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Impacts of renewable energies on landscape development in Germany - how to manage our environment?

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One important facet of contemporary landscape change in Germany is caused by political decisions in favour of renewable energies. In particular the increasing use of wind, solar and bio-energy has become a decisive part of energy and climate protection policies. It is foreseen to enhance the share of renewable energies in the total consumption of electricity on minimum by 35% until 2020. In the same time the proportion of renewable energies in heat supply shall rise on 14% in Germany (BMU 2011). This implies a radical change in energy policy and is only possible by strong investment in new facilities.

These developments have spurred a public debate on the impacts of renewable energies on landscape development. Rather traditional notions of landscape, basing on agricultural and silvicultural land use patterns often are articulated in contrast to concepts of "energy landscapes" in which technical elements (wind, solar and biogas power facilities) and biomass production are seen as an expression of innovation and modernisation. The most intensive discussion concerns wind power, focusing on visual and ecological impacts. Therefore, wind power use has become the most frequent trigger of landscape-related local debates in Germany (Leibenath & Otto 2010).

Considering the described situation the question arises who is responsible for the shape and the change of our landscape. One could get the impression that political decisions at European and national levels dictate framework conditions reducing the options of local and regional actors substantially. From this point of view it is no wonder that conflicts appear as mentioned above. But what can be done by local people to deal with landscape changes caused by higher decision-making levels? How can landscape development be managed? This refers to questions of actors, actor constellations and modes of interaction (Scharpf 1997) in relationship to landscape development.

The research project LaGo (Landscape Governance) of the Leibniz Institute of Ecological Urban and Regional Development tries to reflect problems of the described type from different theoretical positions. This contribution highlights the relevance of networks of actors to influence landscape changes at a local/regional level using the example of renewable energies in Germany. It aims at a better understanding of landscape change in a multi-level governance system.

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Leibenath, M., Otto, A. & Preiß, B., 2010. „(Kultur-) Landschaft“ als Thema regionaler Diskurse, Dresden: Leibniz Institute of Ecological Urban and Regional Development.

Scharpf, F.W., 1997. *Games real actors play: actor-centered institutionalism in policy research*, Westview Press.