

What do Urbanised and Rural Societies Expect from their Forests?^{1,2}

Comparative research of demand and support for future forests across Europe

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Abstract

There is growing pressure and demand on woodlands nearby urban areas. While it is generally assumed that the perspectives of urbanised societies on the role of forest in general and with respect to recreation are different to the ones of more rural societies, this has never before been tested at a pan-European level. Results of a survey just completed in sixteen diverse European case study areas indicate that there is a demand for more forests, related not to the distinction between urban and rural, however, but to existing landscape quality. Across the urban-rural continuum, there is hardly any difference in priorities of forest functions and forests play a small –only ecological- role in preferred future local development. The more urbanised an area gets, the more that nature conservation and the less that economic activities are considered to be important as forest functions. With respect to recreation, there is hardly any difference in recreational visits to local forests and all societies support freedom of access to both public and privately owned forests. However, only a small group of inhabitants approve of financial supports to landowners to open their forest property for recreation. Although this group is larger in the more urbanised societies, urbanised people show in general a low understanding for landowners’ economic viability. Besides recreation, they want local private forests to satisfy their ecological and landscape demands, but are not enthusiastic about financially supporting the forest owners in reaching those goals.

Keywords: Urban-Rural Continuum, Future Role of Forests, Forest Access, Recreation, Functions and Grants

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1. Introduction

While the forestry sciences have been traditionally developed within a rural context, there is growing pressure and demand on woodlands from increasingly urbanised societies living in and nearby urban areas. As a result, forests are no longer understood in the limited context of natural resource production or protection, but have to provide a wide range of socio-cultural, economic and environmental services. In short, forestry needs to become better at serving urbanised societies (Elands & Wiersum, 2000). Thus, environmental, educational and especially recreational aspects are of increasing importance in the planning and management of forests for an urbanised society (Konijnendijk, 2001).

The influence of urbanising societies on forests is not only felt in urban and peri-urban areas, but extends to rural and even remote areas where there is a growing demand from urban people for countryside recreation, second homes and tourism. Local people in these rural areas often recognise the potential economic benefits of tourism and other urban-based demands on forests (Elands & O'Leary, 2002). Nonetheless, it is sometimes suggested that urban and rural people have different perspectives on the value of forests (Elands & Wiersum, 2000). This suggestion is counter-acted, however, with the observation that in this age of information and communications technologies and globalisation, rural societies are quickly becoming influenced by urban values and lifestyles. Moreover, urban people are increasingly moving to rural areas to live (Kvarda, 2002; Schraml et al., 2002).

There is still little comparative information as to whether the forest-related perspectives of urbanised societies are different to the perspectives of their rural and remote brethren. The aim of this paper is to provide comparative information from a European level study on the expectations of both urban and rural people on forests. When considering these opinions and their possible impact on forest management, two major aspects need consideration. In the first place the overall perspectives on the amount of forests and the desired present and future functions are of importance. It can be considered that interactions between (rural oriented) forest managers and (urban-based) consumers foremost take place in the form of recreation. Consequently, a second factor for consideration when assessing the social expectations on forests is the question of what are the perspectives of both producers and consumers regarding the recreational use of forests. In this respect, the first issue to be considered is the actual recreational use of forests. In addition, it is important to understand perspectives on public access to forests as well as how the maintenance costs for (recreational) forests should be financed. Thus, in this paper, the following questions will be addressed:

1. General opinions on the role of forests under different rurality conditions
 - What are opinions about the amount of forests?
 - What are the perspectives regarding the functions of forests?
 - What are the opinions about the role of forests in the future of the area?
2. Perspectives of producers and consumers on the role of forests for recreation
 - How much recreational use is made of local forests?
 - What perspectives exist on public access to forests?
 - What are the opinions about government grants for forest management?

2. Methodology

2.1 General

The Multifor.RD project

The data which are presented in this paper were collected within the framework of the EC funded 'Multifunctional forestry as a means to rural development' project. The principle research objective of the 'Multifor.RD' project is to make a comparative European study about the nature and dynamics of landowners' and the public's attitudes towards forests and forestry, and at developing criteria for distinguishing region-specific strategies for multifunctional forestry to serve rural development. A group of universities and research institutes in eleven European countries (Austria, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, the Netherlands, Spain, and Switzerland) participated in this project.

In order to achieve the principle research objective, as described above, two case study areas were selected in each country, one traditionally forested (TR), and another involved in a process of afforestation (AF). As Greece did not have any area with substantial afforestation, they selected two traditional forest areas, one with mostly privately owned forests and one with predominantly public owned forest. Although the selection of areas was not based on a predefined set of rurality characteristics and thus is in some respects arbitrary, the broad variety of rural conditions in Europe is to a large extent covered (only the north Scandinavian region is not included). The participating countries are spread from Denmark in the north of Europe to Greece and Spain in the south, and from Hungary in the east to Ireland in the west. As the research focused in particular on the role of forests in rural areas, the case study areas were selected on the basis of the presence of forests. Consequently, the average forest cover in the study areas is higher than the overall European average and the study results do not present a representative overview of the European forestry situation. However, the main purpose of the study was to obtain a comparative understanding of the perceived role of forestry for rural development under various rurality conditions. Thus, selection of the study areas was based on the aim of gaining insights in comparative trends rather than in obtaining representative data on ideal or typical conditions.

The research consisted of four phases: description and typological classification of case study areas, qualitative interviews with members of different stakeholder groups, quantitative survey among community inhabitants and landowners, and synthesis and development of policy recommendations (Wiersum & Elands, 2002). In this paper the comparative results from the quantitative survey in eight of the participating countries will be presented³.

The quantitative survey

On the basis of the results of a qualitative, explorative survey which was carried out in six countries as well as a literature search a common questionnaire was developed by the researchers and translated into relevant languages for use in the case study areas (Wiersum & Elands, 2002). The questionnaire contained, among others, the following categories of questions which will be reported on in this paper:

- Impressions concerning the amount of forest cover in respondents' locality and their level of satisfaction with it

³ Note: In France a modified questionnaire was used and the French data are therefore not incorporated in this paper

- Priority of different forest functions
- The role of forests in the future development of rural areas
- Recreational use of forests
- Freedom of public access to both private and State owned forests
- Level of support for grant aiding land uses, including afforestation, forest management and forest recreation.

The common questionnaire was employed in eight of the countries which participated in the research, i.e. Austria (AU), Denmark (DK), Germany (DE), Greece (GR), Hungary (HU), Ireland (EI), the Netherlands (NL) and Spain (ES). In total 7,044 people were surveyed in the period between February and April 2001. Two thirds of these respondents are community inhabitants (66%, N=4638) and the remaining one third are landowners (34%, N=2406).

Data analysis

In order to account for possible differences between countries and types of areas in terms of rurality and forest history, four groupings of areas were identified to be used in the subsequent analysis. Apart from *country* (k=8) and *traditional* versus *afforestation* (k=2) groupings, *rural typology* (k=5) and *Euro-zones* (k=3) groupings have been developed. The ‘rural typology’ has been derived from a classification of the case study areas based on a list of parameters. A cluster analysis on these parameters classified the areas into five socio-economic categories of rurality: (i) rural areas with urban characteristics, (ii) diversified rural areas, (iii) growth areas depending on the agriculture sector, (iv) decline areas depending on the agriculture sector, and (v) remote areas (De Deugd & Elands, 2001). The remote area class includes only one case study area, whereas the diversified class includes five case study areas (Table 1). The ‘Euro-zone’ refers to a geographical grouping of the countries into three European zones: Atlantic (DK, EI, NL), Central European (AU, DE, HU) and Mediterranean (ES, GR). The initial analysis of survey data (Elands & O’Leary, 2002) indicated, that the survey data were variably correlated with the country, rurality class or Euro-zone characteristics. This indicates that not only specific socio-economically defined rural conditions influence the perspectives of local people on the rural development role of forest, but also national and regional conditions regarding history of land-use, forestry sector organisation and legal frameworks. This paper will specifically focus on the range of different perspectives on forests and forestry in urbanised and rural societies across Europe.

When case study areas are grouped, the different sample sizes (ranging from 119 to 640 respondents) can heavily influence the results. However, each area should be equally dealt with in the analysis. Therefore, to correct for dissimilar sample sizes, a weighting factor was constructed and applied in the analysis. Besides, the sample sizes of both *community inhabitants* and *landowners* do not necessarily reflect the real distribution of both target groups. A weighting factor has therefore been developed and used in order to correct for over- and under-sampling. It appears that the weighting of the target groups does not change the results substantially; therefore, it has not been used in the main analyses⁴.

⁴ The only differences, though small, can be found in the more urbanised case study areas. High population densities and people that are no longer connected to land use activities but are more consumers of rural space can display different ideas with respect to forests in the development of the locality than land owners.

Table 1: The case study areas classified according to rural typology (K=16; N=7,044)

Rural area typology	Characteristics	Case study areas
Rural area with urban characteristics	High population density (at least 70 to over 300 persons/km ²) Forest forms important part of land-use Significant tertiary sector	Ede (NL) (N=407) Haderslev (DK) (N=615) Staufen (DE) (N=330) Toroella de Montgri (ES) (N=330)
Diversified rural area	Medium population density (50 – 80 persons/km ² , only Stadskanaal higher) Agriculture main form of land-use Equally developed secondary and tertiary sector	Hvorslev (DK) (N=596) Kerekegyhaza (HU) (N=404) Konitsa (GR) (N=375) Stadskanaal (NL) (N=436) Wicklow (EI) (N=522)
Growth area dependent on agriculture	Medium population density (50-60 persons/ km ²) Both forest and agricultural land-use Dominance of primary sector, but growing importance of tertiary sector	Pfullendorf (DE) (N=266) Weinviertel (AU) (N=570)
Decline area dependent on agriculture	Low-medium population density (20-70 persons/ km ²) Both forest and agricultural land-use Important, but stagnating tertiary sector	Kolindros (GR) (N=484) Leitrim (EI) (N=549) Szentgal (HU) (N=390) Waldviertel (AU) (N=640)
Remote area	Very low population (less than 10 persons/ km ²) Dominance of forest land-use Dominance of primary sector	Navès (ES) (N=119)

Bold printed areas are traditional forest areas. Those not printed in bold are afforestation areas.

3. Opinions on the role of forests under different rurality conditions

In this section three topics will be discussed: the perception of present forest cover as well as the satisfaction with it, the functions people prefer for local forests, and the potential role of forests in the future development of the locality. They will be explored in general terms, as well as for differences between community inhabitants and landowners and between urban and rural societies.

3.1 Opinions about the amount of forests

Respondents in the Multifor.RD study were asked to give their impression about the amount of forests in their locality. Taking both community inhabitants and landowners collectively and weighting for case study area sample sizes, 20% have the impression there are too few forests, 72% feel the current forest area is OK as it is and the remaining 8% say there are too many forests. At the European level, therefore, the majority is satisfied with the present forest cover in their locality.

At the rural area type level, diversified locations are those which most feel there are too few forests (35%), followed by urbanised areas (19%). Most of the diversified areas belong to the ‘bland & viable’ afforestation areas that have a strong wish for more forests (Elands & O’Leary, 2002). The area type

which most feels there are too many forests is primary sector in decline (17%). This is relevant in both the traditional and afforestation areas: in the traditional areas, the overwhelming amount of forests is eroding the agricultural character of the area and in the afforestation area the dominance of plantation forests established by outsiders is perceived as threatening the self-control and identity of the area.

The question whether people feel there are too few / many forests is strongly related to the present forest cover, which in turn is related to whether the area has a long forest history (traditional area) or a short forest history (afforestation area). In Table 2, the perception of the present forest cover as well as the satisfaction with it is depicted for each rural area type and forest history.

Table 2: Perceptions about the present forest cover in the locality compared to the satisfaction with it per rural area type and traditional/afforestation areas (all respondents; N=6,781; weighted for dissimilar sample sizes)

	Rural area type				
	Rural area with urban characteristics	Diversified rural area	Growth area dependent on agriculture	Decline area dependent on agriculture	Remote area
Traditional forest area					
- present forest cover	2.4	2.3	*	2.3	2.7
- satisfaction about amount of forests	2.1	1.9	*	2.0	2.0
Afforestation area					
- present forest cover	2.0	1.8	2.2	1.9	*
- satisfaction about amount of forests	2.3	2.5	2.1	2.0	*

Present forest cover: 1=low, 2=medium, 3=high.

Satisfaction amount of forests: 1=too much, 2=okay as it is, 3=too low

* = no data available

The traditional areas all tend to feel that the amount of forests is medium to high, compared to the afforestation areas where the perception of forest cover tends to be closer to medium. Next, it can be concluded that all traditional forest areas are satisfied about the amount of forests, despite the varied perception of the present forest cover. With respect to the afforestation areas, there is a tendency to be slightly dissatisfied (“too low”) with the amount of forests. People from diversified areas are the most dissatisfied taking into account their perception of the present forest cover. Although the forest cover in urbanised afforestation areas is perceived as being medium, residents still think they need more forests. Not so in the declining afforestation areas, however, where people generally feel that the current cover is ‘okay as it is’.

Figure 1 does not split the areas according to forest history but, instead, according to the perception of present forest cover:

- If people feel the present forest cover is high, there is hardly any difference between the different areas. All rural residents are more or less satisfied with the present amount of forests; some of them even thinking there are too many forests (diversified and decline areas)
- When people perceive that the amount of forests is either low or medium, then urbanised areas demonstrate a greater demand for more forests, decreasing with increasing rurality. People in more urbanised locations, therefore, tend to be more concerned about low or medium forest cover,

expressing a preference for an increase, whereas those living in more rural areas tend to be more satisfied with the level of cover as it is, expressing no great desire for more.

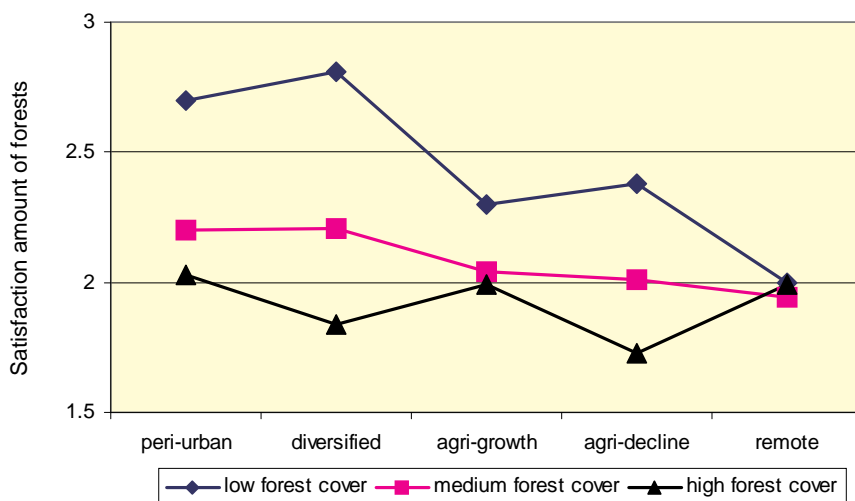


Figure 1. Satisfaction with present amount of forest cover (1=too much, 2=okay as it is, 3=too little) related to the perception of the present local forest cover per rural area type (Pearson correlation too much: -0.152, okay as it is: -0.188, too little:-0.333)

3.2 Perspectives regarding forest functions

When analysing what future potential benefits they expect from their local forests, the ecological arguments dominate. The respondents considered 5 alternative potential benefits of forests, indicating the relative priority of each (1 = low priority, 2 = medium priority and 3 = high priority). The benefits can be put in two groups:

- Protection, nature conservation and landscape benefits are regarded as top priority (2.8, 2.7 and 2.6 respectively);
- Recreation for local people and business activities, including providing jobs, are valued as medium priority with recreation slightly higher than business (2.4 vs. 2.2 respectively).

Environmental and landscape functions are valued lowest by farmers, along with recreation. Not surprisingly, therefore, farmers prioritise business activities the most. Landowners give relatively more priority towards production whereas community inhabitants tend relatively towards consumption and public services.

Not much difference exists between rural areas with respect to the valuation of forest functions. The two most discriminating functions are recreation and business activities. Business activities are regarded as a higher priority in diversified, declining and remote areas compared to the two most progressive area types (urbanised and primary sector in growth), reflecting the higher dependency in the more rural areas upon incomes from forests. The converse relationship is found for recreation: the more prosperous areas attribute more importance to the recreation function than the other area types.

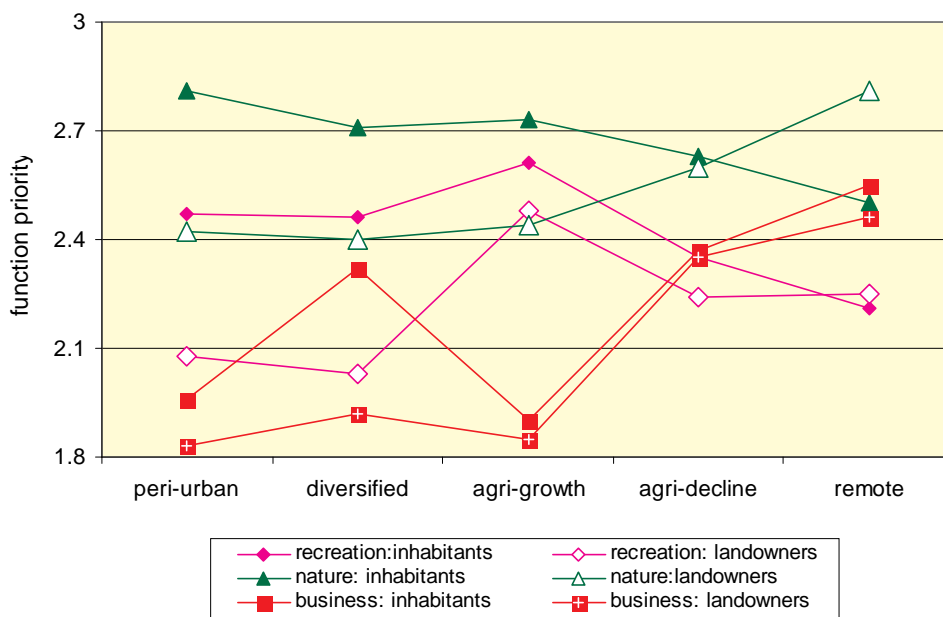


Figure 2: Future priority of forest function (1=low, 2=medium, 3=high) of community inhabitants and landowners per rural area type (Pearson correlation (a) recreation inhabitants: -0.073, landowners: -0.125, (b) nature inhabitants:-0.138, landowners:0.182, (c) business activities inhabitants: 0.170, landowners: 0.302.

In Figure 2 the opinions about recreation, nature conservation and business activities are depicted for landowners and community inhabitants separately. It can be concluded that:

- Community inhabitants tend to place a higher priority on each of the functions than the landowners. The only noticeable exception to this is found in the remote area where landowners are more concerned than inhabitants about nature quality.
- Differences between inhabitants and landowners are greatest in the two most urbanised areas, with much smaller differences in more rural areas.
- The importance of both nature and recreation increases among landowners with increasing rurality, whereas it decreases for inhabitants.
- Both groups are in general agreement that the importance of business activities increases with increasing rurality. A curious exception to this is found with the inhabitants in diversified areas.
- Inhabitants of the peri-urban and diversified areas attach surprisingly more priority to nature conservation than to recreation. At the same time, however, these inhabitants value recreation much higher than landowners.

3.3 Role of forests in the future of the area

It is useful to analyse what kind of future options people think could be developed for their locality. On the basis of a cluster analysis six groups of respondents indicating their preferred future developments could be identified⁵:

⁵ As the variables are stochastic dependent (scale-ticking alternatives), this has repercussions on the results of the cluster analysis.

1. *secondary sector economy development*: increase in industrial activities, employment opportunities, availability of services (25%)
2. *tourism development*: increase in the number of visiting tourists (20%);
3. *agri-business development*: increase in intensive factory farming and employment (14%)
4. *organic-economy development*: increase in organic farming and employment (13%)
5. *ecological development*: increase in organic farming, amount of nature, landscape scenic beauty, and to a smaller extent forests (19%), and
6. *traditional development*: increase in services and in friendship and strength of bond between neighbours (10%).

It can be observed that forests as a future option does hardly emerge in the above clusters. As indicated by the clusters, an increase in forest cover is primarily associated with environmental and ecological functions and not with economic functions (O’Leary & Elands, 2002).

With respect to differences between community inhabitants and landowners, it can be concluded that inhabitants more often prefer ecological development, whereas landowners choose agri-business development. This is especially true in urbanised areas, where the differences between both groups are the biggest. Inhabitants are more consumers with a hedonistic attitude.

Residents from rural areas with urban characteristics prefer more often an increase in nature and wildlife areas (37%) and scenic beauty of landscape than an increase in forests. Residents from diversified areas ask much more frequently for more forests in the future (28%) than residents from the other rural areas (Elands & O’Leary, 2002).

According to Wiersum et al. (2002) the agri-business and secondary sector development options can be equated with the traditional approach of agricultural modernisation, whereas the tourism, ecological and organic-economy development can be equated with the more recent considerations of rural restructuring. The more remote the area gets, the more prevalent is the agricultural modernisation perspective (Figure 3).

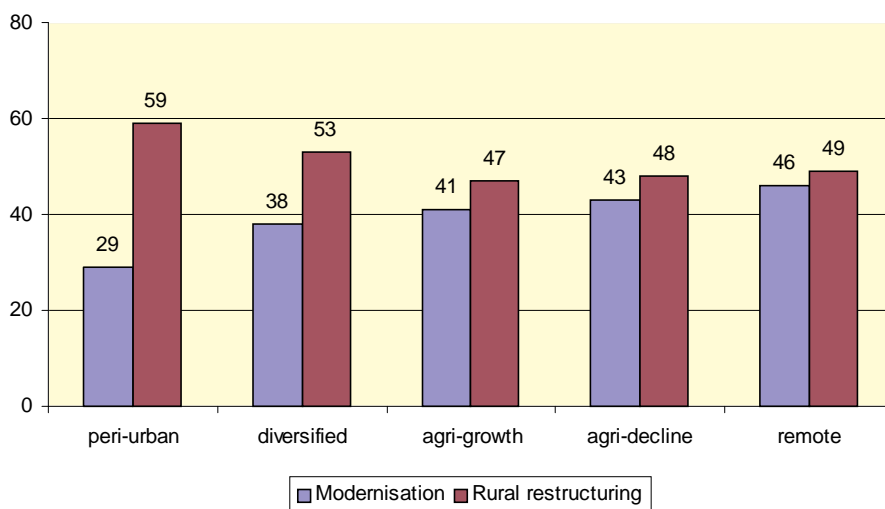


Figure 3: The share of agricultural modernisation of rural restructuring approaches as a future development option per rural area type

In all areas the restructuring perspective (47-59%) predominates over the modernisation perspective (29-46%), although in both agricultural areas and the remote area the differences are not so strong. In the remote area there is a very strong wish for an increase in agri-business activities (38%), whereas in both agricultural areas groups of people prefer an increase in either agri-business activities (on average 17%) or secondary sector development (on average 25%). The latter development is also equally desired in the diversified area.

More than 50% of the urban and diversified societies ask for restructuring perspectives, with one third (on average) preferring modernisation. It is remarkable that landowners share more or less the same opinions as community inhabitants (sometimes even more in favour of restructuring!). It might be that landowners recognise at first hand the difficulties facing farming in the future and have more faith in restructuring than modernisation. Community inhabitants, on the other hand, may have a more nostalgic view of modernisation, keeping the farmers as caretakers of the countryside and associating restructuring with great change and deterioration in traditional rural lifestyles.

The most preferred approach to restructuring varies between the different rurality classes: in rural areas with urban characteristics ecological development is preferred, whereas in diversified, agricultural decline and remote areas tourism development is most highly appreciated. Tourism is likely perceived as a direct cash injection to the more rural economies whereas it is more difficult to improve economic welfare on the basis of ecological development alone.

3.4 Conclusions on the role of forests under different rurality conditions

It has become clear that satisfaction with present forest cover is highly dependent upon the forest history of the area and the perception of that present forest cover. People from traditional forest areas and people who feel the present forest cover is high are content with the present forest situation. On the contrary, people from afforestation areas and those who feel the present forest cover is low or medium think their locality needs additional forests. The need for more forests increases with increasing urbanity.

Concerning future benefits of local forests, environmental, nature and landscape functions get high priority, whereas business activities and recreation get medium priority. This is irrespective of rural area type and target group. More specifically, it is interesting to observe that the more 'rural' an area gets, the higher priority that is put on nature and recreation by landowners, whereas the lower priority by inhabitants. Besides, inhabitants of the peri-urban and diversified areas attach surprisingly more priority to nature conservation than to recreation. At the same time, however, these inhabitants value recreation much higher than landowners.

Forests play a minor role in the preferred future development of rural areas. Only within an ecological development perspective, preferred by one fifth of rural residents, do forests appear. Two major future development perspectives can be distinguished: agricultural modernisation and rural restructuring. The latter perspective consists of an ecological (nature and landscape), a tourism or an organic-economy (organic farming combined with more employment) development. In all types of rural areas this perspective predominates over the agricultural modernisation perspective.

4. Perspectives of producers and consumers on the role of forests for recreation

The most immediate relation between consumers and producers concerning forests and forestry occurs via recreation. Therefore, in this section three topics will be discussed: the actual recreational use of the forests, perspectives on public access to forests, and opinions about government grants for forest and land management. They will be explored in general terms, as well as for differences between consumers (community inhabitants) and producers (landowners) and between urban and rural societies.

4.1 Recreational use of forests

One of the objectives of the Multifor.RD questionnaire was to identify the variety in frequency of forest recreational visits across Europe. In this respect, the respondents were asked to indicate how often they visited forests for recreational purposes in the year 2000, whether daily, weekly, monthly, 2-4 times, once or never. On average across the entire survey population, people visit forests almost monthly and at least one quarter visit forests on a weekly basis. Forests in Europe are frequently visited, therefore. There are no big differences in recreational visits to forests between community inhabitants and landowners.

Some strong relations exist, including the following:

- The amount of visits is linearly correlated to the distance people live to the nearest forest. Those who live immediately besides a forest go either weekly or monthly and those who live further than 2 km away from the nearest forest go only 2-4 times a year.
- The attachment of people to their local forests is strongly correlated to their behaviour: the more attached people are, the more often they visit the forests.
- Visiting frequency is negatively correlated to the opinion that forests in the locality offer very few possibilities for recreation and sports: the more often people visit forests, the stronger they disagree with such a statement. The opposite is true as well, namely that the less frequently people visit forests the more they are dissatisfied with the opportunities for recreation and sports.

There are some differences along the urban-rural societal continuum (see Table 3). First of all, people from the remote area visit their forests the most, which is in this case is not surprising as almost all people live next to or even within a forest. Next, the most prosperous societies (the urbanised and agricultural growth areas) visit the local forests much more frequently than the diversified and decline areas. In the afforestation areas in urbanised and decline area types, the recreational use of local forests is less, most likely due to the fact that forests there may not be as mature overall as those in traditional areas and therefore do not offer the same recreational opportunities. The lowest visiting frequency of all is found in the agricultural decline area, where most forests are planted for production and therefore have become the symbol of deterioration of the area (O'Leary et al., 2002).

Table 3: Frequency of outdoor activities in local forests per rural area type and traditional/afforestation areas (all respondents; N=6,781; weighted for dissimilar sample sizes)

Recreational use	Rural area type				
	Rural area with urban characteristics	Diversified rural area	Growth area dependent on agriculture	Decline area dependent on agriculture	Remote area
Traditional forest area	4.0	3.3	*	3.4	4.4
Afforestation area	3.7	3.4	4.1	2.3	*

Mean visits: varies from 1=never, 2=once, 3=2-4 times a year, 4=monthly, 5=weekly, 6=daily
 Traditional area: $\eta^2=0.09$ ($P < 0.001$), afforestation area: $\eta^2=0.12$ ($P < 0.001$)
 * = no data available

4.2 Perspectives on public access to forests

The issue of public access to forests for recreation is highly topical in Europe presently, most especially as to whether the public should be allowed to visit privately owned forests freely given that most forests are planted with substantial support from the public purse in terms of grants and premiums. The Multifor.RD quantitative survey thus sought to investigate this issue and some of the key results are presently below.

Looking firstly at the general population level and comparing just between community inhabitants and landowners, it can be seen from Table 4 that there exists much greater support for freedom of public access to public owned forests (e.g. State owned forests) compared to those forests which are privately owned (irrespective of respondent type). There thus appears to be some appreciation that private forest owners have a greater right to limit free public access to their forests, whereas public forests should be openly accessible to all for recreational purposes. Nevertheless, some 60% (ie. the majority) of all respondents support the idea of privately owned forests being made freely available for public recreation. Forest owners should realise, therefore, that there exists a considerable expectation among the public for access to their forests for recreation.

Table 4: Support for freedom of public access to private and public/State owned forests for recreation (%; N= between 1,163 and 5,728; weighted to correct for dissimilar sample sizes; Cramer's V = 0.03 and 0.07 ($P < 0.001$))

Support for public access to	All	Community Inhabitants	Landowners
Privately owned forests	60	61	57
Public owned forests	89	90	84

Considering differences between community inhabitants and landowners, it can be seen that the latter group is less supportive of free public access to both private and public owned forests forest. Landowners are thus more cautious regarding allowing members of the public to freely visit land for recreation, whether that land is privately or public owned. This result is not unexpected, however, given that landowners may wish to receive payments for services and amenities provided to the public.

Opinions relating to the above issue among forest owners is also worth considering, given that they stand to be most affected by policies on public access to privately owned forests. Foresters (only) are found to be as equally supportive as community inhabitants for freedom of access to both private and public owned forests (59% and 90% respectively). It would appear, therefore, that this group do not express any great concern over possible access to their forests compared to community inhabitants. Not so with forest-farmers, on the other hand, where the level of support for free public access to private and public owned forests is considerably less (44% and 84% respectively). Forest owners who also are engaged in farming, therefore, are likely to be much less supportive of policies aimed at opening up privately owned forests for public recreation, compared to their forester (only) counterparts. This may reflect their understanding that services such as recreation and amenities provided to the public should be paid for.

Moving from the general European level, attention will next be focused at different rural area types and the differences or similarities therein (Table 5). Firstly, we can see that rural area typology does not influence the fact that there is much greater support for freedom of public access to public owned forests than private forests, that landowners are less supportive than community inhabitants of allowing the public free access to either private or public owned forests and that in general the differences between landowners and inhabitants are not very large. The exception to this trend concerns landowners in the agricultural growth area, who are much less enthusiastic about public access to private forests than inhabitants are (49% vs. 71% respectively).

Secondly, comparing across rural area types in relation to private forests, respondents in the two areas dependent upon agriculture are the most supportive of allowing free public access, whereas the remote area is least supportive. The two most urbanised areas are somewhere in between. It can be concluded that expectations regarding open access of privately owned forests increase with increasing rurality. The remote area is, however, an exception on this. The reverse can be concluded for support for general access to public owned forests: the mean level of support decreases with increasing rurality. The more urbanised a society gets, the more they appreciate that public forests are for their enjoyment.

Table 5: Support for free public access to private and public owned forests per rural area type (all respondents; %; N=6,839; weighted to correct for dissimilar sample sizes; Cramer's V = 0.14 and 0.18 (P < 0.001))

	Rural area type				
	Rural area with urban characteristics	Diversified rural area	Growth area dependent on agriculture	Decline area dependent on agriculture	Remote area
Support for public access to					
Privately owned forests	50	54	65	66	32
Public owned forests	90	90	86	87	70

4.3 Opinions about government grants for land & forest management

In general

Grants and subsidies are important means to stimulate afforestation and management of existing forests. On the other hand, there are other financial measures which are used to stimulate agriculture. The respondents have been asked to qualify five purposes for the provision of grants and subsidies: farming

practices, enhancement of landscape, planting of trees, management and protection of existing forests, and finally, the accessibility of forests for recreation. Table 6 presents the results.

Table 6: Opinions about government grants for land & forest management per respondent type (%; N = between and 2,407; weighted to correct for dissimilar sample sizes)

... should be paid grants or subsidies...	All	Respondent type	
		Community inhabitants	Landowners
a) Farmers.... to enhance and sustain the landscape	85	82	90
b) Farmers.... to support their farming enterprises	73	67	84
c) Private landowners...to plant trees on their lands	69	65	76
d) Private landowners... to manage and protect their forests	68	63	75
e) Private landowners...to allow people to visit their forest for recreation	47	46	50

Cramer's V = (all P < 0.001): a) 0.11, b) 0.18, c) 0.12, d) 0.13, e) 0.04

Firstly, one can observe that the majority of the respondents agree with the provision of grants and subsidies to landowners for both farming and forestry activities. The most endorsed purpose is landscape enhancement (85% agreement). There is also, however, high support for farming enterprises. Afforestation and protection/management of forests are equally endorsed and there is relatively low support for forest recreation (47%).

Opinions of inhabitants and landowners can differ. In every case, not surprisingly, landowners are more supportive of grants than inhabitants. Next, we can conclude that as soon as things are being asked of farmers that have nothing to do with their core business, such as landscape enhancement, both community inhabitants and landowners think that provision of grants and subsidies is reasonable and there is hardly any difference in opinion between both target groups. The same is true for a measure that gets less support generally: both inhabitants and landowners have the same opinion about grants for opening their property for recreation. When asked should farmers receive grants to support their farming enterprise, on the other hand, (ie. their core business), there is a very strong divergence of opinion between respondent types, with community inhabitants being much less supportive.

There is practically no difference between the level of support exhibited for either afforestation or management of existing forests among both community inhabitants and landowners. However, while community inhabitants regarded these two forestry activities as equal to supporting farming enterprises, farmers are comparatively less concerned about them.

Regional differences in grant-aiding land uses

In Table 7 the regional differences in support for land use grants are depicted. First of all, it can be seen that support for agriculture grants increases linearly with increasing rurality (strong relationship), clearly reflecting the relative dependence upon farming in those more rural areas. Secondly, landscape grants are almost equally supported in all areas, although areas in decline are the most supportive of it. This finding is expected at least in the Irish case study given that many of the locals complain about the adverse landscape impacts arising from afforestation of farmland with commercial conifer forests of limited

species diversity. Thirdly, relatively low support is demonstrated in urbanised areas for both the protection and management of existing forests and afforestation. Support for protection/management grants increases linearly with increasing rurality (strong relationship), clearly reflecting the strong connection of local people with their natural surroundings. With respect to afforestation grants there is little difference between rural area types. While those in urbanised areas who expressed a desire for more forests in the future are more supportive of afforestation grants (64%), it still can be seen that those in urbanised areas are still less supportive than diversified, growth or decline areas (70-75%). Notably, in diversified areas there is a strong support for afforestation, probably to be explained by the fact that ‘bland & viable’ afforestation areas dominate this type. Finally, the approval of grants for forest recreation is highest in peri-urban and diversified areas and much lower in the other areas.

Table 7: Opinions about government grants for land & forest management per rural area type (%; N=between 6,044 and 6,399; weighted to correct for dissimilar sample sizes)

... should be paid grants or subsidies...	Rural area type				
	Rural area with urban characteristics	Diversified rural area	Growth area dependent on agriculture	Decline area dependent on agriculture	Remote area
a) Farmers.... to enhance and sustain the landscape	84	84	84	90	86
b) Farmers.... to support their farming enterprises	58	71	72	87	89
c) Private landowners...to plant trees on their lands	59	75	69	71	72
d) Private landowners... to manage and protect their forests	60	68	62	73	81
e) Private landowners...to allow people to visit their forest for recreation	49	54	44	40	44

Cramer's V = (all P < 0.001): a) 0.07, b) 0.25, c) 0.14, d) 0.13, e) 0.12

Grant-aiding recreation: in general and regional differences

If private forest owners are to allow the public to visit their forests for recreational purposes (see section 4.2), it is interesting to consider whether or not they should receive additional financial supports. Firstly comparing different respondent types at the general European level, it can be said that the greatest support comes from foresters (only), at 53%, followed closely by community inhabitants, farmers (only) and forest-farmers (47%, 51% and 50% respectively). It would appear, therefore, that aside from foresters (only), the type of respondent has little influence on opinions regarding whether private forest owners should be paid to allow public access to their forest. The difference between foresters (only) and forest-farmers is curious, given that they both own forests and would thus stand to gain similar benefits financially from such a scheme. Apparently, forest-farmers want their property to be exclusively used by themselves and not to be shared with others.

It appears there may be some relationship between support by private forest owners for recreational grants and the size of their forest, with larger forest owners (irrespective of whether they are just foresters or forest farmers) tending to be more in favour. The mean size of forest for foresters and forest farmers who are in support of recreational grants is 13ha and 33ha respectively, compared to 6ha and 10ha respectively for those who are not in favour.

At a country level, there are interesting differences of opinion regarding support for recreational grants, with considerably lower support in the three central European countries of Hungary (21%), Austria (41%), Germany (32%) compared to the others (53-58%). This may be due to the fact that these countries have a long history and tradition of forestry and, accordingly, public use of forests for recreation. Forests in these countries are already well developed for recreation and thus the provision of grants may not be so critical. In the Atlantic countries, on the other hand, where there is a much shorter history of forests, a considerably higher support for recreational grants has been demonstrated, perhaps reflecting the perceived need to assist forest owners in improving the recreational quality of their holding. This interpretation is supported by the relative frequency of forest visits, where people in central Europe visit significantly more often than those in the Atlantic countries.

Having concluded that there is not much difference between respondent types concerning support for recreational grants at the general European level, it is next worth considering whether there are distinctions to be made at the level of rural area type (Table 8) between community inhabitants and landowners.

Table 8: Support for providing grants to forest owners to allow the public visit their forest according to rural area and respondent type (%; weighted to correct for dissimilar sample sizes)

Support for providing grants to forest owners to allow the public visit their forest ...	All	Rural area type				
		Rural area with urban characteristics	Diversified rural area	Growth area dependent on agriculture	Decline area dependent on agriculture	Remote Area
Community inhabitants	47	48	51	39	37	39
Landowners	51	55	57	54	44	46

Community inhabitants: N=3874, P<0.001, Cramer's V = 0.14; Landowners: N=2169, P<0.001, Cramer's V = 0.10

Looking firstly to the community inhabitants, there is greater support for recreational grants in the two most urbanised areas, with no difference whatsoever between the three most rural areas. It would appear, therefore, that urbanised community inhabitants are the most willing to pay for recreation in private forests. Referring back to the results in Table 5, it will be remembered that these two urbanised societies had lower expectations regarding freedom of access to private forests than the two agricultural areas. Considering next the opinions of landowners, the greatest level of support for forest recreational grants is found in the peri-urban, diversified and growth areas.

4.4 Conclusions on the perspectives of producers and consumers on the role of forests for recreation

People pay on average a monthly visit to their local forests. The closer their residence is to the forests, the more frequent they go there. There is hardly any difference between respondent type and rural area type. People in traditional forest areas go more often than people in afforestation areas.

In general, it can be concluded that there is a much greater support for freedom of access to public owned than for privately owned forest as well as that inhabitants are more in favour of public access to both forest types than landowners. Besides, with increasing urbanity there is a decreasing support for public access to private forests, whereas the reverse is true for public owned forests. It seems that urbanised societies have lower expectations regarding access to private property and more appreciation of public forests for their enjoyment.

With respect to grant-aiding land uses, it can be observed that a very high support exists for farming and landscape measures, a high support for protection/management of forests and afforestation, and a relatively low support for recreational access to forests. Landowners are always more supportive than inhabitants. Support for protection/management of forests, afforestation and farming increases with increasing rurality, reflecting the high dependency between natural resource production processes and local people in the more rural areas. Although recreation is not highly supported, community inhabitants from peri-urban and diversified areas are the most willing to pay for recreation in private forests. These two societies perhaps appreciate more than the others that landowners cannot be expected to freely open their property for the general public but, instead, that they should be compensated for this.

5. Conclusions

The way forests are perceived within localities exhibits similarities and differences. In Table 9 the main findings with respect to the differences between the rural area types are presented. In the following text, both the similarities and differences will be elaborated.

With respect to similarities, it is clear first of all that in general there is not a great demand for more forests and that demand is to a large extent related to the present landscape quality of areas and less concerned with the rural area type. Environmental and aesthetic functions of forests are of high importance, whereas recreation and commercial functions are of medium importance. Forests 'an sich' do not play any role within the future perspectives of rural areas; they only feature when people prefer an ecological development for their area, which is one of the six major future options.

In every rural area forests perform an essential role in recreation. People visit the local forests on a monthly basis. There is a broad support among inhabitants and landowners for general public access to privately and public (state) owned forests. Two qualifications should be made, however: the support for access to private forests is less than for public forests and inhabitants are always more in favour of public access than landowners are. It can be concluded that the general public has high expectations of forest owners regarding free access to any kind of forest. It is remarkable to observe, however, that there is a relatively small group of people that at the same time supports the provision of grants for private landowners to allow people to visit their forests for recreation compared to the high support for grants stimulating landscape enhancement, farming activities, afforestation and protection and management of existing forests.

In rural areas with urban characteristics, it can be concluded that there is a demand for more forests, in which ecological functions as well as recreation should be the central focus. As there is in general a low concern for landowner support and for forest economy, a discrepancy exists between inhabitants' wishes and their understanding of landowners' economic viability. The public want local private forests to satisfy

their ecological and recreational demands, but are not enthusiastic about financially supporting the forest owners in reaching those goals. Although inhabitants from urbanised areas are the most willing to support grants for forest recreation opportunities, still, half of them and even more in the other rural area types do not think landowners need financial support.

Table 9 Main differences between the rural area types with respect to the general role of forests within the locality and on the role of forests for recreation

Rural area typology	Opinions on the general role of forests in the locality (amount, function, future)	Perspectives of consumers and producers on the role of forests for recreation (use, access, grants)
Rural areas with urban characteristics	<ul style="list-style-type: none"> *Likely to feel there are too few forests *Along with all areas, nature and landscape functions are rated highest. However, in peri-urban areas production function is lowest. Recreation rated relatively high, especially by inhabitants. *Highest demand for rural restructuring. Residents more concerned with an increase in nature and wildlife and better scenery (ecological development) than an increase in amount of forests 	<ul style="list-style-type: none"> *Monthly use *Along with diversified areas, highest support for access to public owned forests and lowest support to private owned forests *Least supportive of providing most types of grants to landowners, increasing linearly with increasing rurality. Inhabitants –along with inhabitants from diversified and growth areas- most supportive of forest recreation grants
Diversified areas	<ul style="list-style-type: none"> *Most likely to feel there are too few forests, especially in the bland & viable areas *Production function is relatively important. Inhabitants rate recreation especially high. *High demand for rural restructuring perspective. Along with remote and decline areas, highest demand for tourism development 	<ul style="list-style-type: none"> *2-4 times/monthly use *Along with urbanised areas, highest support for access to public owned forests and lowest support to private owned forests * Highest support for afforestation grants. Inhabitants –along with inhabitants from urbanised and growth areas- most supportive of forest recreation grants
Agricultural growth areas	<ul style="list-style-type: none"> *Present amount of forest = okay *Productive function is rated low in importance, recreation relatively high. *Comparatively high demand for development of secondary economy and maintaining traditional values 	<ul style="list-style-type: none"> *Monthly use *Along with declining areas, highest support for public access to private forests and medium support to private owned forests *Relatively high support by landowners for forest recreational grants. Inhabitants –along with inhabitants from urbanised and diversified areas- most supportive of forest recreation grants
Agricultural decline areas	<ul style="list-style-type: none"> *Present amount of forest = okay, but most likely to feel there are too many forests *Relatively high priority put on production and protective functions *After remote areas, greatest demand for development of agri-business. Along with remote and diversified areas, highest demand for tourism development 	<ul style="list-style-type: none"> *2-4 times/monthly use *Along with growth areas, highest support for public access to private forests and medium support private owned forests *Most supportive of landscape related measures and high concern for management/protection of forests and farming activities
Remote areas	<ul style="list-style-type: none"> *Present amount of forest = okay *Relatively highest priority put on productive/ commercial and protective functions *Highest demand for modernisation perspective, i.e. more agri-business activities, with comparatively low concern for ecological development. Along with decline and diversified areas, highest demand for tourism development 	<ul style="list-style-type: none"> *Weekly use *Lowest level of support for public access to either private or public owned forests *Most supportive generally of financial assistance for landowners. Special concern directed towards management/protection of forests.

In diversified areas, there is a high demand for more forests with equal priority upon recreation and production. This quest for more forests is strongly related to the forest history and the present landscape quality, which is limited in its recreation possibilities. As the support for afforestation and recreation grants is the highest among people of diversified areas, conflicting views might not be expected as long as new forests are not mono-functional nor comprise solely of non-locally accepted species. Moreover, as there is a broad support amongst the residents for future tourism development, the establishment of new forests should at least not damage this development perspective and –even better - contribute to it.

People from agricultural growth areas are not really concerned with more or less forests. The residents value the recreation function of forests relatively high as well as freedom of access to public owned forests. As these areas are relatively prosperous, the non-productive values of forests are highly esteemed. So, there is a relatively high support for recreational grants. For the area in general, a majority of the people ask for a more traditional (agricultural) modernisation approach, although the voice of more environmental oriented people can be observed as well.

In the agricultural decline areas, people ask for developments that boost the local economy, rather than local ecology. The way the area should develop is varied: some prefer a classical agricultural modernisation future, whereas others prefer a restructuring perspective by means of tourism development. From this perspective it is understandable that people favour the development of the economy of existing forests rather than the planting of more land. Besides, there is a high support for management, protection and landscape related subsidies for private landowners.

Residents from the remote area show a great concern for the protective and productive functions of their forests as well as for the economic viability of their area. There is a pronounced wish for more agribusiness activities in the future. In general, these people are most worried about the economic viability of landowners and are therefore the most supportive of any kind of financial assistance for landowners. They also show a special concern directed towards management/protection of forests. But, although the protection of the forests is highly valued, there is a low support for a more ecological development of the area. Most probably people think the area is 'ecological' or rich in nature enough already.

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