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**Conference Paper**

## Sustainable Landscape Development with Regional Parks - Overcoming Problems of Landscape Multifunctionality in Urban Agglomerations

45th Congress of the European Regional Science Association: "Land Use and Water Management in a Sustainable Network Society", 23-27 August 2005, Amsterdam, The Netherlands

**Provided in Cooperation with:**

European Regional Science Association (ERSA)

*Suggested Citation:* Gailing, Ludger (2005) : Sustainable Landscape Development with Regional Parks - Overcoming Problems of Landscape Multifunctionality in Urban Agglomerations, 45th Congress of the European Regional Science Association: "Land Use and Water Management in a Sustainable Network Society", 23-27 August 2005, Amsterdam, The Netherlands, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

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**Paper for the ERSA Congress:**  
**“Land Use and Water Management in a Sustainable Network Society”**  
**23-27 August 2005**  
**Vrije Universiteit Amsterdam**

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**Sustainable Landscape Development with Regional Parks.  
Overcoming Problems of Landscape Multifunctionality in Urban Agglomerations**

**Abstract:**

Landscape – understood as the product of human activity and societal developments – can only be the subject of regional management if the institutional framework shaping its use and development is understood and taken into strategic consideration. For that purpose new forms of governance and institutional arrangements specifically designed to meet the requirements of landscape and to involve regional and local stakeholders in these processes are necessary to deal with institutional problems. Regional parks, characterised by project orientation and co-operative arrangements, can be seen as new, flexible governance structures. The paper discusses their possibilities and limitations in the sustainable management of urban landscapes using the example of three regional parks in urban agglomerations in Germany.

**Key Words:** landscape management, institutional problems, landscape multifunctionality, regional parks, agglomerations

## **1. Introduction**

Urban agglomerations all over Europe are growing at the expense of the surrounding landscapes. Given the enormous growth of built-up land for settlement and transport use within recent decades in Western and Southern Europe and, more recently, comparable trends within Central and Eastern European EU accession states, landscape and open space policy in urban regions is an emerging core issue and field of action for targeted sustainable spatial development, and will be exemplified by German cases in this paper. For European urban regions strategies and instruments to secure and improve open spaces play an important role because quality of life, the image of the region as well as international competitive capacity are tightly linked with the existence of valuable open space structures.

The ecological, social and also economic problems of the loss of open space and their negative effects on sustainable development are well-known. Diverse high-level monitoring systems for observing spatial or ecological processes, and models with sophisticated indicators describing land-use change in urban agglomerations exist. Wide-ranging planning systems and well-defined legal regulations concerning various aspects of open space protection have been established in many European countries. But in reality there is a considerable difference between the high level of knowledge and regulations, and the contradictory, often unsustainable changes in the urban landscape. Although Germany, for instance, has a comparatively well-developed system of landscape protection (e.g. landscape planning, nature protection) and inclusion of landscape issues in the political instruments of town and regional planning, every day 105 ha of open space is transformed into sealed land.

Conflicts between ecological and socio-economic aspects tend to obstruct the implementation of traditional landscape policy instruments, which frequently ignore the multifunctionality of urban landscapes. For these reasons in some urban regions protagonists involved in landscape policy have recognized that metropolitan open space depends not only on the top-down approach of public landscape protection, but also on active landscape management and development. They have established regional parks in order to enhance the value of open spaces by means of project-oriented regional management.

This paper aims to explore the institutional problems of sustainable landscape development in urban agglomerations enriching conventional planning perspectives with theoretical approaches from social sciences (Apolinarski/Gailing/Röhring 2004). Ways of dealing with conflicts concerning open space development by means of suitable forms of governance and regional institutional arrangements will be discussed using the example of regional parks in urban agglomerations in Germany.

## **2. Requirements and problems of landscape development**

### **2.1 Sustainable landscape development**

As a normative and regulative strategy, the concept of sustainable landscape development involves the linking of economic and social dimensions with the requirement of the preservation of natural resources and the consideration of the environment's carrying capacity. Economics, ecology and social balance should, therefore, be understood as a unity in this context. Now and in the future, both locally and globally, the habitats of people, animals and plants should be guaranteed for future generations and allow a just and humane life (Rodewald et al. 2003). For purposes of landscape research the international formulation of the principle of sustainable development in the early 1990s as well as national, regional or local approaches that attempted to implement this principle can be interpreted as a fundamental change in ecological discourses and planning strategies:

- Ecological goals like nature protection were complemented by socio-cultural and economic goals. The logic of "protection" was integrated in a logic of "development".
- Overcoming sectoral development approaches as well as the reconciliation of environmental goals with social and economic conditions asked for innovations in civic participation such as Local Agenda 21 processes. Thus, communicative and collaborative activities (Kühn/Moss 1998) gained importance in the implementation of spatial planning strategies.

Any policy of sustainability tends to be ineffective due to the diversity of goals and the inherent necessity to combine very different modes of governance. By reason of this complexity the term "sustainable development" was often used as an alibi rather than as guidance for strong action. A rational answer to this problem is to concentrate the planning process on the protection of specific regional goods who, such as landscape, respond to the institutional requirements of sustainability:

- Landscape policy demands due to the multifunctionality of landscape intersectoral planning approaches.
- Landscape is a by-product of human activities. Consequently landscape planning and landscape related policies require the participation of citizens and land users.

In the following section the perspective of institutional theory will be used to specify and systematise the requirements of landscape development. The analysis of institutional and actor-centered contexts is necessary to formulate clear and feasible options for action.

## 2.2 Institutional problems of landscape development

To understand human behaviour regarding landscapes, theoretical considerations from the perspective of institutional theory offer new insights into the generation and use of them. Due to its diverse elements landscape is not a homogeneous good, but a heterogeneous regional common good, consisting of a multiplicity of partly inconsistent components with socio-economic, ecological and aesthetic functions (multifunctionality of landscape).

According to institutional theory (Göhler 1997) human behaviour is influenced by a wide range of formal and informal institutions. Formal institutions are sets of rules and regulations or administrative structures articulated in constitutive documents (e.g. nature protection laws). It is important to recognise that especially formal institutions do not simply provide orientation for actors; they are themselves subject to (re-)shaping by actors (Scharpf 1997). Because of the lack of comprehensive formal institutional regimes, landscape is essentially influenced by informal institutions e.g. social and individual values, traditions, customs or regional identity.

Given that the landscape development is largely guided by institutions and considering the fact that the consequences for landscape are often not taken into consideration when designing or adapting institutions, landscape related problems can be seen as, in essence, institutional problems:

- firstly as “problems of interplay”, e.g. between sectoral public policies and their institutional regimes for regulating particular issues with diverging or coherent impacts on landscape: Because of the given functional interdependencies in the use of landscape, problems of interplay (Young 2002, pp. 23) between institutions regulating different functions can occur. Institutional problems of interplay can also result from “politics of institutional design and management” (ibid., p. 23) often activated by functional interdependencies.
- secondly as “problems of fit” arising from the incongruity between landscapes and administrative areas: Institutional problems of fit (Young 2002, pp. 20) concern, in the case of landscape, factual compatibility or spatial congruence between institutional arrangements designed to manage particular human activities and the specific requirements of landscape at the regional level. Whereas landscapes can be the subject of regionalisation and regional management independent of administrative areas, formal institutions are mostly bounded by administrative areas, so that problems of spatial fit can occur.

- thirdly as “problems of scale”, of finding the right level for managing the ecological and socio-economic conflicts of landscape: Institutional problems of scale (Young 2002, p. 26) have to do with the spatial difference between the level at which especially formal institutions are created and the level of landscape at which institutions work.

These aspects of institutional interrelationships are often not taken into consideration by actors dealing with landscape. The analysis of institutional problems can contribute to devising ideas for institutional arrangements and new governance structures concerning sustainable landscape development.

### **3. Regional parks - New institutional arrangements in urban agglomerations**

#### **3.1 The idea behind regional parks**

In the face of European-wide processes of accelerated land-use change, landscape is currently being rediscovered as a key issue of regional development. International conventions therefore aim less to implement classical instruments of landscape protection following a command-and-control approach, but focus on integrative management strategies: the European Union’s European Spatial Development Perspective (ESDP) calls for the “creative management of cultural landscapes” and the “enhancement of the values of cultural landscapes within the framework of integrated spatial development strategies” (European Commission 1999). The Council of Europe’s European Landscape Convention (ELC) commits the signatory states “to recognise landscapes in law as an essential component of people’s surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity”, to “establish and implement landscape policies aimed at landscape protection, management and planning” and to “establish procedures for the participation of the general public, local and regional authorities” (Council of Europe 2000).

Landscape – understood as the product of human activity and societal developments – can only be the subject of active attempts at regional management if the institutional framework shaping its use and development is understood and taken into strategic consideration. For that purpose new forms of governance and institutional arrangements specifically designed to meet the requirements of landscape and to involve regional and local stakeholders in these processes are necessary to deal with the above-mentioned institutional problems and also to comply with the requirements of ESDP and ELC.

In Germany in addition to formal methods of regional and landscape planning new governance structures to enhance regional landscape policy have arisen in the last few years: e.g.

regional initiatives concerning cultural landscapes in biosphere reserves (Kühn 1999) or collaborative landscape planning (Danielzik/Horstmann 2000). These new governance structures do not present themselves as a substitute for classical formal planning instruments, but supplement them in their efficacy by models of stakeholder participation or their project orientation.

Regional parks are a particularly successful example of integrative and active management strategies. Given the fact that other formal nature conservation categories such as nature parks or biosphere reserves are not in use in urban agglomerations due to the urban and suburban landscape complexity, regional parks are being implemented solely in urban agglomerations. Spatial trends like urban expansion and urban sprawl, the fragmentation of open space by the construction of infrastructure networks and the consequent ecological problems and degradation of landscape aesthetics shape urban agglomerations and their surrounding landscapes. Due to the competition and overlapping in the use of land in urban and suburban areas, landscape policy and open space protection in urban agglomerations has to deal with aggravated problems of institutional interplay.

For this reason in some urban regions protagonists involved in landscape policy have recognised that the metropolitan open space depends not only on the top-down approach of public landscape protection, but also on bottom-up activities. They have established regional parks in order to produce value for the open spaces by means of project-oriented regional management (Gailing 2005). Problems of spatial fit between regional open spaces and action spaces basing themselves on local administrative areas are solved by interlocal collaboration. Regional stakeholders resolve institutional problems of scale by the implementation of new action arenas and actors such as regional park authorities or subregional park development societies. Improving living conditions and mobilising urban landscape is to be achieved by the collaborative implementation of landscape projects and by overcoming problems of institutional interplay between sectoral fields such as local recreation, sustainable agriculture, nature protection, the protection of cultural heritage and landscape architecture. Regional parks improve the accessibility and increase the aesthetic attractiveness of open spaces by providing networks of footpaths and cycle trails, developing recreation and sports facilities and allowing room for art, cultural heritage or “urban wildernesses”. Open space is gaining in importance for regional economic and spatial development in urban agglomerations as a “soft” location factor and an emerging core issue and action field for targeted sustainable landscape development. In the sense of multifunctional landscape management, individual open space interests are integrated and the status of open space is strengthened in a holistic approach. Former

“residual space” can thus acquire a lobby in formal planning processes. The following list recapitulates the potentials of the regional park approach to solutions to selected institutional problems concerning urban landscapes and the protection of open spaces.

- *Problems of interplay between sectoral institutions:* Regional parks serve as an inter-sectoral management strategy for urban and suburban landscapes integrating socio-economic, ecological and aesthetic aspects.
- *Problems of interplay between formal and informal institutions:* Regional park development enables an improved consideration of informal institutions such as regional and local identities or aesthetic values in formal planning processes.
- *Problems of spatial fit:* Regional open space takes on the character of an action space by means of the collaboration of local municipalities and stakeholders.
- *Problems of scale:* Activities on the different scales of a regional park, its partial areas and their local projects are each carried out within specific institutional arrangements.

### **3.2 Regional parks - Case studies in Germany**

The case studies of the “Emscher Landschaftspark”, the “Regionalpark RheinMain” and the “Berlin-Brandenburger Regionalparks” introduced below (cf. Gailing 2005) demonstrate that regional parks are an innovative form of regional governance and landscape management in agglomerations and urban surroundings.

For decades the Emscher, a small river in the north of the heavily industrialised Ruhr region, was misused as a drain for sewage and waste water. Today the river and its ecological recovery project (“New Emscher Valley”) is the linking element in the “*Emscher Landschaftspark*” regional park concept. The IBA - International Building Exhibition Emscher Park 1989-1999 - marked the starting signal for the development of seven regional greenways in a north-south axis and a new greenway (east-west) along the Emscher from Dortmund to Duisburg. Many local and regional projects such as cycle trails, “industrial” parks, and art on former coal tips aim to improve the quality of life and location conditions and strengthen the image of an industrial-cultural landscape. The IBA – promoted by the State of North Rhine-Westphalia – and its main project “Emscher Landschaftspark” have received international recognition for their approach to preserving industrial heritage and addressing post-industrial decline as well as population shrinkage.

The “Emscher Landschaftspark” is integrating aesthetic and ecological landscape functions in an exemplary manner by landscape architectural and artistically revalued open space recovery projects, nature-orientated water management and valorisation of the industrial cultural land-



scape. As a result of a lack of collaboration with open space users (in particular cultivators) socio-economic aspects have, however, been neglected. By means of the creation of new organisational and cooperational structures at the level of the regional park and its interlocally arranged greenways, the reactivation of metropolitan landscape policy has succeeded in the implementation of successful and well-known local projects.

The “*Regionalpark RheinMain*” aims to join up and enhance open spaces, which are often reduced to remnants between settlements and infrastructures in the towns and cities of the booming Frankfurt area. The Park’s main element is a corridor, a path accompanied by green structures. Apart from this linear feature the park developers (Frankfurt/Rhine-Main Conglomeration Planning Association and subregional publicly owned companies) are implementing projects with a more spatial character such as playing grounds, pocket-parks and orchards, and smaller elements such as wells, monuments or lookout towers. Starting from a pilot area a regional network will develop.

The idea behind it is that people who come to appreciate these open spaces will protect them against urban pressure. The park responds to a strong need for local recreation. Together with a biodiversity network the park presents itself as a guideline for ecological compensation in line with nature protection legislation. Thus ecological and aesthetic aspects of urban landscape development are well integrated in an implementation-oriented regional planning approach initiating locally differentiated management solutions in collaboration with local authorities. Only at the regional level, where a combination with socio-economic aspects tends to be successful, is the „Regionalpark RheinMain“ considered a planning tool in the process of metropolitan identity building and as a main regional asset to increase its international competitive capacity, whereas local land-users and their economic interests were underestimated in the process of regional park development.

Based on the Joint State Development Programme for Berlin and Brandenburg a chain of regional parks is planned to develop and maintain a green belt around Berlin including the relevant parts of the Berlin municipal area. Due to the lack of a common management organisation the *Regional parks in Berlin and Brandenburg* have to “grow from below”. The concept of creating eight regional parks around Berlin is no more than an offer by the states of Berlin and Brandenburg to the local communities, to the people living and working in the affected regions and also to the open space users. Thus the differences between the regional parks are enormous: some parks are still waiting for their formation (e.g. “Flutgrabenaue”),

while in other parks landscape projects have been realised based on existing local networks (e.g. “Barnimer Feldmark”). Due to the fact that most of the regional park areas are sparsely populated and used for agriculture, forestry or recreation, collaboration strategies to manage the interplay between land-users like farmers or persons providing tourism services are relevant.

An institutional void, which becomes manifest in a lack of financial resources, a lack of collaboration between Berlin and its surroundings and a lack of efficient management structures, results in only a small number of projects being realised, but offers good prospects for actions integrating the motives of land-users and for civil society based associations. Thus, landscape policy opens up perspectives for sustainable development following the principle “ecological protection by sustainable socio-economic use”.

<b>Institutional Problems</b>	<b>Emscher Landschafts-park</b>	<b>Regionalpark RheinMain</b>	<b>Regional parks in Berlin and Brandenburg</b>
<b>Problems of interplay between sectoral institutions</b>	integration of aesthetic and ecological goals; underestimation of certain socio-economic dimensions (esp. agricultural land use)	integration of aesthetic and ecological goals; underestimation of certain socio-economic dimensions (esp. agricultural land use)	integration of socio-economic and ecological aspects (“ecological protection by sustainable socio-economic use”)
<b>Problems of interplay between formal and informal institutions</b>	local and regional processes of identity-building based on the aesthetics of industrial cultural landscape; integration of landscape issues into regional economic development policy	the regional park as a tool for regional identity-building and aesthetic-oriented landscape policy; integration of these issues into formal planning institutions	concentration on aesthetic aspects of “classical” cultural landscape; delegation of hard-fought land use conflicts in the suburban landscape to formal planning institutions
<b>Problems of spatial fit</b>	area of the regional park covers relevant parts of the open space structure in the northern Ruhr area, crossing the administrative borders of municipalities and regional planning authorities	area of the regional park covers relevant parts of the open space structure in the Rhine-Main area, crossing the administrative borders of municipalities, integration of local landscape concepts (e.g. Frankfurt Green Belt)	eight regional parks crossing the administrative borders of municipalities and the state border between Berlin and Brandenburg
<b>Problems of scale</b>	strategy of multi-level governance (local projects, inter-municipal working groups, regional management organisation)	strategy of multi-level governance (local projects, subregional publicly owned companies, regional planning association)	bottom-up management solutions (e.g. local associations of land users); lack of regional management organisations

**Fig. 1: Regional Parks: Comparison of institutional characteristics of regional examples**

Fig. 1 presents a review of the regional parks introduced and compares them on the basis of their institutional characteristics. Despite inherent or possible problems like the underestimation of agricultural land use, dependence on public finances or the preferential treatment of symbolic interventions and of aesthetisations of landscape policy, regional parks can be identified as efficient tools for strengthening the status of landscape and open space in urban and regional policies. By bridging the gap between conception and implementation they are complementary to existing formal planning processes.

#### **4. Summary and conclusion**

Due to the fact that landscape is a multifunctional by-product of human activities landscape development demands intersectoral and citizen-based planning and policy approaches. Therefore landscape development is a regional task of public policy appropriate to respond to the requirements of the principle of sustainability.

Given that landscape development is driven by formal and informal institutions landscape problems can be seen as, in essence, institutional problems: problems of interplay between sectoral institutional arrangements and between formal and informal institutions, and institutional problems of fit and scale. Because of the lack of comprehensive institutional regimes, landscape is essentially influenced by informal institutions, e.g. social and individual values, traditions, customs or regional identity.

New forms of management and institutional arrangements specifically designed to meet the requirements of landscape can contribute to dealing with the institutional problems of landscape. Regional parks in urban agglomerations, characterised by project orientation and cooperative arrangements, can be seen as new flexible governance structures in this sense. Their project activities aimed at solving problems of institutional interplay and problems of spatial fit and scale also involve informal institutions (especially identity, regional image and aesthetic aspects). In the sense of multifunctional landscape management individual open space interests are integrated and the status of open space is strengthened in a holistic approach. Former “residual space” can thus acquire a lobby in formal planning processes.

Case studies of the “Berlin-Brandenburger Regionalparks”, the “Regionalpark RheinMain” and the “Emscher Landschaftspark” demonstrate that Regional parks are an innovative form of regional governance in agglomerations and urban surroundings. The implementation of these new governance structures can, however, also lead to diverse problems: the risk of reduction solely to a marketing instrument, the dependence on public finance, the level of acceptance on the part of the administration, the politicians and the population of the region, and

the lack of legal regulations to impose measures. Especially because of the latter it is necessary to understand new governance structures not as a replacement for, but as an addition to, administrative authorities and legal rules and regulations regarding regional and landscape planning.

According to this understanding the idea of regional parks can be important for the creation of new governance structures in urban agglomerations and other types of regions (e.g. rural regions). In addition, traditional formal instruments like nature parks, biosphere reserves, national parks and formal regional and landscape planning can integrate elements of the new governance structures to extend their given scope of action.

Managing the change and preservation of landscapes as a regional common good in a better, more sustainable way is a challenge which can be mastered only if the institutional and actor-related driving forces of landscape change are understood and the opportunities to influence these processes are recognised.

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