

Developing analytical framework for regulation of green infrastructure

Borgström, Suvi, Similä, Jukka and Primmer, Eeva

Finnish Environment Institute

Policy Mix Conference

Leipzig, Lille (France) 18-21 June 2013

Green Infrastructure (GI) is an emerging policy response aiming to govern the pressure from the intensive human use and habitat fragmentation on ecosystems and services they provision. Green Infrastructure, as a policy response, is not a single instrument, but a mix of various instruments aiming to support the overall policy goal to maintain and restore ecosystem services.

In this paper, we aim to build an analytical framework to assess existing and developing new regulation for GI policy. We start the building of our framework from the notion of that GI is a resource, which may be used over time in various ways for multiple purposes (Frischmann). While acknowledging the advantages of this approach, we recognize its limitations including the inability to address the issue of active conservation measures. We structure our analysis using a typology of instruments, including economic, command-and-control, planning, and voluntary instruments. We identify types of instruments from each category and the advantages and disadvantages of those instruments for enhancing the provision of wide variety of ecosystem services, enhancing the active conservation measures and landscape scale management will be assessed. We aim to make conclusions on conditions under which each instrument is likely to be effective. The factors affecting the suitability of the instrument are bio-physical, economic, and institutional. The bio-physical factors focuses on the characteristics of the resource and services it provides, including the renewal rate of the recourse, the scale of services provided, and the specific conditions required for producing the services. Economic factors include the degree and rate of rivalry among recourse uses, nature of services and goods derived from the recourse (excludability, non-market/market good, private or public good), and the nature of the recourse user (human, non-human, future generation). Finally institutional factors include the institutions needed for and affecting the successful use of the instrument.

While the overall aim of this paper is to create an analytical framework for assessing the suitability of policy instruments for green infrastructure policy, it also serves the purpose of identifying the potential gaps in current regulatory frameworks as well as needs for developing the instruments or creating new ones to better achieve the targets of GI policy. The hypothesis is that often the existing instruments provide little incentive to enhance the landscape level management as they are targeted for a single service, single land owners, or single land use, leaving those services that depend on a broader landscape level management unaddressed.