approbation (Van Eemeren and Grootendorst, 1984, 17). A linguistic unit is not automatically an argument but becomes one during a communicative process aimed at achieving a particular objective (Van Eemeren and Grootendorst, 2004, 3). In order to be effective an argument needs to carry through the process and influence the end result. The Viirusuo conflict is both a legal and a political battle, which is why we separate the effectiveness of arguments in terms of their outcome on the legal and political processes. In the Viirusuo case the end result, against which their effectiveness will be evaluated, is the legally binding decision to protect the mire as well as the ability to bind stakeholders for a lengthy political process.

However, we are not only interested in the direct links between an argument and the final decision to conserve Viirusuo but also in any other minor and indirect effects caused by the arguments during different phases of the process. Here the effectiveness of an argument means that it has caused a change in the state of affairs which contributes to the acceptance of the idea of conserving Viirusuo during the process. The growth of acceptance is, however, difficult to measure. One indicator is to follow what happens to the counterarguments. If an argument succeeds in suppressing or silencing counterarguments, it has been effective. This often results in a change of strategy or behaviour on behalf of the representatives of the counterargument. Sometimes the

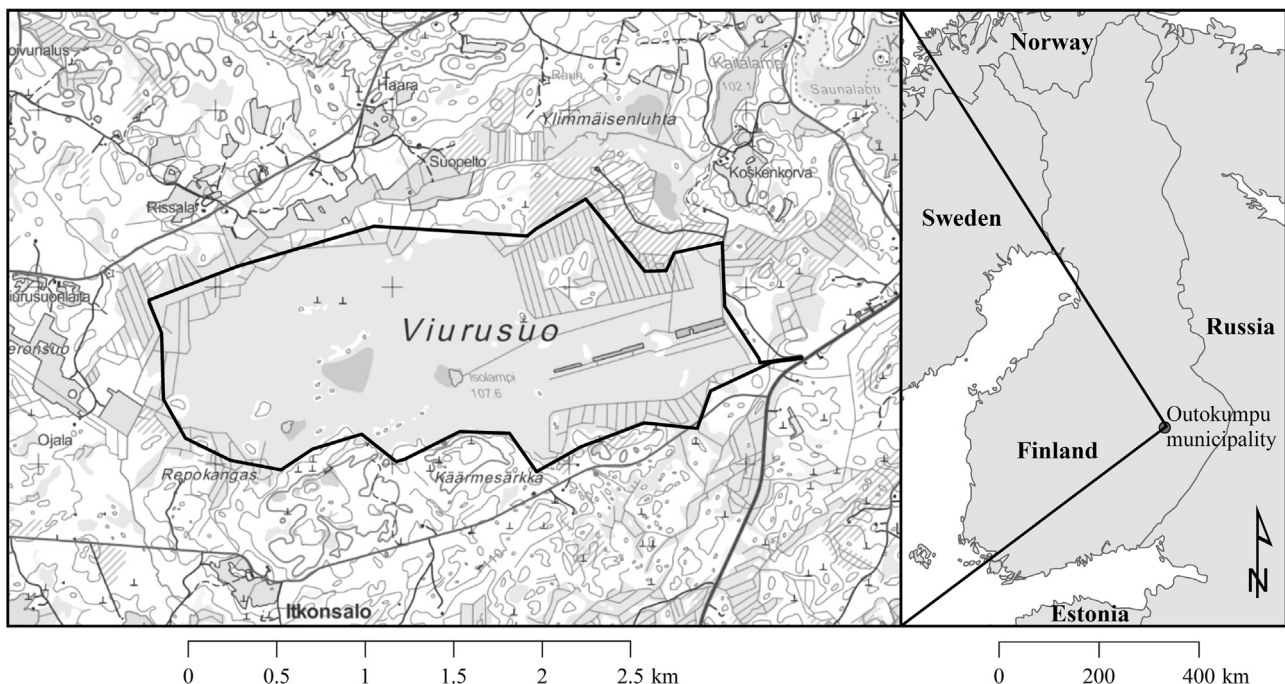


Fig. 1. Map of Viirusuo mire, Outokumpu Finland. (© NLS, Esri Finland/cc by 4.0, Finnish Environment Institute, Esri Geoportal Server 1.2. <http://creativecommons.org/licenses/by/4.0/>).

Download English Version:

<https://daneshyari.com/en/article/4761637>

Download Persian Version:

<https://daneshyari.com/article/4761637>

[Daneshyari.com](https://daneshyari.com)