

## Urbanisation of the countryside

problems of interdisciplinarity in the study of rural landscape development

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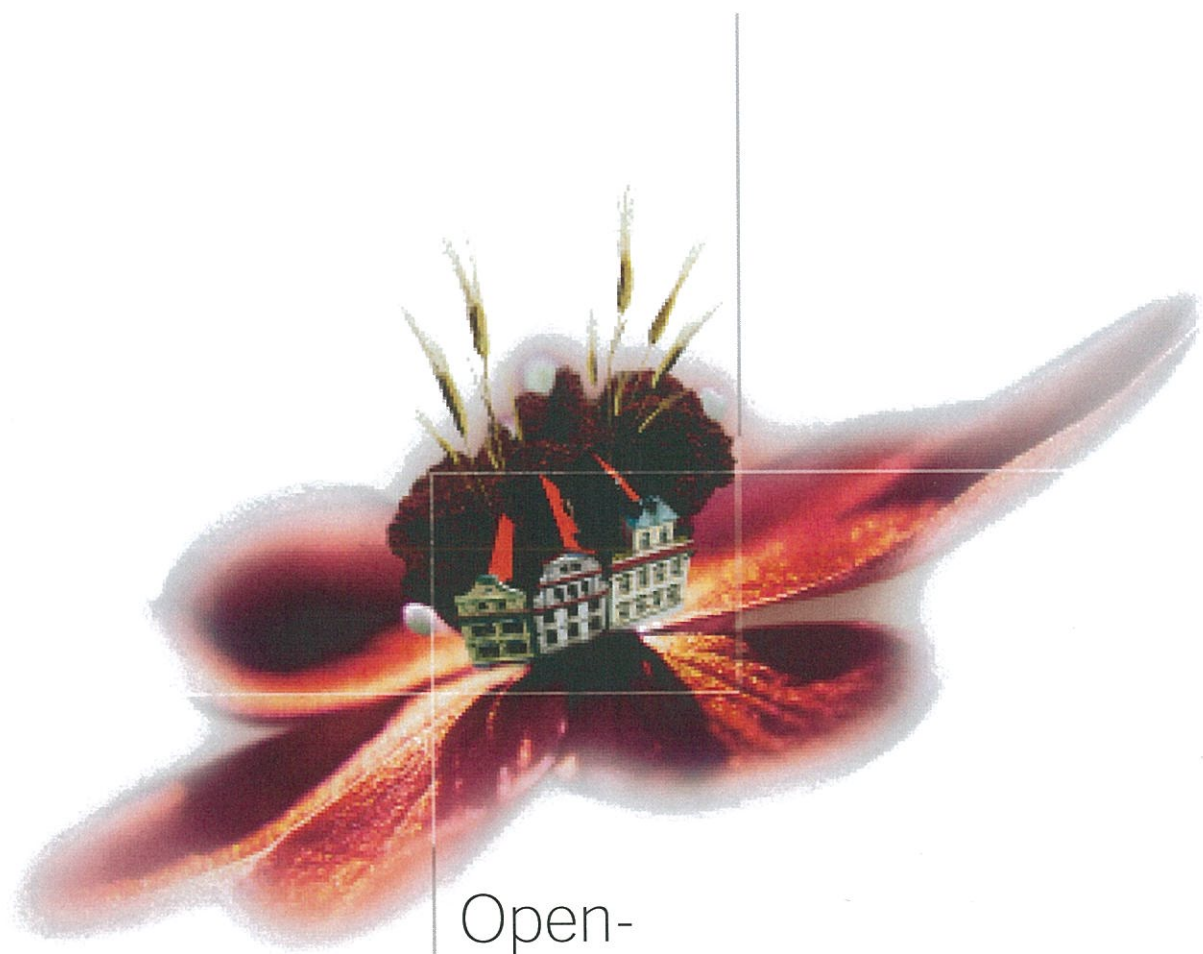
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**Open SPACE functions under URBAN pressure**

# Programme

## Day 1: Wednesday 19 SEPTEMBER

**14.00 - 14.25 A. Verbruggen** (Belgium, Chief of the Cabinet of the Minister Vera Dua)  
Welcome - Programme overview

**14.30 - 14.55 Opening of the conference**

**15.00 - 15.30 J. Brandt** (Denmark, Roskilde University)  
Urbanisation of the countryside – problems of interdisciplinarity in the study of rural development

Functionally, the influence of urbanisation on the countryside is supposed to go far beyond the urban fringe. A main aspect of this process is the growing diversification in local needs and interests, challenging local planning and management, expected to develop from monofunctionality towards multiple land use and growing landscape diversity. However, different scientific traditions and concepts of nature and landscape seem to be serious obstacles for an integrated research on landscape functionality.

**15.35 - 16.05 C. Bryant** (Canada, University of Montreal)  
The Socio-Economic Roles of Open Space and Agriculture in the Urban Fringe

In this presentation, a framework is presented to further our understanding of how the socio-economic significance of agricultural open space is constructed in particular local, regional and national contexts. This framework is also used to demonstrate how the pertinence and effectiveness of the land use management, planning and development tools available in a particular geographic context can be evaluated.

**16.05 - 16.25 Coffee break**

**16.30 - 17.00 E. Brabec** (USA, University of Michigan)  
An assessment of various land protection tools and programs in urbanizing areas of the United States

Urban sprawl, caused by the continued flight of homeowners out of the cities to relatively inexpensive land and housing in the urban fringe, has placed a tremendous pressure on farmland resources in the USA. With the fragmentation of farms in the urban fringe has come a loss of the traditional farming economic base, and a change in the character and visual quality of rural communities.

**17.05 - 17.35 P. Janssens** (Benelux Economische Unie)  
The potential and actual meaning of an integrated transnational and European spatial policy in areas under urban pressure

How can a European spatial policy contribute to a better spatial policy in areas under urban pressure?  
How do countries and regions handle the problems of open space under urban pressure?  
Divergences and convergences in the policy?

**17.40 - 18.10 P. Devillers**  
Overview of the European open-space policy

**18.20 Reception**

**19.30 Dinner**

## Day 2: Thursday 20 SEPTEMBER

**08.30 - 08.45 G. Van Huylenbroeck** (Belgium, Universiteit Gent)  
Introduction

**08.45 - 09.15 H. Gulinck** (Belgium, Katholieke Universiteit Leuven)  
Concepts for multifunctionality in the Flemish "park city" 2050

Innovative ideas for the long term development of the open areas in the highly urbanised Flemish core area should be based on the definition of the requirements of a multifunctional neo-urban entity (a "park city"), and on the determination of levels of self-responsibility relying on the natural capacities of the fragments and networks of undeveloped grounds and spaces.

**09.20 - 09.50 A. Simson** (UK, Leeds Metropolitan University)  
The role of designed open space in the social, environmental and economic success of the UK's 3rd generation New Towns

Brief exploration of the social, environmental and economic rationale behind the planning and design of public open space in the UK's New Towns, emphasising in particular the desire to design "locally distinctive" open space.

**09.55 - 10.25 A. Errington** (UK, Plymouth University)  
Employment Creation in the Peri-urban Fringe through Rural Development

The peri-urban fringe around major metropolitan areas serves multiple functions (economical, social and environmental); it is important to maintain a 'working' as well as a 'living' countryside in these areas. This lecture reviews the different facets in the case for public interventions to support/foster rural employment and identifies those facets which are particularly relevant to the peri-urban fringe.

**10.30 - 10.50 Coffee break**

**10.55 - 11.25 J. Douwe van der Ploeg** (the Netherlands, Wageningen University)  
Agriculture under urban pressure

The CAP directs the farmer through economic principles and expects that the price and income support mechanisms will deliver the expected results. This view is too limited: by examining different styles of farming, it is shown that other factors also influence the choices made by the farmers.

**11.30 - 12.00 M. Merlo** (Italy, Università degli Studi di Padova)  
Marketing of environmental goods and services linked to farming and forestry:  
institutional and managerial approaches in Austria, Germany, Italy and the Netherlands

Analysis of the transformation of public goods and positive externalities provided by agriculture and forestry into marketable private/club products on the basis of case studies in Austria, Germany, Italy and the Netherlands.

**12.05 - 12.35 T. Embo** (Belgium, Flemish Environment, Nature, Land and Water Management Administration)  
Suburban forests and the delineation of the suburban area of Ghent

**13.00 - 18.00 Lunch & excursions**

- Bourgoyen-Ossemeersen
- Dirk Mouton, Lovendegem (direct sale of agricultural products, organic products)
- Luk De Witte, Lovendegem (non-cultivating farms + manure processing)
- Management contracts within the framework of nature management
- Development of suburban forests
- Development of suburban forests
- Nature development in the city of Ghent



# Day 3: Friday 21 SEPTEMBER

## Session 1

**08.45 - 09.00 D. Reheul** (Belgium, Universiteit Gent)  
Introduction

**09.00 - 09.25 X. Guiomar** (France, Bergerie nationale de Rambouillet)  
Conception and building of an agri-urban project in Ile-de-France

Recent changes in urban planning: agricultural land is becoming a part of urban projects. Description and analysis of the main public demands. Typology and description of various on-going projects. How can different farming systems contribute to a common project? How an evolution towards sustainable uses of metropolitan open spaces can contribute to the sustainability and identity of the whole area, and of the towns themselves? Concrete examples drawn on: sustainable development plan of South Yvelines, Parc naturel régional du Gâtinais français, Plateau du Saclay...

**09.30 - 09.55 C. C. Konijnendijk** (Denmark, Ministry of Environment and Energy)  
European NeighbourWoods – Developing policies and planning for Europe's Urban Woodlands

Overview of the existing policy on urban forests in different European countries. Description of the problems and the need for further development of the policy on local, national and European level.

**10.00 - 10.25 A. Cagnato** (Italy, Associazione Nazionale degli Urbanisti)  
The open spaces as historical and cultural heritage: functions and problems in order to maintain centuries of planned sustainable development facing the present urban and industrial sprawl

The development of the environmental plan 'Palù del Quartier del Piave' highlighted theoretical and practical weaknesses in the national and regional planning system regarding open space. The main interests of the planning system are the urban sphere and the preservation of environment; the rest has been considered as generic rural areas waiting to be urbanised.

**10.30 - 10.50 Coffee break**

**10.50 - 11.15 dr. A. Demeter** (Hungary, National authority for nature conservation)  
Biodiversity issues in the green belt around Budapest

New economic opportunities for Hungary, at the doorstep of the European Union, will imply deterioration of biological diversity, unless conservation considerations are integrated into land use planning. Some recent greenfield investments will be reviewed and the efforts of Hungarian nature conservation authorities to mitigate their effects will be described.

**11.20 - 11.45 T. Dekany** (Hungary, state planning agency)  
The vanishing green belt around Budapest

As early as in the 19th century a town planning concept was developed to surround Budapest with a green belt. From the early 1990's, however, capitalisation has been steadily consuming the green belt. Non integrated shopping centres, warehouses, logistic centres are being built: they aesthetically ravage the environment and increase traffic around Budapest.

**11.50 - 12.15 J.C. Ferreira** (Portugal, Universidade Nova de Lisboa)  
Greenways – Application of the 'ecopolis' concept on the metropolitan area of Lisboa.

**12.20 - 12.45 S. De Vries** (the Netherlands, Wageningen University)  
Nature and health

Nature has a positive influence on human health, but does this imply that people living in a green environment are healthier than other people? The connection between nature and human health is proven to be positive and even stronger than the known connection between the degree of urbanisation of the residence and the human health.

**13.00 - 14.30 Lunch**

# Day 3: Friday 21 SEPTEMBER

## Session 2

**08.45 - 09.00 A. Van Herzele**

Introduction

**09.00 - 09.25 M. Schwarze-Rodrian** (Germany, Projekt Ruhr GmbH)

Emscher Landschaftspark – 10 years of experience with a regional strategic approach to integrate and qualify urban landscape in a metropolitan area

A new regional park is planned and under construction in the dense urban areas in the Ruhrgebiet in Germany. Industrial-landscape is a new object for landscape architects and planners and the involvement of artists has radically changed the view of this landscape. The Land of North Rhine-Westphalia has supported this regional park project as a part of an economic based structural policy. Nowadays the experts, the organisations and the politicians are discussing how the second decade should be started with a new programme: Emscher Landschaftspark 2010.

**09.30 - 09.55 B. Ilbery** (UK, Coventry University)

Alternative farm enterprises on the urban fringe: evidence from the UK

Against a background of change in 'productivist' agriculture, the lecture focuses on the opportunities and constraints for diversification in urban fringe areas. The research examines different types of 'structural' diversification, including recent interests in local speciality food and drink products with a strong quality dimension. It might be possible to contrast opportunities and constraints for AFE in urban fringe areas with more marginal farming regions. The lecture concentrates on the UK.

**10.30 - 10.50 Coffee break**

**10.50 - 11.15 E. Rombaut** (Belgium, Sint-Lucas Hogeschool)

Considerations about the urban fringe of an 'ecopolis'; A plea for a 'lobe-city'

The demand for local, (inter)national solutions for the problems of the environment and urban development caused Tjallingii to make his ecopolis-study. Cities are mostly considered to be the sources of social and ecological problems, but can cities also give hints for solutions to these problems? Which strategy should be followed in that case? The lecture treats the theory of Mr Tjallingii as a theoretical frame for the symposium.

**11.20 - 11.45 R. Henke** (Germany, Planungsverband Frankfurt)

Regionalpark Frankfurt RheinMain: Positive actions for open space in a European metropolitan area

Short description of German open space planning instruments - specific situation in Frankfurt RheinMain Region - multi-purpose approach: open space management, regional identity, social functions, biodiversity functions, soft locational factor, vision for agriculture - method – built examples - the balance so far and the future of the project.

**11.50 - 12.15 H. Vejre** (Denmark, Royal Veterinary and Agricultural University)

The dissolution of a rural landscape: the precipitation of a multifunctional urban fringe landscape. Vestskoven, Copenhagen 1967-2001

In 1976, 1500 ha of agricultural land was designated as a future recreational zone Vestskoven ("Western forest") that should provide western Copenhagen with recreational land, forests and open space. Vestskoven was gradually established as a combination of open pastures and forests by acquisition of farms, demolishing of farm houses and greenhouses, afforestation and establishment of fenced areas for grazing. Vestskoven is entirely surrounded by urban areas.

**12.20 - 12.45 S. Nyhuus** (Norway, Radhuset Oslo)

Densification of urban and suburban areas during the last decades: Impact on qualities and functions of the green structure and the elaboration of a planning tool in order to meet the pressure from today's development patterns

Densification and urbanisation of (sub)urban areas have led to a massive fragmentation of green open spaces during the last decades. Based on landscape ecology theory and theory on human needs and behaviour in green areas, a planning tool for green structure analysis has been developed.

**13.00 - 14.30 Lunch**

## Day 3: Friday 21 SEPTEMBER

### Afternoon

13.00 - 14.25   **Lunch**

14.30 - 15.05   **A. Verbruggen** (Belgium, Chief of the Cabinet of Minister Vera Dua)  
Evaluation of the current European policy; summary and evaluation of the themes discussed

15.10 - 16.35   **Public Debate**  
Panel members : pressure groups, professional organisations, speakers

16.40 - 17.00   **Coffee break**

17.05 - 17.30   **V. Dua** (Belgium, Minister for Environment and Agriculture of the Government of Flanders)  
Conclusion of the Symposium

18.00 - 20.00   **Reception**

20.30            **Concert Festival of Flanders**

## Day 4: Saturday 22 SEPTEMBER

10.00           **Start of social programme Ghent**

16.00           **End of social programme Ghent**



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“Urbanisation of the countryside – problems of  
interdisciplinarity in the study of rural development”

Jesper Brandt

(Denmark, Roskilde University)

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## **Brandt, Jesper**

(Denmark, Roskilde University)

“Urbanisation of the countryside – problems of interdisciplinarity in the study of rural development”

Professor Brandt Master Degree in geography from University of Copenhagen 1974. Assistant professor at Roskilde University Aug. 1974.; Assoc. Prof. at Dept. of Economy and Natural Resources, Danish Agricultural University, 1994-95.; Full professor at Department of Geography and International Development Studies, Roskilde University 1996. Member of the Executive Committee of the International Association for Landscape Ecology (IALE) since 1988. Editor of IALE Bulletin. Member of the Editorial Board of 'Landscape Ecology'. A main research area has been the structure and development of 'small bio-topes' in agricultural landscapes through field surveys combined with farmer-interviews in a number of test areas. Since the start in the late 1970's the scope and extent of these studies have changed towards a monitoring system for agricultural landscapes with an ever-increasing aspect of interdisciplinary landscape research. 1995-2001 leader of an interdisciplinary project: 'Value, Landscape and Biodiversity' (in a co-operation between the Danish Agricultural University, The Academy of Art, Copenhagen University and Roskilde University), sponsored by four different Danish state research councils.

# Urbanisation of the countryside – problems of interdisciplinarity in the study of rural landscape development

By Jesper Brandt, Esbern Holmes and Peter Skriver

Department of Geography and International Development Studies, Roskilde University, Denmark

## 1. Abstract

The influence on the countryside of urbanisation is supposed functionally to go far beyond the urban fringe. A main aspect of this process is the growing diversification in local needs and interests, challenging local planning and management, expected to develop from monofunctionality towards multiple land use and growing diversity in the landscape. However empirical studies of rural landscape development are seldom oriented towards this perspective, and different scientific traditions and concepts of nature and landscape seem to be serious obstacles for an integrated research on landscape functionality. Thus the growing multifunctionality of the landscape and of especially of the more remote countryside, due to urbanisation are difficult to document.

## 2. The countryside: space for counterurbanisation

The English word countryside, expressing the character of rural areas seen from an urban point of view, is not easily translated to other European languages. This can be explained historically through the early industrialisation of the United Kingdom and the related enclosure movement, giving rise to an early marginalisation of the rural population, and a corresponding public – meaning primarily urban – interest in the rural areas as living and leisure room for a rapidly growing industrial middle class. Despite industrialisation and urbanisation, the agricultural community, including an upcoming agricultural industry, has kept a major influence, keeping the agricultural areas free from direct urban dominance as much as possible. An important factor behind this well-established urban-rural dichotomy has also been the fact, that although urban areas have absorbed a still larger part of the population, the land occupied directly by urban functions have until the 1960ties remained relatively limited – seldom taking up more than 10% of the territory even in densely populated regions – due to build-in processes of concentration.

However, especially since the 1960ties this situation has changed, and a trend towards a more dispersed pattern of urban function has been observed in most industrialized countries, often conceptualised as 'counterurbanisation', whereby non-urban population growth rates are higher than urban population growth rates (Berry, 1976, Illeris 1988, Boyle and Halfacree, 1998).

The growing social problems in the ever-spreading conurbation gives birth to a new movement towards the countryside. Many people are looking for new (old) values of a more coherent life and "back to nature", often forgetting that the countryside has changed from imaginations of "the golden age landscape" of family organised mixed farming (or the extensive farming of Estates) into a completely different space of an intensive rural production site. That is one of the reasons why this movement is giving birth to new conflicts between urban and rural thinking and behaviour.

The process has been observed since the beginning of the 1970ties under the name of counterurbanisation, since it basically has resulted in a change in the direction of the push-pull mechanisms characterising traditional urbanisation.

Berry (1976) identified and described an early counterurbanisation in United States as a process of population deconcentration as (just) another aspect of the demographic transition. His mostly descriptive research has inspired a countless number of empirical surveys of this transition, on a local, regional and international levels confirming the trend, and raising the debate: How to explain the 'turnaround' - the counterurbanisation, thereby raising theoretical perspectives, typically answered in a theoretical continuum between economy and culture (Kontuly 1998). It should however also be remembered that 'counterurbanisation', seen as a trend towards settlement of urban populations at the countryside, since the 90ties has been accompanied by a parallel alternative in form of a gentrification of many parts of the urban core-areas..

### 3. The rural areas: diverging and ever-changing conditions for counterurbanisation

The process of counterurbanisation is not implemented to the countryside as a colonisation of a Terra Incognita. The countryside has its internal development trends that serve as important conditions. Much theory related to the development of the countryside seen from a rural point of view can be traced back to the classical problem area named '*the agrarian question*'. It was raised in the beginning of the former century, especially among Marxists, to whom it was an important challenge for their understanding of capitalist development. The accumulation of capital produces a constant rationalisation of production that undermines less efficient modes of production, thereby disintegrating traditional small-scale production. In rural areas this means dissolution of small-scale peasant farming, resulting in a division of the rural population into two classes. This in fact happened in England, and Marx considered it the prototype of capitalist development in agriculture, and the role of agriculture in the industrialisation.

The problem, however, was that in all other countries with capitalist development, a large sector of family owned farms continued to dominate the agrarian sector despite industrialisation. In fact, the capitalist English agricultural structure is later shown to have been unique (Newby et al, 1978). Later, it was dissolved, and England got a large family-sector like most other European countries.

This tenacity of the family holdings in the agricultural sector is without doubt one of the main reasons behind the sharp division of urban and rural questions in developed capitalist countries.

A variety of partly contradictory neo-Marxist theories has developed to explain why family-based agriculture can reproduce under capitalism (e.g. Friedmann 1978, Mann and Dickinson 1978, Goodman and Redclift 1985, Goodman, Sorj & Wilkinson 1987). Wulff (2001) has divided them into two main theses: *The flexibility-thesis*, putting emphasis on the possibility of survival for family holdings by simple reproduction through the use of the unpaid working power of the family, and *the limitation-thesis* stressing the inconsistency between working time and production time due to natural processes that can be difficult to speed up. Where possible such processes are taken over by an ever-expanding agro-industry through appropriation and substitution, leaving the ever-changing rest to the family farming.

However, as far as these theories concentrate on finding explanations only related to the capitalist/wage-labourer-relation they have not only problems in relation to the inclusion of non-capitalistic trends of development, but also to include heterogeneity in the development of agriculture, including spatial heterogeneity at different levels.

This has given rise to a more descriptive oriented research that can soften the ontologically oriented Marxist approach. One important school is the Wageningen school of agricultural researchers, stressing the possibility of individual farmers to choose different positions to the market, thereby keeping reproduction through different strategies – farming logics (Long, 1984, Van der Ploeg, 1992). This gives a certain working order, a room of manoeuvre, theoretically allowing for an understanding of heterogeneity in development. A basic distinction is made between strategies of intensification and extensification within the agricultural holding.

However, different farm strategies do not just turn up. They have to develop within different structural contexts, where economic, but also cultural, ideological and social aspects constitute the social way of regulation. Realizing this has given rise to a theory of agriculture regimes linking the agricultural development to different periods with a given social way of regulation that settle, mediate or normalize propensities of crises, inherent to the accumulation process (Agrietta 1979, Friedman and McMichael 1989). During the first extensive regime (from 1870-1914) a free international market was forced through, whereby the rural areas in and outside Europe were captured by the international market. The second, intensive (so-called fordistic) regime dominating from 1945-73, was especially characterized by the subordination of agriculture under the Fordist economy, leading to a strong vertical integration and national regulation to support the intensive agricultural sector.

The international agricultural crises since the 1970s has been interpreted as a sign of the collapse of the regulation system build up during the 2. Regime, and the appearance of a new 3. regime, but with very diverging trends of regulation (Friedman, 1993). One option has been a private global regulation, where agriculture has to adapt the production to the demands from a small number of transnational companies to be able to adjust to the claims for quality and prices from these companies. Another option is quite the opposite: To support a regional autonomy and local influence of the urban population on the rural production by means of a public democratic regulation that can favour local

economic connections through land use- and taxation policy. In any case the period following the second agriculture regime will be characterized by much more uncertainty for the single farmer and more heterogeneity in the agricultural development due to moderated national regulation of the linkage between the local agricultural regions and the transnational companies buying their products. This produces a diversification of the role of farmers: On the one side they are specialized producers linked to an agricultural world market. On the other hand they have a rural enterprise serving local needs, such as nature management. The collapse of the second agriculture regime combined with the trends towards 'counterurbanisation' has put a pressure on the last function and has undermined the agricultural monopoly on the rural areas: It is no longer legitimate that the agricultural production dominate the rural areas, since it is more and more considered a space for consumption rather than for production. Even the strong organisation of Danish farmers has realized this fact. Some years ago the deputy president of this organisation wrote in the farmers newsletter:

*'It is my opinion that when so few people own the most of Denmark, we cannot behave as landlords, standing uncompromising on the private ownership. If we want to keep the ownership we have to be open to the social environment.'*

(Deputy president Hans Bang-Hansen, 1997, 'Landsbladet')

In the last decade the discussion of the present trends during the third agriculture regime has been dominated by the thesis of the *post-productivist transition*, often operationalized into a change in agricultural development from concentration, intensification and specialisation towards dispersion, extensification and diversification that has been observable since the mid-80ties (Bowler and Ilbery, 1997, 1999). However, as pointed out by Geoff Wilson in a newly review of the post-productivist discussion (Wilson, 2001), the transition cannot be narrowed down to these agro-structural aspects, but has to be related to a variety of very different inter-related dimensions: Ideology, actors, food regimes, agricultural production, agricultural policies, farming techniques and environmental impact. Within each of those dimensions, different phenomenon can be enhanced as useful characteristics of productivism and post-productivism, related to the sociological concept of post-material attitudes and values (see fig. 1).

Since the concept of post-productivism has primarily been negatively defined, he put the important question: A transition towards what? He conclude that the post-productivist transition should be understood as a transition towards a new stage of a *multifunctional agriculture regime*, that institutionalises the wide diversity to be expected as a territorialisation of continued parallel but diverging trends of productivist and post-productivist processes.

The perspective of a 'multifunctional agriculture regime' has important implications for the process of counterurbanisation. It means that also in a long-term perspective the very different trends of rural perspectives will have a decisive influence on location aspects of the counterurbanisation. Since the counterurbanisation is economically and socially differentiated, it will react specifically to the regional and local character of the 'multifunctional agriculture regime' in a mixture of an appropriate adjustment and active modification. Superimposing the process of counterurbanisation to the countryside during a '*multifunctional agriculture regime*', could correspondingly be labelled a '*multifunctional countryside regime*'.

Such a regime represents a certain dissolution of the traditional dichotomy between rural and urban questions and theories related to this dichotomy. It also stresses the horizontal dimension in the development of rural areas, by focusing on how the countryside is constructed as space.

Marsden (1999) has characterised the rural areas during the post-fordist accumulation regime as a consumption-space with the new service-class as a major force in the construction of the rural space. Due to the weakening of the welfare-state, local authorities and local politically influential actors will play a major role in the regulation of the rural space (Woods, 1998). This will further develop regional and local diversity.

Marsden et al. (1993) has set up 4 different ideal types of rural space: 1) The preserved countryside, 2) the contested countryside, 3) the paternalistic countryside, and 4) the clientelistic countryside.

These types have been developed (and later refined, see Marsden, 1999) in a British context, but applied to a wider European context by Hoggart et al. (1996).

However, the construction of the rural space has also to take into consideration the differentiation in landscape characteristics, both natural and cultural, since it obviously plays a major role in the differentiation of the future countryside. So, there is a strong need for more integrated approaches to studies of the future development of the European countryside.



#### 4. Complex countryside research: Multifunctional land use, landscape characteristics and values

As shown above, the development of counterurbanisation of the countryside cannot just be seen as a mere spatial process (as often simplified in urban studies) but has to be closely related to landscape structure and dynamics, including land use, as well as development in landscape related values. However, the rise in different interests and values developing during a multifunctional agriculture regime superimposed by a counterurbanisation process makes an appropriate registration and monitoring of landscape characteristics and landscape values very difficult, but also utmost important in the complicated process necessary to solve the inherent ecological, economical and social problems. It is interesting to notice that since the mid 80ties, where not only the counterurbanisation was clearly observed throughout Europe (Illeris, 1988), but also the trends towards post-productivism in different European regions could be detected (Bowler and Ilbary, 1997) there has been a growing interest among scientists and planners in the problems of agricultural landscapes. Especially during the last decade an impressive amount of interdisciplinary landscape research programmes has been initiated in a number of European countries, e.g. in Germany, Austria, UK, The Netherlands, Belgium, Norway, Sweden, and Denmark.

Just in Denmark, new research initiatives in the order of 5-10 mill. €, such as: '*Man, Landscape and Biodiversity*' (1995-2001), '*Land use – the farmer as landscape manager*' (1995-2001), '*Sustainable land use*' (1997-2000), and '*The agrarian landscape*' (1998-2003) were launched for such broad studies each year in the last part of the 1990s (Brandt, 2000).

One of the first projects in these series of research programmes, called *Value, Landscape and Biodiversity* was especially devoted to the complex problems of values, consequences and planning in regard to integrated management and use of the countryside. Allow us a short presentation of this, we think, typical project for the present situation. The idea was to establish an empirical and theoretical framework that could serve as a foundation for the use and management of the countryside due to the emerging multiple use of the landscape from very different interests and groups, by focusing especially on

- 1) an ethical weighting of different values and interests,
- 2) how to integrate such a knowledge with relevant information on the nature and economy in the landscape, and
- 3) how to find relevant management tools under such conditions.

The project was implemented in two dimensions:

- 1) a list of problem areas, which comprised the empirical and theoretical foundation, and
- 2) a range of scenarios testing visions on a multipurpose, balanced use of the countryside on a concrete empirical base.

Empirically the research project was based on detailed studies of 32 small areas, representative for the Danish countryside, each with an area of 4 square kilometres, where detailed data have been collected on land cover and land use, small biotopes, structure of ownership and farming units and interviews with farmers (Agger and Brandt 1988). This registration is interesting because it allows for a detailed empirical investigation of some important trends in the development of our agricultural landscapes during the post-productivist transition period. So, we have been able to make a comparative quantitative registration of the rate of changes within some major categories of non-agricultural land cover ('small biotopes') in 5 of the 32 areas, from 1954 (based on air photos) to our latest field-registration in 1996 (Fig. 1).

There is a high dynamic in these mostly man-made landscape elements that comes and goes as an integrated part of the dynamics of the agricultural structure. It is however clear that especially the period of heavy industrialisation of the crop production during the 1970ties resulted in a decrease in all types of biotopes. And it is just as clear that this period was replaced by a period of stabilisation during the 80ties and 90ties. Thus, at the empirical level there seems to be a support for the thesis about a transition from a productivist phase of Danish agriculture towards a post-productivist phase and the influence of this transition on the development of the agricultural landscape.

Looking at all the 32 sample areas, this trend is confirmed by our material at the national for the period 1991-96 (see fig. 3) There are however some marked regional and local differences that we are currently investigating. The new positive trend is clearly present especially in Eastern Jutland, whereas it is much more modest in eastern Denmark, dominated by specialised plant-production. And surprisingly, Western Jutland also only shows a minor improvement of the biotope content, with the exception of progress in small plantations and ponds. This might be interpreted as a sign of a continued

relative intensification of agriculture in Western Jutland, traditionally considered to be marginal. It might not be illogical, since we have reasons to believe that the pressure of urbanisation is minor, so that the continued productive land use might get a dominating role precisely in these more sparsely populated areas.

Such an interpretation seems to be confirmed by some detailed scenario-studies that have been made in conjunction with the landscape monitoring (Tress et al., 1999, Tress&Tress, 2001).

Two of our 32 test areas were selected for the scenarios, representing some extreme points on a complex scale of agricultural landscapes ranging from the urban to the remote rural and from the highly productive loamy moraine landscapes of eastern Denmark to the sandy outwash plains of western Jutland.

Stavnsholt common is a typical suburban agricultural 'island' in the urban matrix north of Copenhagen, situated on the marginal border of three former agricultural parishes, characterised by small to middle-sized farms, today managed as part-time or mainly hobby-farms often in form of 'horsiculture', dominated by recreational interests. Pressure for urban expansion from the surrounding communities as well as zone restrictions influence land use and management decisions in general not related to local production or employment considerations.

Kravlund in southern Jutland just north of the Danish-German border is a typical example of a Western Danish agricultural area situated on a sandy outwash plain, but with intensive dairy farming of middle-sized holdings. Although new trends in land use can be observed in the area, e.g. as conversion to organic farming, the relation to land use is clearly more economically oriented with emphasis on the relation between land use and possible spin-offs on local economy and employment.

## 5. The rural-urban continuum

The dichotomy of the scenario cases above can certainly be interpreted as extremes within the countryside-part of a rural-urban continuum stretching from small rural pockets in an urbanised landscape to the agricultural region, where productive agricultural activities dominate the local landscape and community, both economically, socially and culturally. In sociological and geographical literature the rural-urban continuum has often been formulated around characteristics of local social relationships, with the pole of the traditional *Gemeinschaft* based on kinship, locality and neighbourliness, fellowship and mutual responsibility on the one side, and competition and formal control mechanisms in the *Gesellschaft* due to the diverse origin and backgrounds of the members, sharing only weak common historical roots. (Robinson, 1990). In a spatial perspective, it can be argued that this continuum in some way correlates with population density and the degree of urban land use that permits a spatial model to test not only a link between social relations and geographical characteristics (population density and land use), but also their spatial location in relation to an urban-rural potential space.

Due to the concentrated character of the urbanisation process during the industrialisation and the obvious tenacity of the dominating family structure in western agriculture, such a spatial continuum should be expected to be rather 'dualistic', as expressed in fig. 4.

The process of counterurbanisation, could be expected to produce a much more continuous rural-urban transition, both concerning social relations and maybe also in land use and population density. (see fig. 5). However, since the counterurbanisation started before the end of the second agriculture regime, strong tensions between the emerging counterurbanisation and the productivist oriented regulation of the rural space has probably dragged on the process. So, in Denmark this resulted in a national zoning in 1970, dividing the territory into urban, rural and summerhouse zones, strictly regulating urban sprawl, and at the same time cementing the rural zone as space for productive agricultural interests. Nevertheless, a 'hidden urbanisation' has been observed, especially since the 1990s, in form of a widespread change in functions of agricultural buildings, and additional forms of land use in rural areas. As a consequence, there has been a growing political pressure on the zonal legislation to allow for more urban functions at the countryside.

The combined process of productivism and post-productivism, resulting in a multifunctional agriculture regime might correspondingly result in urban-like social relations, as shown in fig. 6. As indicated, the urban/rural character of the future countryside is a very open question, with many opportunities from the modest urban to the modest rural.

However, the geographical effects in form of population density and land use as well as the connection to landscape characteristics are only partially spatially conditioned. It should also be connected to

different historically developed environments at different geographical levels that can further different trajectories.

## 6. Regional models for empirical studies

As shown in part 4, it has been possible to link the development in certain landscape characteristics with the process of a transformation from a productivist to a post-productivist agriculture regime. But can landscape characteristics or changes in these also be related to the combined process of counterurbanisation and development of a multifunctional agriculture regime?

Based on our empirical material from the project Value, Landscape and Biodiversity, we have tried to fit our 32 4-sq.km. test areas into a spatial model for 'urban pressure' in Denmark to test if different relevant landscape parameters could be linked to the ranking of the test areas within an urban-rural continuum.

By urban pressure is meant the sum of potential urban influence from all urban areas to a given rural location. In the following, the potential urban influence is considered to be distance-dependant, based on a gravity-principle. Further a model for the potential urban influence based on the square root of the weighted distance to an urban-area-related expression of population size has been used. The nationwide potential urban influence from the 4 largest urban areas in Denmark (each with a population of more than 100 000 inhabitants) has been calculated with distance measured by a digital road model for Denmark. This has been done due to the distribution of land and sea in Denmark, which does not allow the use of a simple spatial diffusion model. For pragmatic reasons a more simple diffusion model with a spatial influence of in general not more than 30 km has been used for all other urban areas, defined as areas with urban zone planning status.

In fig. 7 is shown a map of the resulting distribution of urban pressure on rural areas in Denmark. Our 32 four-square-kilometre grids of rural area used in our detailed monitoring of the agricultural landscape are indicated as well.

As shown i fig. 8 only few of our test areas have been placed in the urban fringe of larger cities. If the rural-urban continuum is reflected in physical, social and cultural characteristics (Robinson, 1990), it should be possible to test such a continuum empirically on a variety of indicators.

In the following the value of a small number of characteristics of each sample area are shown related to the position of the 32 areas within the urban-rural continuum. Balance sheets are all from 1996, figures of change referring to the period 1991-1996, since all 32 areas have been monitored only since 1991. When interpreting these data, the reservation should be made, that the data have been produced for other purposes than the one used here.

As can be seen from these figures (and other data from the surveys) there are almost no correlation between the indicators and the urban-rural continuum. Certainly more detailed analysis of the data as well as use of alternative models for the urban pressure has to be carried out. But it seems reasonable to conclude that there are no empirical evidence for any simple model of local implication of a general urban-rural continuum. In the next part, an alternative model for the local implications of rural development will be presented, that perhaps can explain the missing pattern shown in the previous figures. The small 4-km<sup>2</sup> squares are probably not suited for regional analysis.

## 7. Local models for empirical studies

The settlement history of rural areas is certainly different from region to region. Often it has to be seen in a clear national context related to development in rural regulation history. The contemporary history of the Danish rural settlement has been dominated by a profound reallocation of all Danish villages carried out around 1800. This was done in different ways, according to the local conditions. In some cases, especially in a heterogeneous physical environment, the village was dissolved and the farms were spread over the territory of the association of owners. In areas of relatively homogeneous natural conditions the reallocation was organised as a 'star reallocation', keeping the village settlement intact, but giving each farm a slice of land spreading out from the village to the marginal areas near the borders to the next village. During later expansion, small peasants and agricultural workers typically settled the most remote areas.

The following models should only be seen as a rough model for a characterisation of changes and conflicts for this type of village. It has to be adapted to other types of rural environment. It should also be noted, that the model should be implemented into a regional model allowing for different roads of development for the model according to the regional context.

The structure of a Danish village with a 'star-reallotment' during the first extensive agriculture regime is shown in fig. 12. The good soils were concentrated around the village, dominated by middle-sized farms, surrounded by marginal areas, typically more wet or sandy soils dominating the periphery. Small farmers and rural workers were typically located in the periphery, living in modest cottages. During the end of the first regime, they were partly constructed to ensure a class of agricultural workers for the village farmer, partly planned as smallholders, inspired by Georgist philosophy. In Western Denmark they had an agricultural acreage of up to 11 ha.

A considerable part of the good soils around the village were drained with drainpipes. Late in the period also the marginal soils were drained, more often with open drain ditches. The former very open landscape was closed through the construction of hedges, both as windbreaks, for the cattle and to mark the boundary of the property. Due to the star-structure, the density of these landscape elements was highest near the village, as was usually also their 'quality' (e.g. the width of the hedgerows).

As shown in fig. 12, this gave rise to a typical distribution of cultural landscape elements (including building quality and style), with a distribution of value roughly corresponding to the distribution of the value of the natural resources. Thus the social stratification of the village was by and large geographical reflected in the distribution of both natural resources and cultural landscape elements. During the productivist phase of agriculture, continued melioration as well as a substantiate input of cheap fertilisers and pesticides raised the productivity of much of the marginal area to a level comparable with the good quality soils. In the first part of this phase it gave rise to a certain economic progress of smallholders, able to survive through a strong intensification. Corresponding investments also in related landscape elements were made. However, due to their small acreage they could not survive as full-time farmers during the agricultural industrialisation. An important landscape-related aspect was the increase in field size that was implemented more efficiently on the good, homogeneous areas of the larger holdings in the centre of the village than on the more heterogeneous marginal soils of the smallholders. Many small ponds, established as marl pits during the first agriculture regime were filled up during the productivist period to accommodate to the agricultural machinery. This left the intensive production areas as open undifferentiated landscapes cultivated with mainly one single plant; barley. In fact, at the end of the 1970s, spring barley covered more than 50% of the total Danish land territory!)

As indicated on Fig. 13, the result was a more equal geographical distribution of landscape values, and a dwindling correspondence between the distribution of wealth, natural landscape elements and cultural landscape elements.

Already during the last part of the productivist phase a certain counterurbanisation can be observed, oriented towards cottages in the marginal areas. In this period many small holders gave up, and migrated to urban areas for alternative job opportunities. Strong influence from the agricultural lobby tried to prevent sale of agricultural holdings to non-farmers through legislation keeping rural property for skilled farmers. But gradually these restrictions were loosened primarily to raise the price of cottages and to stabilize the population base for service and infrastructure in the rural areas. During the transition towards the multifunctional agriculture regime, with conditions that furthered the possibilities of changing land use towards consumption, the counterurbanisation has intensified. The decline of the intensive regime has also meant a trend toward more spatial heterogeneity of the natural resources, e.g. through the canceling of support for drainage, with a long sighted reestablishment of wetlands in the marginal areas as a consequence. This furthers the attractiveness of these areas for counterurbanisation.

At the same time, however, rural possibilities of a variety of alternatives to productivist agriculture make a certain resistance against the pressure from counterurbanisation possible. Remaining smallholders in the marginal areas stay plurifunctional or as parttime/leisure-time farmers. Through this *the marginal areas* have already in many areas been transformed into a true mixture of plurifunctional agriculture and recreational housing. The destiny of *the village* is however much more unsure, due to an unstable situation: The strong rationalization of the larger farms might have left the village with a monotonous 'field desert', not attractive for high-income middleclass, looking for a private closed natural environment. Historically developed rationalized holdings settled in the village will often form a core of continued productivist agricultural activities, giving rise to additional pollution problems in the village. Heterogeneity in style and quality of buildings, missing local care of the environment, and traffic nuisance might add to the missing attractiveness. On the other hand, if the village settlement, often with historical quality buildings, has been kept intact, and has been opened for



some counterurbanisation, a very attractive local social space can be constructed, despite the productivist surroundings.

As indicated on Fig.14, sharp contradictions between the value of natural resources and cultural landscape elements develop during the multifunctional agriculture regime. Especially on the good soils around the village tense battles of land use strategy can be observed, and many economic, social, and ideological factors can influence if a productivist or a consumptionist way of strategy will take over. Thus, at the local village level, a cultural landscape historical conditioned patchwork of areas with protected and contested countryside might develop.

A regional differentiation between the forces influencing the local development is certainly possible and should be investigated.

The shown models have not yet been empirically tested.

## 8. Limits to interdisciplinary studies of landscape development

The landscape is a major aspect of the countryside. But landscape aspects of counterurbanisation under conditions of a multifunctional agricultural regime is an extremely complex problem area, calling for an intensified interdisciplinary research activity. Inspired from a Danish interdisciplinary research project Value, Landscape and Biodiversity we have tried to outline some aspects that has to be taken into consideration. Only through interdisciplinary studies it is possible to grasp the complexity and richness of our manmade landscapes in a way relevant for those wishing to plan and manage the landscapes of the future. The necessary research field is even much broader than indicated in this presentation. So, a major part of the project was dedicated to methodologies for the registration of landscape elements, and development of a relevant geographical information system to allow for different types of landscape ecological spatial analysis. Systematic-philosophical studies of values and analysis of basic ethical viewpoints in form of different instrumental and intrinsic types of values was another important study field. Interdisciplinarity in landscape studies is extremely difficult to practice. This is due not only to different terminology, but also to the fact that many disciplines, that we have to consider important for landscape studies in fact have only general relations to a landscape concept at all. Which also means that they have difficulties in formulating their specific contribution to an interdisciplinary landscape research group. And further: There is an enormous gap from the dominating natural science concept of landscapes as concrete material systems of the environment to the concepts of landscape dominating humanities and social sciences as pure mental constructions in our mind, only to be understood and handled in a social and historical context. This is probably the biggest challenge we are facing.

The main integration strategy for the interdisciplinary research group was the common scenario-building. Some 40 interdisciplinary seminars were arranged. Three interdisciplinary sub-groups on economy, biodiversity and interview-preparation were formed for a joined formulation of a methodological scenario. It was a time-consuming and partly frustrating process, where we very often had the feeling of rummaging around in the bottom of a Babylonian tower. And it was risky, too, since there was no guarantee for a traditional scientific success within our disciplines.

We were both biologists, geographers, agronomists, economists and lawyers, philosophers, landscape architects and planners from very different institutions, but with the common denominator that all had been related to universities and other institutions of higher education. This could be seen both as an advantage and a disadvantage. Advantage, since integrated research in such a politically potent matter as countryside development, should be driven independently of political and economic influences, following its own courses driven by scientific principles. A disadvantage, since the necessary strong steering – including a pragmatic discipline - is often against the academic tradition. So, the very applied goal-orientation of the project was in fact based on a forced and partly pragmatic dialectics between theory, development of methods and empirical studies that can be difficult to meet in an academic environment - and for good reasons. On the other hand, if interdisciplinary research shall have a chance of an independent future, it is very important that also universities develop ways of project steering that can keep the interdisciplinary goals on the road, also where they might run into troubles with individual or discipline-oriented interests.

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*Paper to be presented at the conference:  
Open space functions under urban pressure  
Ghent, Belgium, 19<sup>th</sup>-21<sup>th</sup> September 2001*

# **Urbanisation of the countryside**

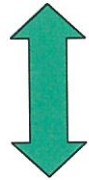
**– problems of interdisciplinarity in  
the study of rural landscape  
development**

*By Jesper Brandt, Esbern Holmes and Peter Skriver  
Department of Geography and International Development Studies  
Roskilde University, Denmark*



# Urbanisation of the Countryside

The countryside: space for  
counterurbanisation



The rural areas: diverging and ever-  
changing conditions for  
counterurbanisation

# Urbanisation of the countryside

*'It is my opinion that when so few people own the most of Denmark, we cannot behave as landlords, standing uncompromising on the private ownership. If we want to keep the ownership we have to be open to the social environment.'*

(Deputy president Hans Bang-Hansen, 1997, 'Landsbladet')

# Urbanisation of the Countryside

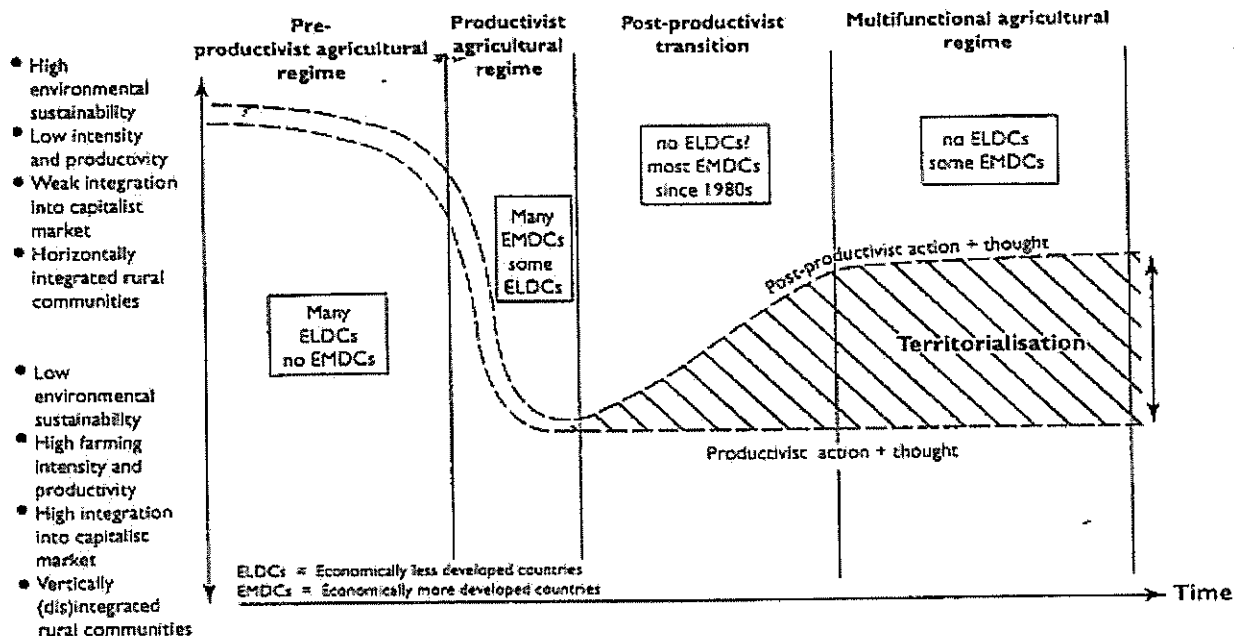


Fig. 1. The transition towards a multifunctional agriculture regime (Wilson, 2001)

# Urbanisation of the Countryside

*Marsden et al. (1993):*

- *The preserved countryside*
- *The contested countryside*
- *The paternalistic countryside, and*
- *The clientilistic countryside*



# Urbanisation of the Countryside

Interdisciplinary landscape research initiatives in Denmark since 1995:

*'Man, Landscape and Biodiversity' (1995-2001)*

*'Land use – the farmer as landscape manager' (1995-2001),*

*'Sustainable land use' (1997-2000), and 'The agrarian landscape' (1998-2003)*

- all in the order of 5-10 Mill. €

# **Urbanisation of the Countryside**

## **Value, Landscape and Biodiversity**

- A research project on values, consequences and regulation with respect to an integrated use and management of the countryside**

# **Urbanisation of the Countryside**

## **Value, Landscape and Biodiversity**

### **Focus:**

- 1. An ethical weighting of different values and interests**
- 2. How to integrate such a knowledge with relevant information on the nature and economy in the landscape, and**
- 3. How to find relevant management tools under such conditions.**

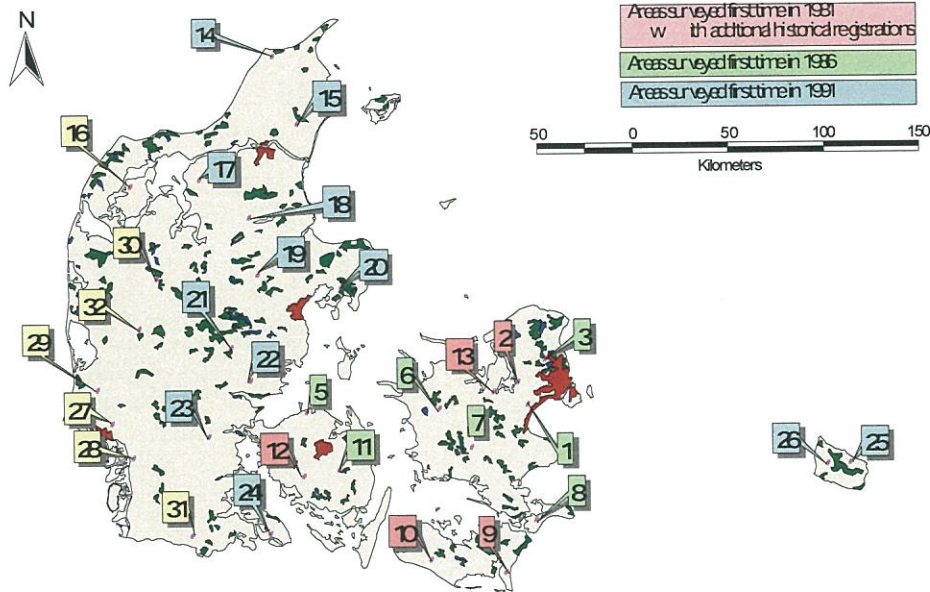
# **Urbanisation of the Countryside**

## **Value, Landscape and Biodiversity**

**Two dimensions:**

- 1. A list of problem areas, which comprised the empirical and theoretical foundation, and**
- 2. A range of scenarios testing visions on a multipurpose, balanced use of the countryside on a concrete empirical base.**

# Urbanisation of the Countryside



Based on data from KMS (Denmark 1:2m), UTM Zone 32 European Datum of 1980

The location of 32 four km<sup>2</sup> rural sites for landscape monitoring in Denmark.

# Urbanisation of the Countryside

**Fig. 2. The net rate of changes per year of linear and area biotopes in 5 test areas in Western Denmark. (20 km<sup>2</sup>) 1954-1996.**

	1954-68	1968-81	1981-86	1986-91	1991-96.
Nb. of years in each period	14	13	5	5	5.
Linear biotopes (% change).					
% of length, per year	- 0.6	- 2.3	- 1.3	-1.3	0.9.
% of area, per year			-2.9		2.5.
Area biotopes (% change).					
% of number, per year	- 0.5	- 0.8	-0.8	-0.8	0.3.
% of area, per year			3.0		1.7.

*Linear biotopes comprises e.g. hedgerows, road verges, field divides, ditches, brooks, channels and rivers.*

*Area biotopes: comprises forests, woodlots and small plantations, solitary trees, permanent herbaceous cover, prehistoric barrows, bogs and lakes.*



# Urbanisation of the Countryside

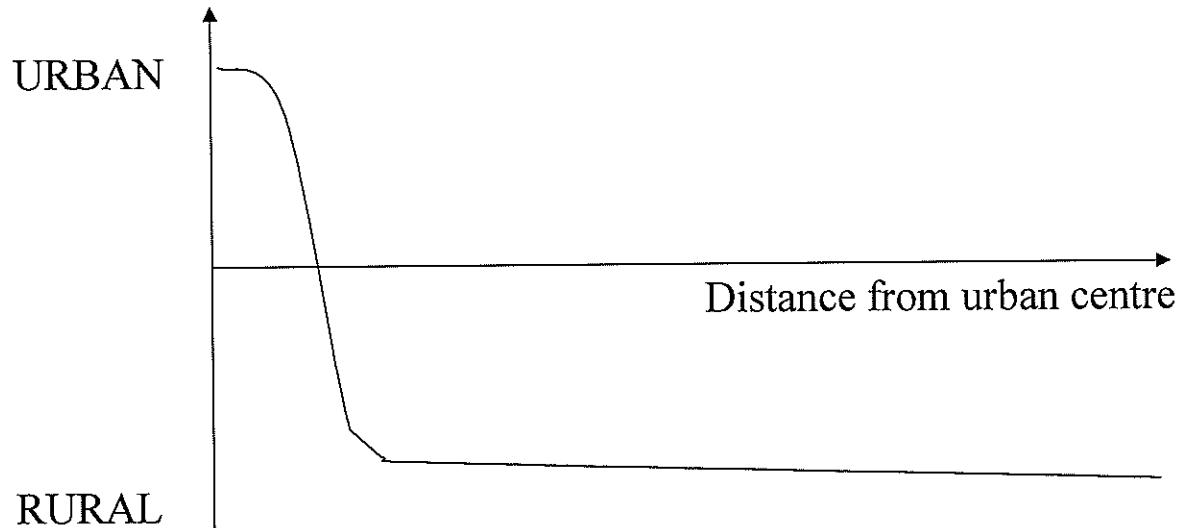
**Fig. 3. The net rate of changes per year of linear and area biotopes in 13 sample areas in Denmark (128 km<sup>2</sup>) 1954-1996**

	Western Jutland	Eastern Jutland	Eastern Islands	Total Denmark
<b>Linear biotopes (% change)</b>				
% of length, per year	0.3	1.1	0.4	0.4
% of area, per year	0.7	2.0	0.1	0.6
<b>Area biotopes (% change)</b>				
% of number, per year	1.5	2.1	0.7	1.1
% of area, per year	0.3	1.9	1.0	1.2

*Linear biotopes comprises e.g. hedgerows, road verges, field divides, ditches, brooks, channels and rivers.*

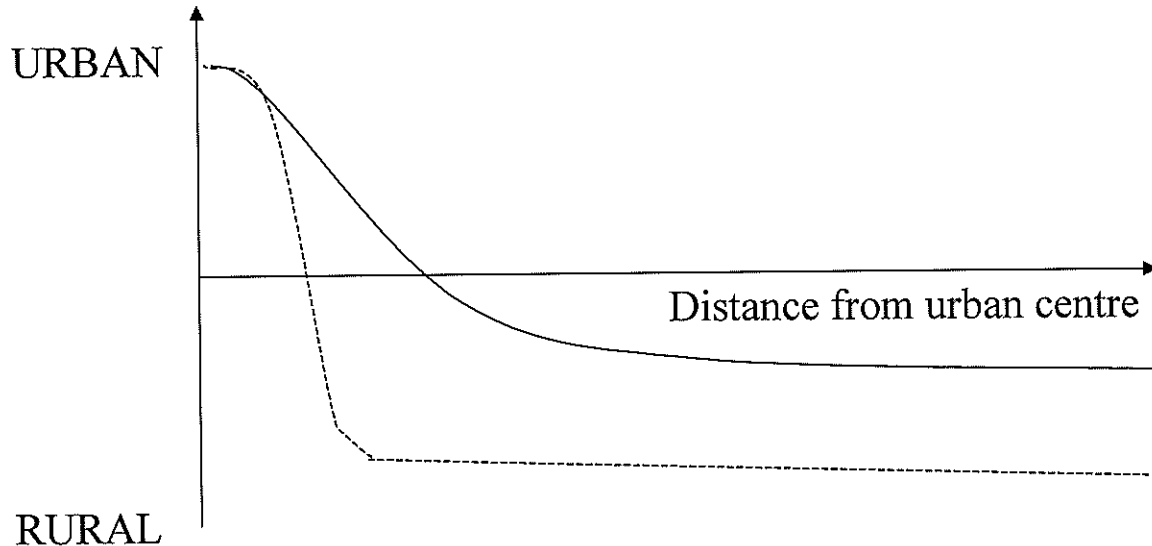
*Area biotopes: comprises forests, woodlots and small plantations, solitary trees, permanent herbaceous cover, prehistoric barrows, bogs and lakes.*

# Urbanisation of the Countryside



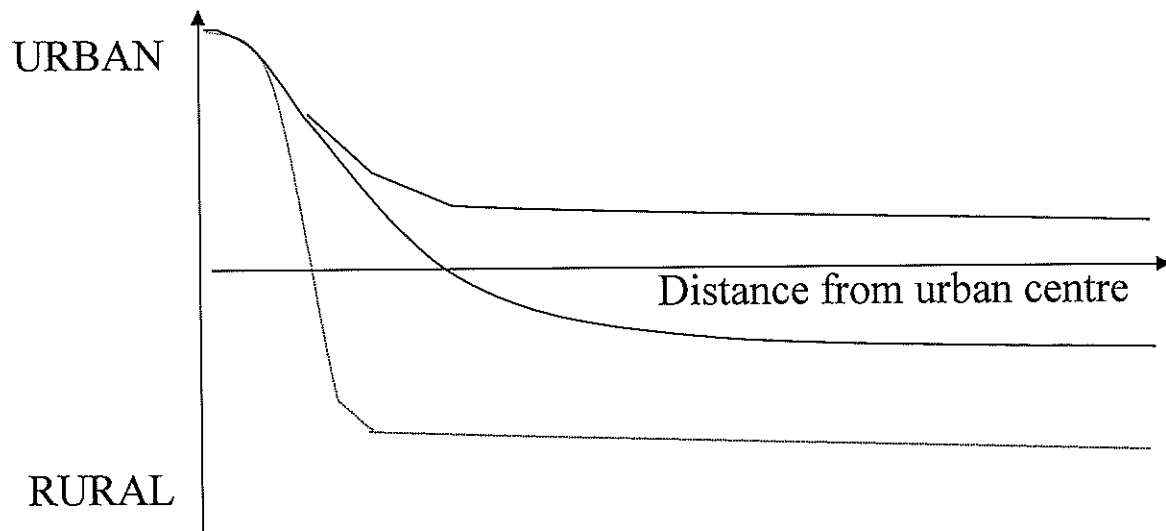
**Fig. 4. The rural-urban continuum: trends during the extensive agricultural regime.**

# Urbanisation of the Countryside



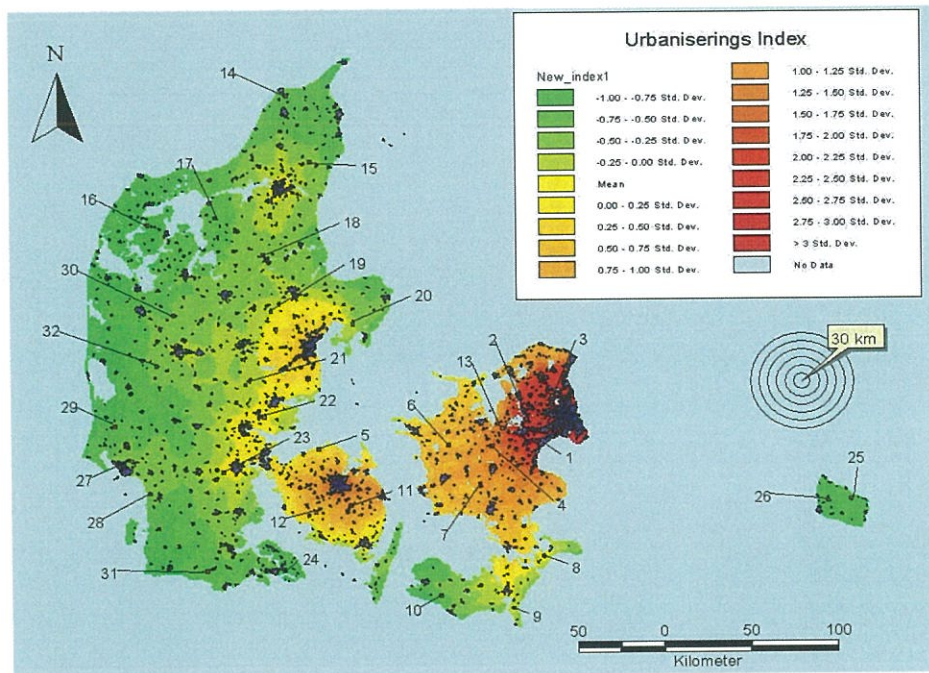
**Fig. 5: The urban-rural continuum: Trends during the intensive agricultural regime. Influence of counterurbanisation**

# Urbanisation of the Countryside



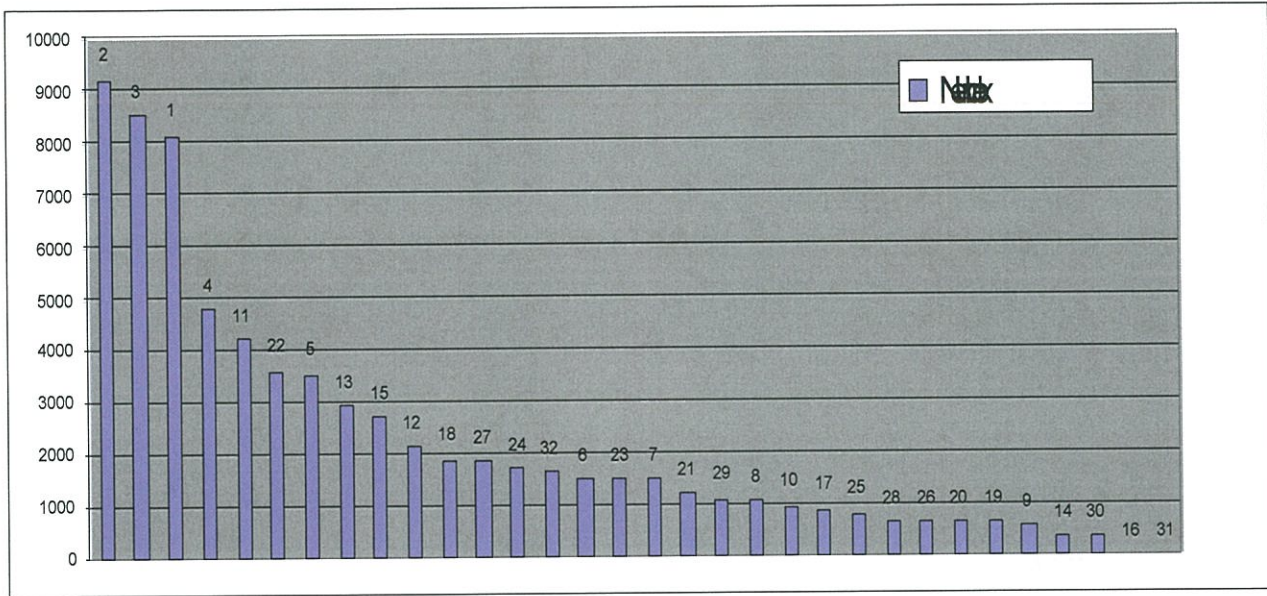
**Fig. 6: The urban-rural continuum: Trends during the multifunctional agricultural regime**

# Urbanisation of the Countryside



**Fig. 7. Distribution of urbanisation-pressure-indices for 32 rural monitoring areas in Denmark.**

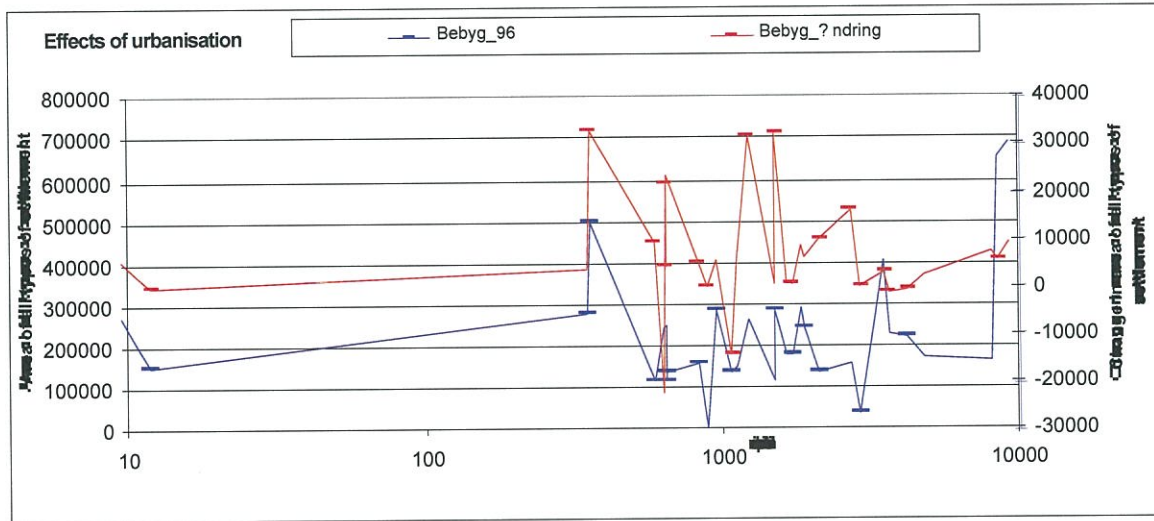
# Urbanisation of the Countryside



**Fig. 8. The position of the 32 rural area on the urbanization pressure surface of Denmark (see Fig. 7).**

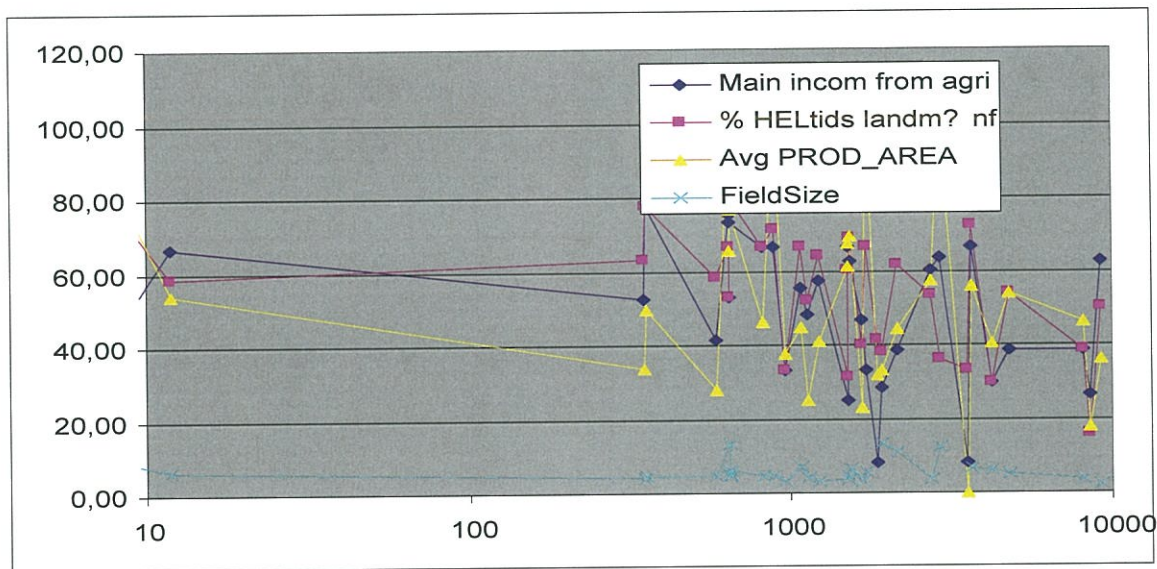


# Urbanisation of the Countryside



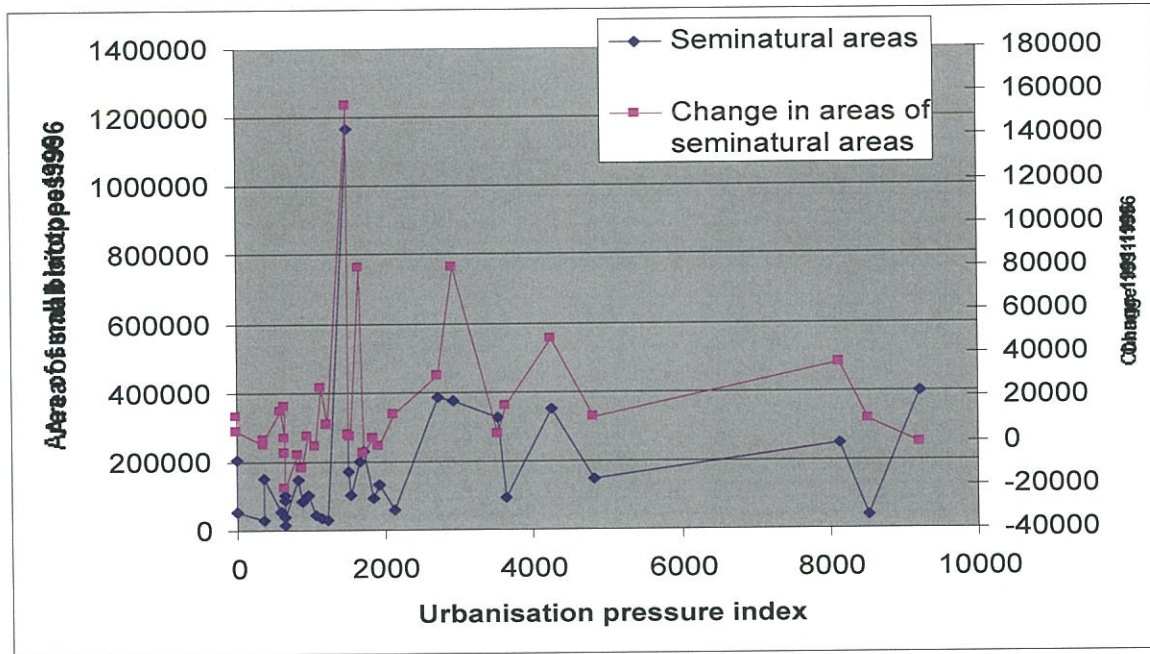
**Fig. 9. Build-up area 1996 and change in build-up area 1991-96 (in m<sup>2</sup>) within each of the 32 test areas, along an urban-rural continuum.**

# Urbanisation of the Countryside



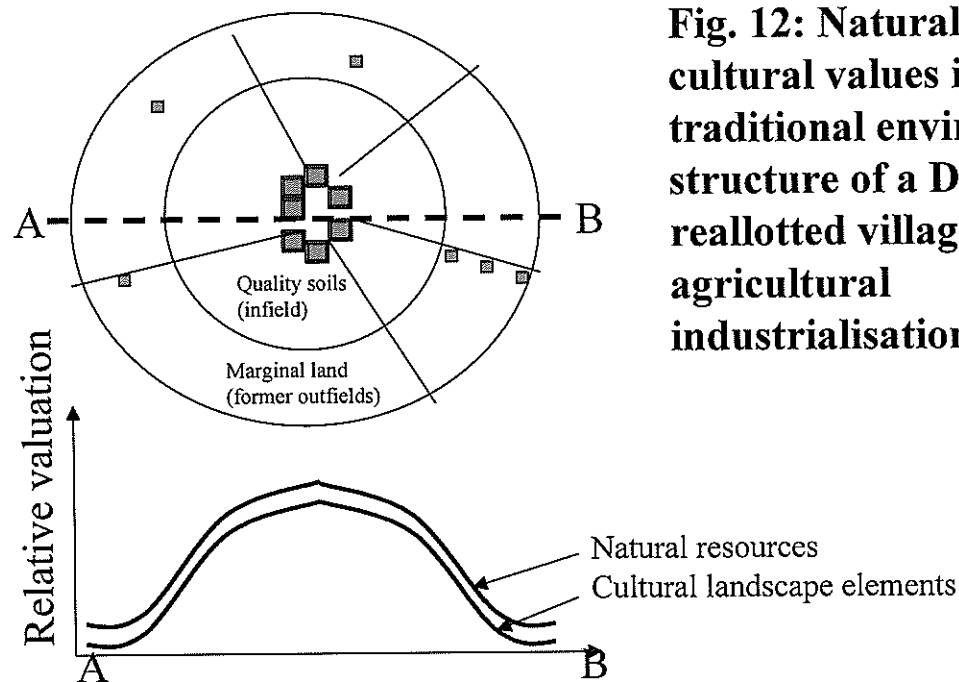
**Fig. 10. Different indicators within each of the 32 test areas, along an urban-rural continuum. A: % of farmers with main income from agriculture. B: % full time farmers. C: Average production area per holding (in hectares) D: Average field size (in hectares)**

# Urbanisation of the Countryside



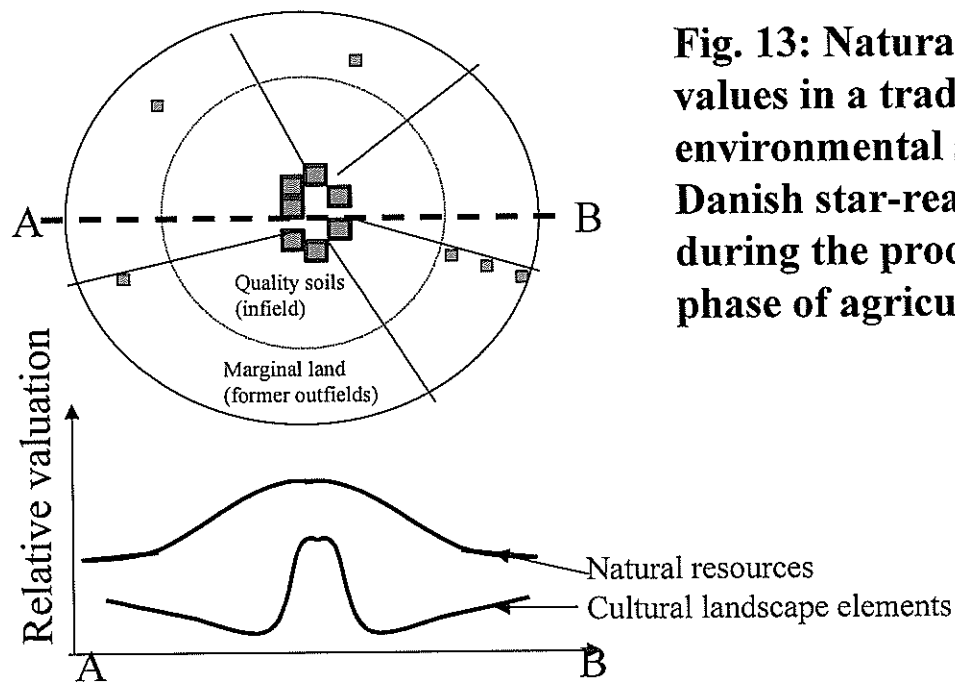
**Fig. 11. Changes in the surface of small biotopes of the 32 test areas 1991-1996 (in m<sup>2</sup>, along an urban-rural continuum.**

# Urbanisation of the Countryside



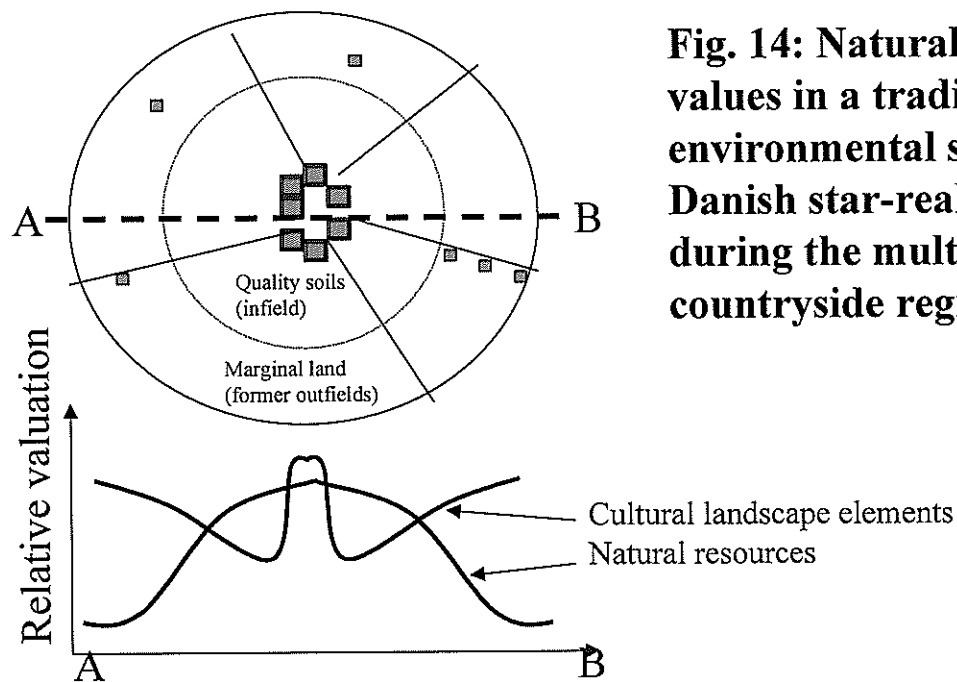
**Fig. 12: Natural and cultural values in a traditional environmental structure of a Danish Star-reallotted village before the agricultural industrialisation**

# Urbanisation of the Countryside



**Fig. 13: Natural and cultural values in a traditional environmental structure of a Danish star-reallotted village during the productivist phase of agriculture**

# Urbanisation of the Countryside



**Fig. 14: Natural and cultural values in a traditional environmental structure of a Danish star-reallotted village during the multifunctional countryside regime**