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Landscape capacity and social attitudes towards wind energy parks in Belgium

DURATION OF THE PROJECT
15/12/2006 – 31/01/2009

BUDGET
361.530 €

KEYWORDS
Wind Energy Parks, Landscape capacity, Social attitudes

CONTEXT

The present energy crisis and the awareness of the human impact on climate change have boosted the public debate on the accelerated deployment of renewable energy sources. The objective of this research project is to analyse and assess the landscape capacity and social attitudes towards wind energy parks in Belgium, especially in non-urban and non-industrial sites. This research project starts from the observation that a sustainable production of energy, relying on renewable resources, should go hand in hand with a sustainable societal support for the use of these renewable sources. Experiences from neighbouring countries showed that the societal support depends of the regional landscape capacity and the social attitudes towards wind energy parks. In this research project both quantitative and qualitative research techniques will be used to: (1) measure the landscape capacity in relation to the location of wind energy parks in Belgium, (2) to gain insight in the way attitudes towards wind energy parks are socially constructed and reproduced.

PROJECT DESCRIPTION

Objectives

The project consists of 3 research lines:

1. Construction of a landscape evaluation map with respect to the location of wind energy parks in Belgium. The map will depict the subjective landscape capacity towards wind energy projects in Belgian landscapes.
2. In depth analysis of the mechanisms that construct, reproduce or change social attitudes towards wind energy parks.
3. Integration of research lines 1 and 2 in order to interpret landscape evaluation in a dynamic way, showing the intervention possibilities and margins of policy makers in order to anticipate negative attitudes.

Methodology

1. Construction of a landscape evaluation map with respect to the location of wind energy parks in Belgium.

   The aim of the research project is to assess and map the quality of Belgian landscapes based on the attitudes of its inhabitants. By means of photo-questionnaires a quantitative database out of which preferences for landscape can be derived, will be compiled. Next, 2000 randomly selected respondents in Belgium will be asked to rank the 20 landscape photos (some with a visible presence of windmills) from very attractive to not attractive. Ranking statistics will be applied to select significant landscape indicators that are correlated with the 'attractivity' of a landscape such as: viewshed-derived skyline-indicators, diversity indicators, landscape integrity indicators and anti-indicators such as the presence of disturbing elements and infrastructure. The significant landscape indicators will be used in a stated preference analysis. The aim of this analysis is to fit a model that allows the assessment of landscape quality based on measurable indicators. For each attribute (the landscape indicator) relevant attribute levels will be determined. The result is a sort of subjective scoring model that depicts the 'consensus preference' for different landscape types. Finally, the results of the stated preferences analysis will be extrapolated by applying the stated preference equation at each 1km x 1km pixel in Belgium.

2. Understanding construction and dynamics of attitudes

   Fieldwork will be performed in four settings. These settings will be selected, based on a general spatial overview of realised and intended on-shore wind turbine parks in Belgium. We foresee four different types of settings: (1) a setting near to the language border where the visibility of a realised or intended wind energy park covers both Walloon and Flemish territory, (2) a setting in Wallonia which is at the moment of the fieldwork in no way linked to the realisation of a wind energy, (3) A third setting in Flanders where there is a clear project for realising a wind energy park in the near future, (4) a setting in Flanders which is at the moment of the fieldwork in no way linked to the realisation of a wind energy park. For each case the stakeholders and interest groups involved in the siting of a wind energy park (both supporters and opponents) will be described. For each case 15 to 20 non-structured, in-depth interviews with citizens will be carried out. In case of intended or realised projects, they are neighbouring residents of these projects, in other cases we just select one municipality and will interview about 15 to 20 people (adults), of all ages and social classes. This qualitative material will be processed and analysed by critical discourse analysis, unravelling the dominant / hegemonic representations and related discourses and interpretation of change in attitudes. We will stress here that it is not our intention to deliver a representative overview of attitudes (see first research line), but to understand the underlying formative processes of attitudes. Because of the complex-

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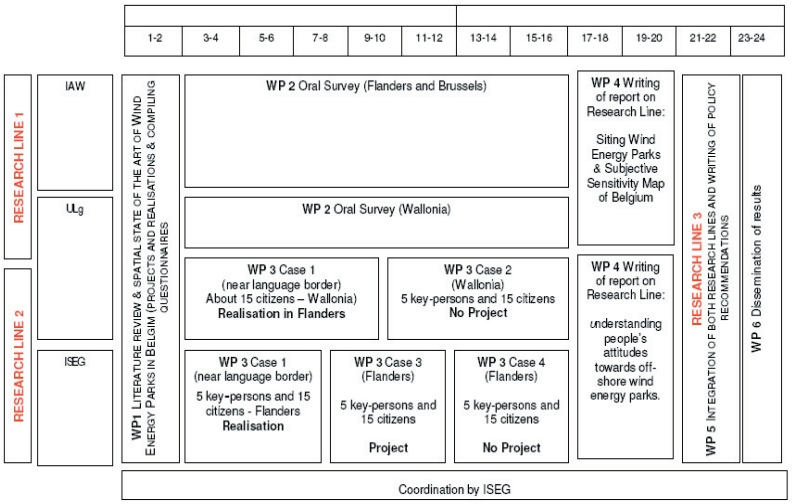
ity of the raised issues and material and time related restrictions, we do not plan to carry out statistically representative research that could allow statistical inference. Interviews will rely on information provided by people, and aim at documenting some important manifestations of attitudes and associated processes. The detailed socio-spatial contextualisation of the interviews will result in a descriptive inference.

INTERACTION BETWEEN THE DIFFERENT PROJECT PARTNERS

The project is subdivided in 6 work packages that are carried out by the three project partners: Physical and Regional Geography Research Group (K.U.Leuven), Social and Economic Geography Research Group (K.U. Leuven) and Social and Economic Geography Research Group (ULG). Research line 1 (construction of a landscape evaluation map) consists of work packages 1, 2 and 4. Research line 2 (in depth analysis of social attitudes towards wind energy parks) consists of work packages 1, 3 and 4. Both research lines are integrated in work package 5. The planning and the responsibilities of each project partner are depicted in the following figure.

EXPECTED RESULTS

1 After 3 months: a state of the art report based on a literature review that gives (1) an overview of existing and planned wind energy projects in Belgium (2) an overview of existing knowledge with respect to measuring and mapping landscape capacity and social attitudes towards wind energy parks in Belgium.
2 After 1 year: a report presenting the first results of the in-depth interviews in two case studies.
3 After 20 months: two thematic reports: (1) Landscape capacity towards wind energy parks in Belgium (research results + map), (2) Social attitudes of Belgians towards wind energy parks (construction, reproduction and evolution)
4 End report in which both thematic reports are brought together showing the intervention possibilities and margins of policymakers in order to anticipate negative attitudes
5 At the end of the project a workshop will be organized to communicate the results with a broader audience.



PARTNERS - ACTIVITIES

The project aims to integrate the expertise of the three partners with respect to landscape analysis (FRG-KUL), social attitudes (ISEG-KUL) and rural geography (ULG). More information regarding the research activities of the participating partners can be found at: geo.kuleuven.be and www.dept-geo.ulg.ac.be.

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Follow-up Committee

For the complete and most up-to-date composition of the Follow-up Committee, please consult our Federal Research Actions Database (FEDRA) by visiting http://www.belspo.be/fedra or http://www.belspo.be/ssd

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