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Mainstreaming biodiversity in economic sectors: An analytical framework



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ABSTRACT

One of the major challenges in halting biodiversity loss is finding ways to address the issue in places where it would matter most; in the economic sectors of society that exert the strongest pressures on biodiversity such as agriculture, forestry and fisheries. Governments have acknowledged the need for this so termed mainstreaming under the Convention on Biological Diversity, but in practice have made little progress and struggle to find ways forward. In this paper we argue that the concept of mainstreaming was originally developed for situations where governments or intergovernmental organizations with explicit public mandates took the lead, but it is increasingly extended into various governance contexts where multiple types of actors at different levels (could) engage in conserving biodiversity. This paper aims to enable the identification of innovative repertoires of mainstreaming opportunities that optimally and realistically benefits from the broader governance context. Therefore it presents a framework, consisting of institutional, motivational and means dimensions for identifying key barriers and levers for mainstreaming biodiversity into economic sectors. By applying the framework on the forestry sector we show that it does not only help to identify new mainstreaming opportunities but it also shows directions for improving existing schemes as well.

1. Introduction

One of the major challenges in halting biodiversity loss is finding ways to address the issue in places where it would matter most; in the economic sectors of society that exert the strongest pressures on biodiversity such as agriculture, forestry and fisheries. Efforts to integrate a 'new' issue in a sectors that have not systematically addressed it have often been referred to as mainstreaming. In 2010 the need for mainstreaming in the field of biodiversity was recognised by the Convention on Biological Diversity (CBD) – captured explicitly in two of the five strategic goals in the Strategic Plan for Biodiversity 2010–2020: (CBD, 2010b)

- ✓ Strategic Goal A: address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society
- ✓ Strategic Goal B: reduce the direct pressures on biodiversity and promote sustainable use.

Mainstreaming became a central theme at various of CBD's Conferences of the Parties (COP) hereafter.

Mainstreaming is a popular concept used both in the academic analysis of policy, but perhaps even more in policy agendas and programs. It involves taking a specific objective of one issue domain and declaring that this objective should be integrated into other issue domains where it is not (yet) sufficiently addressed (Cowling et al., 2008; Nunan et al., 2012). In the political context it has been applied particularly for issues that have emerged as legitimate concerns against an earlier, to some extent conflicting policy context, such as environment in the broad sense, climate change (mitigation and adaptation), gender and human rights. The concept of mainstreaming was first used in the European Union as a policy instrument for the operationalization of 'the integration principle' in the environmental policy domain (Halpern et al., 2008).

An underlying rationale for promoting a strategy of mainstreaming biodiversity or broader environmental issues is the realisation that the causes of the problem in question lay within the remit of other policy domains or economic sectors. In the case of biodiversity it is clear that a sole focus on conservation policies (like in-situ, ex-situ conservation and limiting trade in endangered species) will have only limited impact in reducing biodiversity loss. It is in sectors such as agriculture, forestry,

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fisheries and aquaculture, mining, water management and energy production where the activities take place that drive biodiversity loss and towards which measures need to be targeted (Spangenberg, 2007), and thus where it would be important to mainstream biodiversity concerns (Marques et al., 2014).

However, mainstreaming biodiversity into economic sectors is not an easy process and progress has been slow or non-existent (Huntley and Redford, 2014). A majority of countries who have developed their National Biodiversity Strategy and Action Plans (NBSAPs) under the CBD find the mainstreaming of biodiversity into economic development to be a considerable challenge (Leadley et al., 2014).¹ There are multiple reasons for why it has proved to be so challenging to mainstream biodiversity into economic sectors including lack of knowledge and volition among those (inter)governmental actors that make policy in these sectors. The starting assumption for this paper is, however, that one part of the reason is the dominant focus on government led initiatives and the limited attention to the broader contexts of governance - with its diversity of actors and modes of steering - that are a common characteristic of these sectors. Better identification of opportunities for mainstreaming biodiversity in economic sectors requires an understanding of how and by whom such sectors are governed that moves beyond the governmental view of steering.

Over the past decades, the shift from government to governance has become the key concept denoting how contemporary steering of and in society works. Governance has numerous definitions, most of which share the elements of multiple types of stakeholders being involved and diverse mechanisms of steering being used at multiple sites and levels, resulting in a polycentric governance landscape (Lafferty, 2004; van Kersbergen and van Waarden, 2004). Governance poses fundamental challenges to understand what 'steering' and 'managing change' might imply in such diffuse, complex and multi-level networks that are characterized by for example more self-organization and diverse leadership (Pahl-Wostl, 2009) compared to top-down steering by governmental actors. This is not to say that governments do not have to play a role in the context of governance, but rather that they have to take into account this changing context and adjust their repertoire to make best use of the diversity of stakeholders that are involved and the variety of steering mechanisms that can be applied.

This paper aims to enable the identification of an innovative repertoire of mainstreaming opportunities that optimally and realistically benefits from the broader governance context. We argue that this requires a systematic analysis that will be enabled by a framework that: 1) draws on theories and experiences of governance; 2) identifies barriers and levers in a specific governance context; and 3) supports the identification of promising opportunities for mainstreaming of biodiversity. The main objective of this paper is to develop such a framework and illustrate its usefulness. The paper proceeds in the following steps. In the following (Section 2) we provide a brief overview of the literature on biodiversity and environmental mainstreaming with particular attention to trends that are relevant for mainstreaming biodiversity in contexts of governance. Next, we present our framework for mainstreaming biodiversity in governance contexts that draws on relevant social science and governance theory (Section 3). Then follows an illustration of how the framework can be used by applying it to the case of mainstreaming biodiversity in the global forestry sector through international certification schemes (Section 4). Finally we discuss some implications of the approach and draw some conclusions (Section 5).

2. Mainstreaming – from government led to governance contexts²

In this section we briefly describe the concept of mainstreaming and

its linkages to similar concepts and provide an overview of the literatures on biodiversity and environmental mainstreaming and the identification of some trends that are relevant for analysing the opportunities for mainstreaming biodiversity into economic sectors. This overview is based on a restricted literature review using the major databases including Web of Science and Scopus using search words as mainstreaming and integration combined with governance, environment, biodiversity and ecosystem services.

Mainstreaming is related to other concepts, such as environmental policy integration (EPI), interplay management and policy coherence, all strongly based in public policy sciences. Mainstreaming indicates a unidirectional movement of putting one issue more centrally on the agenda of another particular policy domain. Integration is interpreted in various ways, with some authors (Lafferty and Hovden, 2003) taking a principled priority position in which environment takes priority to other issues. Other authors regard policy integration as a more bidirectional process of merging the concerns of two domains (see for an overview (Jordan and Lenschow, 2008)). Interplay management usually implies pursuing collective objectives through conscious efforts by one or more actors to address and improve the interactions and effects of institutions (Oberthür and Stokke, 2011a). Finally, policy coherence describes a situation of synergy between different policy areas (Mickwitz et al., 2009) as well as an ability to deal with trade-offs and can be understood as the aim of policy integration or mainstreaming.

Specific literature on mainstreaming biodiversity emerged in the 2000s (see below) and onwards building conceptually on the literatures on mainstreaming environmental issues and climate change. Those literatures have, among other themes, provided insights on what factors make mainstreaming effective in government dominated contexts whether in: specific countries (Nunan et al., 2012; Roux et al., 2008), EPI in the EU (Gupta and Grijp, 2010; Jordan and Lenschow, 2008; Nilsson and Nilsson, 2005); donor and government driven contexts in developing countries (Kok et al., 2008; Persson, 2009; Snyder et al., 1996); or in international organizations and international policy domains (Kok and de Coninck, 2007; Oberthür and Stokke, 2011b). This literature has over time been further strengthened with efforts towards more systematic and conceptual elaboration (Runhaar et al., 2014) and empirically oriented studies on national or local mainstreaming implementation efforts both in developing and developed countries (Pasquini et al., 2015; Sietz et al., 2011; Wamsler, 2015), also addressing the question how to embed climate change adaptation in biodiversity conservation (Burch et al., 2014). Over time an emergent theme in this literature has addressed mainstreaming, for example of climate change adaptation, in contexts of governance (Butler et al., 2016).

The literature that focuses specifically on the mainstreaming of biodiversity looks at this issue in various production landscapes and sectors (Cowling et al., 2008); international policy domains (Kok et al., 2010), development planning and poverty reduction and national policies (Huntley, 2014), while overall lessons are drawn in Huntley and Redford (2014). The increasing attention to the concepts of ecosystems services and natural capital has provided a special impetus to the literature on mainstreaming biodiversity as these try to operationalise the benefits from nature for humans. One could distinguish between literature that focusses on mainstreaming ecosystem services conceptually in a more general sense (Greenhalgh and Hart, 2015; Guerry et al., 2015), the mainstreaming in specific policy domains such as climate change and disaster reduction, development planning and poverty reduction, water, agriculture and recreation (Pasquini and Cowling, 2015; Plieninger et al., 2012; Reyers et al., 2015), in specific policy frameworks such as landscape planning (Albert et al., 2014; Sitas et al., 2013) and municipal planning (Wamsler et al., 2014), and in cross-cutting policy tools such as (strategic) impact assessment (Kumar et al., 2013), accounting (Siddiqui, 2013) and environmental appraisal (Gazzola, 2013).

¹ See also Frentz (2006) quoted in Chandra and Idrisova (2011).

² This section draws partly on Karlsson-Vinkhuyzen et al. (2014b).

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