The meaning of biomass in landscape management and energy planning: underutilised or overestimated?

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A team with representatives of private and public sectors deals with the spatial organisation of Dutch river region WaalWeelde. They care about landscape management of the river flood plains, which takes in maintenance of nature areas and water safety measures. The team calls for the improvement of landscape management, due to financial cuts and inefficient practice. The concept of ecosystem services is considered as a promising concept for changing landscape practice in the Netherlands (cf. Melman et al. 2010). The concept refers to the potential physical and socio-cultural benefits of our environment. Biomass resulting from landscape management, wood and grass, can be considered as one of these prospective benefits. Whereas nowadays practitioners handle organic material mainly as a cost, in future it can be handled as a renewable energy resource. Moreover, using biomass may be an important feature of a sustainable society. Notwithstanding this promising outline, some people are cynical about the feasibility of using biomass (cf. Lant et al. 2008; cf. Vatn 2010). What is the meaning of biomass in the context of landscape management and energy planning? Can we create a successful 'biomass ecosystem service', and how?

In this paper, we consider biomass as a 'matter of concern' (after Latour 2004). Biomass is a physical 'matter' that can be valued from diverse perspectives, for example, in financial terms or energy potential. Moreover, the meaning of biomass in practice depends on the 'concerns' of owners, landscape managers, users and organisations involved; their drives, instruments, rules and boundaries define to what extent biomass can really matter. Firstly, an interdisciplinary literature review shows the potential values of biomass in landscape management, on European, national and regional WaalWeelde level. Is biomass underutilized (i.e. sufficient potential biomass material but a lack of commitment and investment)? Or is it overestimated (i.e. high expectations and ambitions but a shortage of potential biomass material)? What are promising directions, logistic chains solutions, motivating coalitions, in order to create a successful 'biomass ecosystem service'? Secondly, we present lessons of comparable regional cases concerning biomass and landscape management. We focus on local prerequisites as well as barriers to use biomass as ecosystem service, including physical, institutional and personal issues. Success depends on, for example, a 'will to change' of people involved, the replacement of dominating visions, and the flexibilisation of rigid rules (see e.g. Hagens 2010). Thirdly, the results of the biomass literature review and case studies are 'contextualised' to the landscape management challenge of WaalWeelde (after Watson 2002). Finally, we discuss ethical and practical issues: the utilitarian approach of ecosystem services, the complex relation of biomass with other land use functions, roles of spatial planners in relation to expectations, and the future of energy planning.

Key words: landscape management, energy planning, political-nature perspective, delta region

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