



Adaptations of the corporate Ecosystem Services Review to a territorial approach

Manon Pons¹, Cécile Leclère¹, Marie-Eve Reinert¹, Jeannette Sieber¹ & Christiane Weber²

¹ EIFER | European Institute for Energy Research

² CNRS-LIVE | Laboratoire Ville Image Environnement

E-mails : pons@eifer.org, leclere@eifer.org, reinert@eifer.org,sieber@eifer.org, christiane.weber@livecnrs.unistra.fr

Keywords

Ecosystem services, corporate Ecosystem Services Review, urban context, decision makers, mapping

Abstract

Urban territories have positive (natural habitat provisioning) and negative (fragmentation, pollution) impacts on ecosystems. City dwellers also benefit from diverse ecosystem services (ES) related to air and water quality or climate regulation, as well as noise reduction or water provisioning that improve their quality of life (TEEB, 2011). In the light of the current biodiversity crisis and growing urbanization, a framework to assess and to improve ES for urban territories seems crucial. Considering that approaches tackling ES are more developed for the private than for the public sector, we propose an adaptation of a corporate approach on reviewing ES to address this gap. Next, a combination of the corporate approach and its adaptation to urban context allows us to investigate the capacity of ES concepts to improve cooperation between local stakeholders.

The World Resources Institute, the World Business Council for Sustainable Development and the Meridian Institute jointly developed "the corporate Ecosystem Services Review" (cESR) in 2008. This five-step methodology aims at helping private decision makers to identify actions to manage business risks and opportunities arising from their company's dependence and impacts on ES (Hanson et al., 2012). The cESR thus provides guidance to operationalize the concept of ES. One of its main assets is the prioritization of ES that is also of interest for cities. The flexibility of this framework allows for some adaptations to transfer it to the urban context.

The so-called urban Ecosystem Services Review (uESR) focuses on a city and its surroundings and is addressed to public decision makers (see e.g. Sieber and Pons (2015)). Adapting the cESR to a city implies, among others, to widen the scope of steps 1 and 2. The first step consists of the selection of the scope and is crucial to both cESR and uESR. For the latter it has to refer to a coherent area with regard to economic, environmental and urban planning factors: the geographic scope should not only integrate ecologically important areas (such as Natura 2000 sites or other protected areas, heritage sites or green areas that could be key to cultural ES) or some hydrological boundaries (e.g. watersheds,

EIFER Europäisches Institut für Energieforschung EDF-KIT EWIV Sitz der europäischen wirtschaftlichen Interessenvereinigung: Karlsruhe Handelsregister: Amtsgericht Mannheim HRA 104823 Vorsitzender des Aufsichtsrats: Prof. Dr.-Ing. Hans-Jörg Bauer Geschäftsführerin: Dr. Ludmila Gautier (Direktorin) USt-IdNr: DE 814587731 EIFER | Emmy-Noether-Str. 11 76131 Karlsruhe | Germany Tel.: +49 (0) 721 61051330 Fax: +49 (0) 721 61051332 Email: contact@eifer.org www.eifer.org



waterbodies, groundwater tables) but also main economic areas and public planning zones. The second step is based on interviews using the questionnaire described in the ESR guide. A review of public planning and development documents can provide first insights of key ES and complement the interview analysis.

Having completed the first two steps of the cESR on the one hand, and the uESR on the other hand, two compilations of priority ecosystem services are available: one for a local stakeholder and one for local policy makers. A comparison identifies mutual ES as targets for shared actions to be determined following the steps 3, 4 and 5 of the ESR.

This framework (Figure 1) helps local economic stakeholders to make their actions more relevant to the local context and to be better coordinated. Moreover, it improves the relationships, partnerships and synergies between the involved decision makers.



Figure 1 - Combination of the corporate Ecosystem Services Review and its adaptation to urban context to identify local synergies

One way to enhance the analysis of priority ES (step 3) is to assess them in a spatially explicit manner. Different tools and models have recently been developed by the scientific community to address the assessment of ES. Some of them have been applied to different case studies in an urban context. Benefits, gaps and limits of the described approaches will be highlighted in a discussion.



References

Hanson, C., Ranganathan, J., Iceland, C., Finisdore, J., 2012. The Corporate Ecosystem Services Review: Guidelines for Identifying Business Risks and Opportunities Arising from Ecosystem Change. Version 2.0. Washington, DC: World Resources Institute.

Sieber, J., Pons, M., 2015. Assessment of Urban Ecosystem Services using Ecosystem Services Reviews and GIS-based Tools. Procedia Engineering, 53 - 60.

TEEB, 2011. TEEB – The Economics of Ecosystems and Biodiversity, Manual for Cities: Ecosystem Services in Urban Management. <u>www.teebweb.org.</u>