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Analysis

Reasons for Adoption and Advocacy of the Ecosystem Services Concept in UK Forestry

Susanne Raum

Centre for Environmental Policy, Imperial College London, 14 Prince's Gardens, London SW7 1NN, United Kingdom

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ABSTRACT

The ecosystem services concept has enjoyed widespread interest and recognition in recent years. In particular, the monetary valuation and commodification of ecosystem services in form of payments for ecosystem services schemes and the development of new markets for ecosystem services has appreciated large popularity. However, who is behind this strong momentum towards ecosystem services and especially why is less well known. In this paper I aim to shed light on this by looking specifically at advocates of the concept of ecosystem services, using forestry in the United Kingdom (UK) as an example. I explore the motivations for accommodating or actively pursuing ecosystem services thinking in this important sector through interviews with forestry and conservation experts. Four prominent groups with a specific interest in the ecosystem services concept in the context of UK forestry are governmental organisations, non-governmental conservation organisations, private forest owners, and the timber and forest industry. These stakeholder groups are interested in this new perspective, chiefly, but not exclusively, because (1) it is required under international obligations; (2) it is in line with dominant market political philosophy; (3) it holds the promise to include the environment more fully into prevailing economic decision-making processes; (4) it can help to draw more attention to biodiversity conservation; (5) it holds the promise of new sources of income from both public and private sources; and (6) it can be used as a convenient argument to promote further tree planting. However, these groups have different, but frequently overlapping reasons for pursuing this new perspective. The results provide a baseline and important insights into who was embracing ecosystem services thinking and why during the early years of the adoption of this approach in the UK.

1. Introduction

The ecosystem services concept has enjoyed widespread interest and recognition in recent years. In particular, the monetary valuation and commodification of ecosystem services in form of payments for ecosystem services schemes and the development of new markets for ecosystem services has appreciated large popularity (Gomez-Baggethun and Ruiz-Perez, 2011; Kull et al., 2015). However, in the UK forestry sector, identifying and placing a value on the non-marketed benefits of forests is not an entirely new concept. In fact, the notion of nature's services has been around since at least the 1960s under various names, such as multiple forest benefits and non-marketed benefits (Mather, 2001; Quine et al., 2013). The expectation then was that by highlighting the monetary value of the non-timber benefits provided by forests these could be more fully taken into account in decision-making (NAO, 1986). In 1972, for instance, the treasury, in response to criticisms to the government's state-funded reforestation programme, reviewed the overall costs and benefits of British forestry. The review gave particular attention to the non-commercial forest benefits of landscape amenity and recreation (HM Treasury, 1972). Remarkably, the study concluded that even though afforestation failed to produce the 10% return expected from public sector investment, forestry would still be economically viable when recreation and amenity benefits were taken into account (HM Treasury, 1972; Raum and Potter, 2015). In the 1990s, there had been another shift in UK forestry policy, this time towards balancing the economic (i.e. timber), social and environmental objectives of forestry (Quine et al., 2013). Other policy areas, especially those linked to biodiversity conservation, climate change and renewable energy were also increasingly affecting land use and forestry policy (Raum, 2017). Moreover, the growing influence of market-based approaches in international forestry agreements (e.g. MCPFE, 2015; UN, 2007), and the focus on ecosystem services and their contribution to human wellbeing in the Millennium Ecosystem Assessment (MA, 2005), has created a particularly strong interest in the goods and services that nature, including her forests, provides (Chaudhary et al., 2015).

This is indicated by a gradual shift in language in international and national documents. For example, whereas the voluntary UN Forest Principles (UNCED, 1992) stressed the need for the "incorporation of

E-mail address: s.raum@imperial.ac.uk.

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environmental costs and benefits into market forces and mechanisms in order to achieve forest conservation and sustainable development", the Non-legally Binding Instruments on all Types of Forests (NLBI) (UN, 2007) specifically emphasised the importance of ecosystem services valuation and the marketplace (Humphreys, 2009). The latter encouraged the "recognition of the range of values derived from goods and services provided by all types of forests and trees outside forests, as well as ways to reflect such values in the marketplace, consistent with relevant national legislation and policies" (UN, 2007). In Europe, the Ministerial Conference on the Protection of Forests (MCFPE) process in its 2015 Madrid Ministerial Resolution 1 also committed itself to "incorporating the value of forest ecosystem services in a green economy", including through tools such as "market-based instruments and payments for ecosystem services" (MCPFE, 2015). The UK forestry sector has been influenced by these trends. The Government's response to the 2012 Independent Panel on Forestry UK Forestry Report (IDPF, 2012), for instance, stressed the "scope for developing new markets" for the provisioning of non-marketed services (Defra, 2013). Moreover, in recent years, a number of forestry workshops and conferences have been convened to explore how best to apply ecosystem services thinking to forestry policy and practice (Mason and Mencuccini, 2014; Raum and Potter, 2015). The Forestry Commission also made a clear reference to ecosystem services in its revised 2011 UK Forestry Standard[1] (Forestry Commission, 2011). However, the explicit reasons and motivations for this growing interest in ecosystem services, their valuation and marketization beyond the above and other international stimuli are less well understood.

The literature has identified a number of advocates of the ecosystem services concept; only very few papers, however, have also provided empirical evidence for the reasons of their specific interest. Ecologists and economists generally tend to be considered as the leading academic proponents of ecosystem services (e.g. Braat and De Groot, 2012; Chaudhary et al., 2015). Chaudhary et al. (2015), for instance, demonstrated how the concept emerged from the research of US economists and ecologists who were concerned about natural resource depletion and environmental degradation. The subsequent inclusion of ecosystem services into global and national ecosystem assessments (e.g. MA, 2005; UK NEA, 2014) to highlight the linkages between ecosystem changes and human well-being, has naturally also been led by ecologists (Kull et al., 2015). Conversely, a number of non-academic ecosystem services advocates and users have been acknowledged too. Sullivan (2009), for example, pointed out how international conservation charities have embraced market-based approaches to financing conservation activities. The Nature Conservancy, Conservation International, and the World Wide Fund for Nature, especially, were embracing payments for ecosystem services (PES) as a key tool for generating and distributing the money required for conservation (Sullivan, 2009). Moreover, Fisher and Brown (2014) observed how major conservation organisations in the US, UK, and Uganda have interpreted and used the ecosystem services concept, especially in the context of forest conservation. Sullivan (2009) also highlighted the new investment opportunities from innovative markets for ecosystem goods and services and various other ecological products, and the accompanying array of brokers, investors, and financial advisors promoting these. In particular, the new trade in carbon, following the ratification of the UN Framework Convention on Climate Change's (UNFCCC) Kyoto Protocol in 2005, has provided a model on which other new market schemes could be developed. Indeed, websites abound with names such as 'Ecosystem Marketplace', 'Species Banking', and 'Climate Change Capital' (Sullivan, 2009).

Still, the concept of ecosystem services seems to have been used in various ways by a wide range of stakeholders and to justify and support different types of activities and objectives (Kull et al., 2015) which tend to be less well understood. In this work, I attempted to fill this gap in the contemporary ecosystem services debate which has placed much emphasis on the theoretical and practical applications of the concept and less on who is using it and the reasons for this. In the UK, for example, ecosystem-based approaches only began to be formally introduced in 2007 when the Department of Environment, Food and Rural Affairs (Defra) produced its first ecosystem approach action plan (Defra, 2007b) and supplementary practical guidance on valuing ecosystem services (Defra, 2007a). Although there have since been numerous activities, frequently linked to the UK National Ecosystem Assessment (UK NEA) (NEA, 2011), and various policy statements of intent around ecosystem services, relatively little is known about how the concept has actually been embraced by stakeholders and of their reasons and motivations, especially on the sector level. The forestry sector offers a particularly interesting case to examine ecosystem services advocacy and use, given its long history of interventions framed within a series of forestry policy paradigms (Raum and Potter, 2015); each devised and promoted to deal with competing interests of numerous stakeholders who are using the same resource for different purposes (Grumbine, 1994). The main aim of this study, therefore, was to investigate why certain interested parties seem to have been actively promoting the idea of ecosystem services during the early years of the concept's adoption, using the forestry sector as an example. The emphasis was on examining why a number of stakeholder groups were interested in the concept of ecosystem services rather than on producing a comprehensive quantitative understanding of who had an interest in this new concept and to which degree.

2. Approach and Methods

For the purpose of this research, I used a qualitative and interpretive approach centred on textual information, to better understand the reasons for certain stakeholders' particular interest in the ecosystem services concept. The emphasis was on the interpretation of the text derived from interviews and placed in context. Interpretivists propose that social action, processes and phenomena must be understood by comprehending individuals', groups' or organisations' motives and views (O'Brien, 2003). The advantage of this approach is that it provides substantive information on stakeholder motivations and perspectives in a real life situation (Savin-Baden and Howell-Major, 2013). This study builds on an unpublished exploratory analysis (Raum, 2016) of stakeholders with an interest in and an influence over woodland ecosystem services in the UK. The analysis suggested that there was a difference between stakeholders who were interested in the actual ecosystem service(s) and those who were interested in the concept of ecosystem services for various reasons. The former group was explored in more detail in the exploratory work; the latter is given particular attention here. They included governmental organisations, such as the Defra and the Forestry Commission, conservation organisations, including the Royal Society for the Protection of Birds (RSPB) and the Wildlife Trust(s), private woodland owners, and the timber industry. For the purpose of this analysis, they were placed into four groups.

The empirical analysis was based on textual data obtained from interviews conducted between April 2013 and July 2014. 12 UK based forestry and conservation experts were selected through a combined purposive and snowball sampling approach and then interrogated through semi-structured interviews. Typically, I questioned experts with an understanding of both UK forestry and ecosystem services. The interview candidates consisted of a cross-section of respondents from governmental organisations ($n = 6$), non-governmental conservation organisations ($n = 4$), and private sector forestry organisations ($n = 2$), one of which represented the timber industry, the other private forest owners. The interviews were conducted both over the phone and in person, recorded and then fully transcribed. The analysis was based on the following guiding interview questions:

[1] The first 'UK Forestry Standard', published by the Forestry Commission in 1998 outlined the government's approach to sustainable forestry (Forestry Commission, 1998).