Department of the Environment and Local Government

Spatial Planning Unit

National Spatial Strategy

Rural Resource Potential and Management Issues

Spatial Planning Unit
Department of the Environment & Local Government
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1 INTRODUCTION

1.1 Study Context

This study is one of a series background research papers being undertaken as part of the preparation of the National Spatial Strategy (NSS).

The research papers constitute Stage 2, of a four-stage approach and form an assemblage of key sets of data and information necessary to allow an analysis of current trends and spatial distribution of development in Ireland. In particular, the research papers will provide baseline data and basic material to evolve the preparation of Policy Papers in Stage 3.

1.2 Study Objectives

A central feature of the NSS is recognition that to achieve more balanced regional development it is necessary to reduce the disparities between and within regions and to optimise the potential of all regions to contribute to the continuing prosperity of the country.

The Objectives of this study are firstly to examine the resource potential of rural areas and the contribution development of those resources can make to a spatial strategy. Secondly to highlight existing problems that occur as a result of the current level of development of those resources and thirdly to highlight the likely effects and implications for the future if the current trends continue.

1.3 Approach & Methodology

No specific methodology was used other than consultation with holders of key data and information and close working with them for data assembly and identification of existing reports, papers and research material that were readily available. Only data and information from existing and reliably acknowledged sources were used.

Information was gathered in textual, tabular and graphic/map form that enabled the study to:

Identify some of the more important the resources of rural areas, such as land, landscape, natural and cultural heritage and water resources,

Map/Quantify the rural resources and establish their spatial distribution

Identify/Quantify existing problems and the implications of the continuation of trends on the rural resources

Identify the potential for those rural resources to contribute to the improved development of an area

Identify any necessary management requirements to ensure that the rural resources can continue to contribute to the improved development of an area.

as set out in the study brief.

In view of the time constraint within which the National Spatial Strategy has to be prepared it has not been possible to carry out an examination of the full range of rural resources. A number of key elements were selected as a representative sample of the issues that, in the opinion of the Spatial Planning Unit, are facing and impacting on rural resources in a national context.

2 RURAL RESOURCE POTENTIAL & MANAGEMENT ISSUES

2.1 Background

Polycentric urban system demands a balance/strong relationship between the urban centres and their surrounding rural area. Rural areas in Ireland hold much of the natural & cultural heritage that determines local identity, which in turn contribute to the quality of life of the individual and to the attraction of an area for inward investment. Furthermore the rural environment forms the essential ingredient for tourism.

Integrated rural development depends not only on the open countryside but also on the small and medium sized towns that form important hubs and links within the rural area a view expressed in the Government policy set out in the White Paper on Rural Development.

> *"Main Elements of Strategic Framework……..*
>
> *regional development aimed at sustaining a balanced population through a settlement pattern of a network of urban centres acting as hubs for economic and social development, interacting with, and sustaining, dispersed rural communities in towns, villages and the countryside in their hinterlands."*

In declining rural areas it is the small and medium sized towns that offer the best prospects for the provision of infrastructure and services for integrated development of those areas.

It is the purpose of this report to investigate some aspects of the resources in rural areas, to highlight some recent trends and to examine the implications of such trends in the context of the National Spatial Strategy.

2.2 Issues arising

It is clear that the structural changes in the distribution of the country's population, from rural to urban has implications for both locations. On the one hand increasing level of urbanisation particularly of the main cities and larger towns will result in rural depopulation and socio-economic decline of our traditional countryside. On the other hand continued expansion of the urban areas, in particular the Greater Dublin Area will result in unbalanced growth, diseconomies of scale and urban congestion.

It is increasingly obvious however that with economic growth there are serious negative effects on the environment on which much of the rural economy depends such effects are urban expansion, particularly urban generated housing, increasing leisure and recreation pressures, water and soil pollution etc.

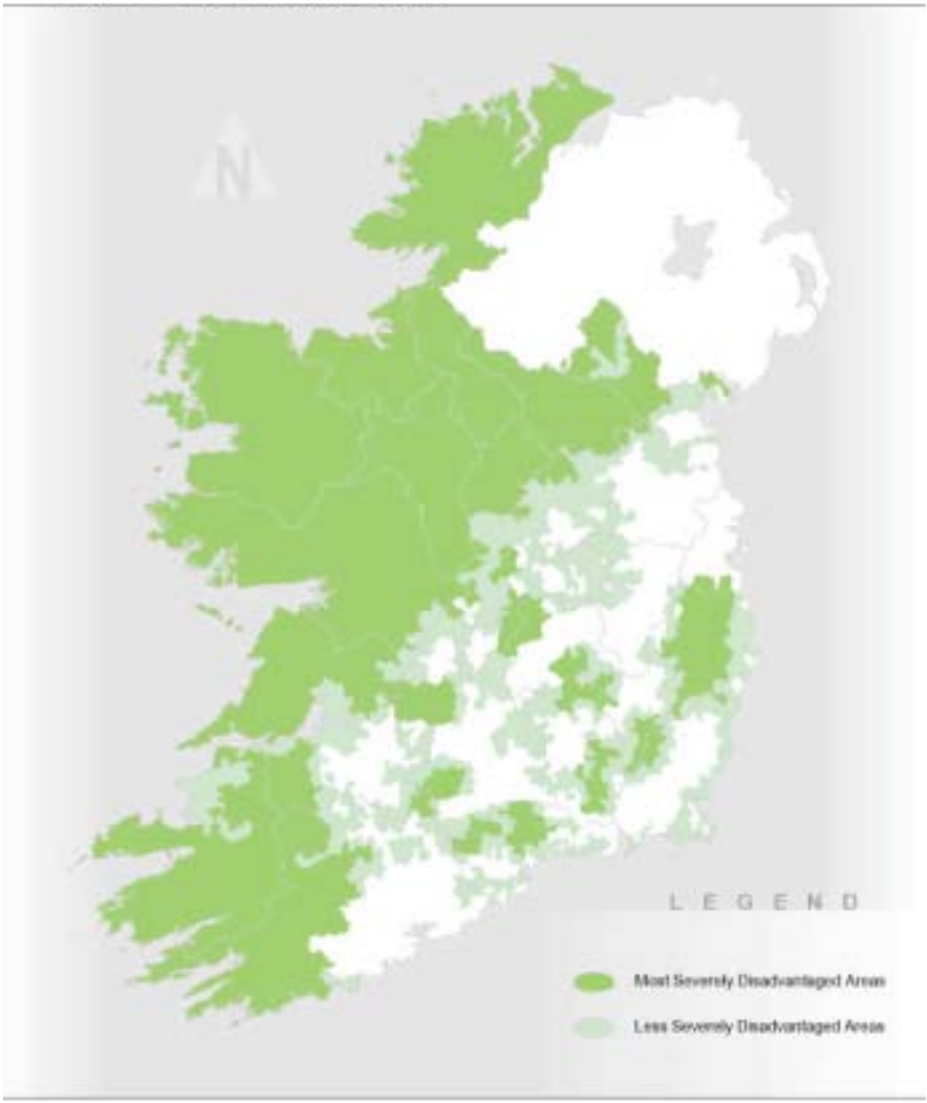
3 ELEMENTS OF THE RURAL RESOURCE EXAMINED

3.1 Agriculture

Agriculture continues to be a significant economic sector in the national economy in spite of the relative decline from 17% in 1973 to 5.2% in 1998 in its contribution to the overall Gross Domestic Product (GDP).

Agriculture remains more important to the Irish economy than other EU states and its contribution to the Irish economy is twice the EU average.

MAP 1: DISADVANTAGED AREAS



Current Trends

Over the past 40 years Irish agriculture has be undergoing a process of increasing commercialisation, intensification and modernisation. The effect and impact of the changes vary spatially due in large measure to distribution of the natural resource and farm size (to the north & west poor soils and small fragmented farms and to the south and east, better soils and larger farm size).

Directly related to change in farming characteristics are international trade restrictions (GATT), reform of the Common Agricultural Policy at EU and national level, demographic characteristics, availability of off-farm employment and technological change in farming techniques.

The nett effect of the change is has been the raising of farm viability threshold at the expense of the smaller, marginally economic farms.

The cycle of modernisation and marginalisation will, in all probability, continue. It is estimated that in 1997 only 50,000 of the 128,000 farms in the State (excluding 20,000 very small holdings) are economically & demographically viable.

In 33,000 of the remaining 80,000 non-viable farms (60,000 of which are in the western counties) the economic position is aided by off-farm income.

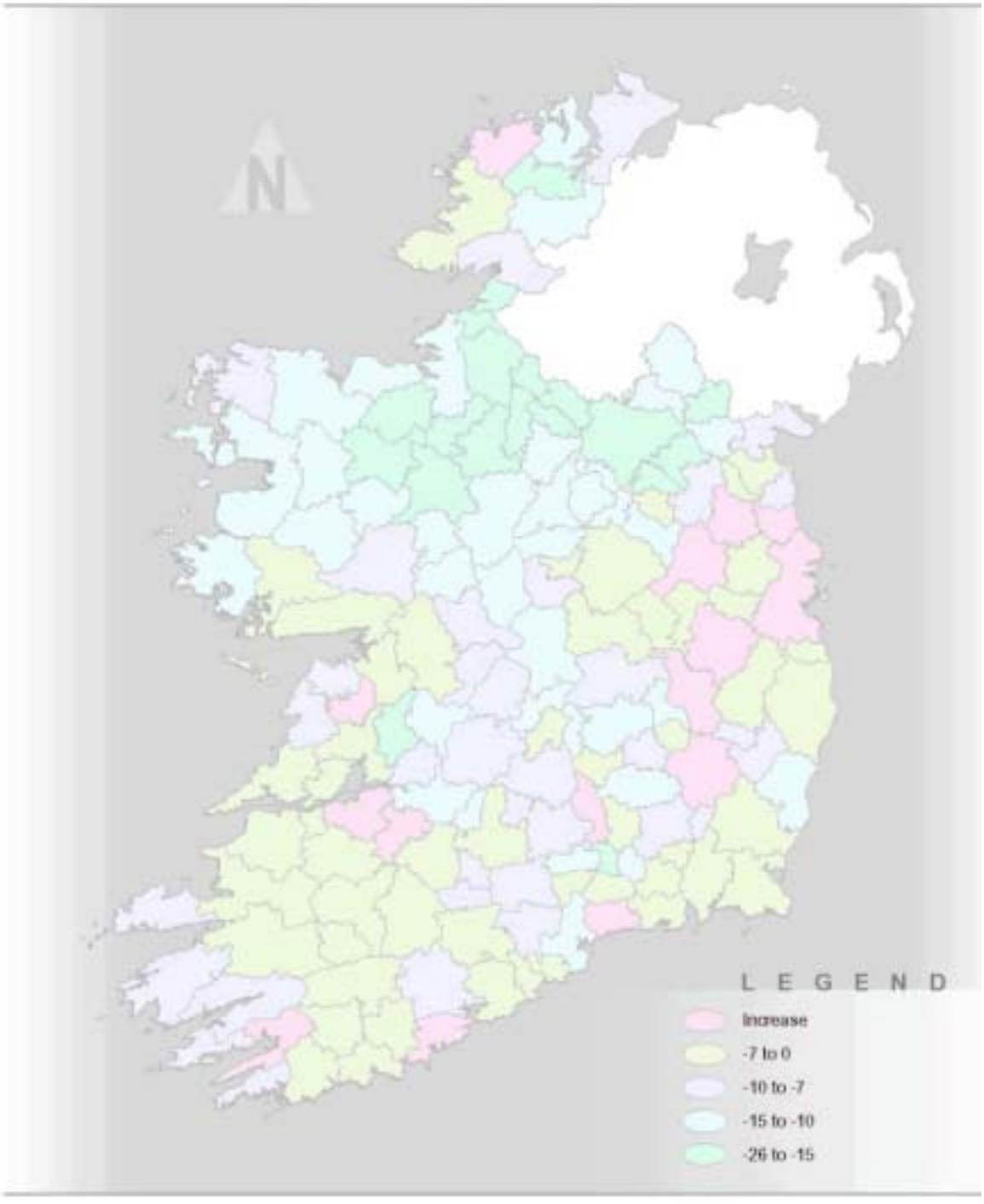
17, 000 non-viable farms are operated by elderly farmers with no off-farm income and who are dependent social welfare payments. The most significant section of farmers to which the NSS must address itself is to the 30,000 non-viable farms with low farm incomes, no off-farm employment and who are in the early stage of the family life cycle.

Table 1: 1 %Change in No. farms 1960-80

Region	Total 1980	Change 1960-80	% Change <20 Ha	% Change 20-60 Ha	% Change 60-120 Ha	% Change >120 Ha
Dublin	3167	-1076	-27.8	-18.1	-13.7	-6.0
Mid-east	18910	-258	-4.9	8.9	-0.5	-16.0
South-east	29256	-2027	-12.7	1.0	1.7	-14.9
Southwest	42003	2003	-8.6	1.6	-0.9	-8.6
Mid-west	29281	-2249	-12.7	2.5	-3.5	-15.7
West	59381	-7844	-16.1	15.5	-12.6	-22.4
Border west	36002	-4777	-15.5	6.2	6.6	-15.9
Border east	22617	-4113	-21.4	15.0	3.9	5.8
Midland	22291	-2412	-16.7	8.3	-3.2	-29.8
Ireland	236558	-26750	-14.6	5.6	-1.2	-16.4

The number of holdings has been the decreasing number of holdings, one example is the change 1960-80. No current data is available for comparison but it is probable that the trends have continued. The regions with the smallest holdings declined in the greatest numbers i.e. West and North, increases were evident in the South and East.

MAP 2: TOTAL HOLDINGS - PERCENTAGE CHANGE 1960-1980



The Border and West regions showed the greatest decline in total holdings which corresponds with the areas that lost the most holdings < 20 Ha.

The process of farm enlargement is confirmed by the increase in 20-60 Ha farms across most of the rest of the country.

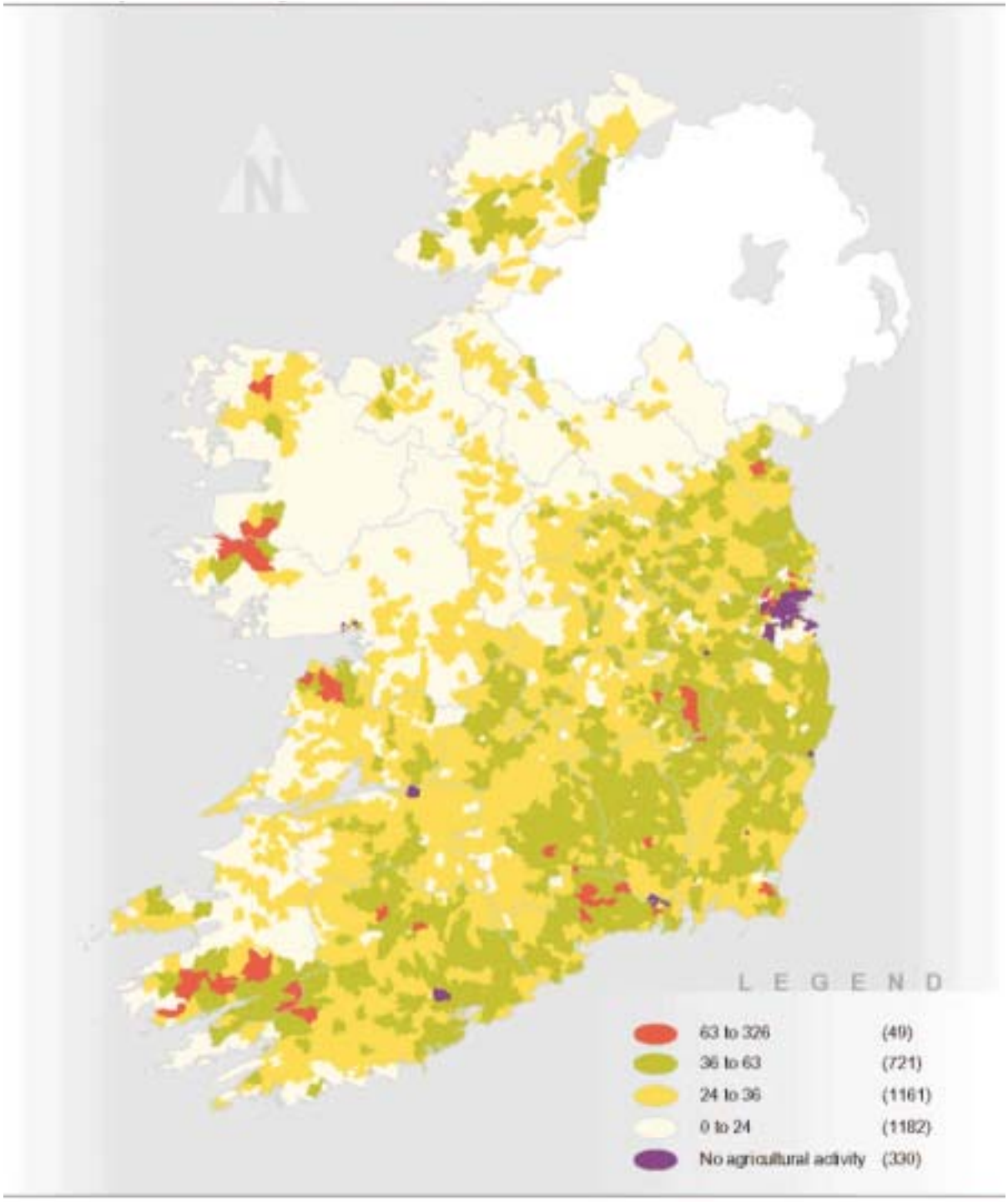
Holdings of 120+ Ha also declined over large areas of the country.

Table 2: %Change in farm sizes (ESU) 1991

1991 Distribution of Farms by European size Units (ESU).						
Region	0-4 ESU	4-8 ESU	8-16 ESU	16-40 ESU	40+ ESU	Ave ESU per farm
Dublin	35.2	14.1	15.6	21.4	13.6	19.2
Mid-east	34.5	15.2	17.2	22.4	10.6	16.5
South-east	25.4	13.4	18.2	29.3	13.7	19.7
Southwest	31.5	13.3	18.7	26.9	9.6	16.2
Mid-west	37.8	16.4	18.2	22.2	5.4	12.4
West	54.2	22.9	15.5	6.8	0.6	6.0
Border west	63.0	18.4	11.7	5.9	1.0	5.5
Border east	44.4	18.6	19.7	15.2	3.1	9.8
Midland	41.8	18.9	17.7	17.1	4.5	11.1
Ireland	42.7	17.6	16.8	17.3	5.6	11.6

The economic size of farms is measured in European Size Units (ESU). The table above indicates significant differences between regions and significant deviations from the national average.

MAP 3: AVERAGE FARM SIZE 1991



In general the highest ESU are found in the South-East followed by Dublin. The Mid-west and South-west form a middle band while the Border-west and the West regions are only half the average for the State as whole.

63% of all farms in the Border (west) region have less than 4 ESU's followed by the West region with 54.2% compared to the South-East and South-West which are only 25.4%and 31.5 % respectively.

The overall distribution of farms by economic size reinforces the notion that there is a clear division of the country along a NE-SW axis running from Limerick to Dundalk.

The areas of largest economic size occur in the eastern and southern portion of the State, particularly counties Cork, Limerick, Tipperary South, Waterford, Kilkenny, Carlow, Wexford, Kildare and Dublin. The lowest ESUs correspond almost uniformly to the northern and western counties of Donegal (except the east), Leitrim, Sligo, Mayo, Galway, Roscommon, Longford and Clare.

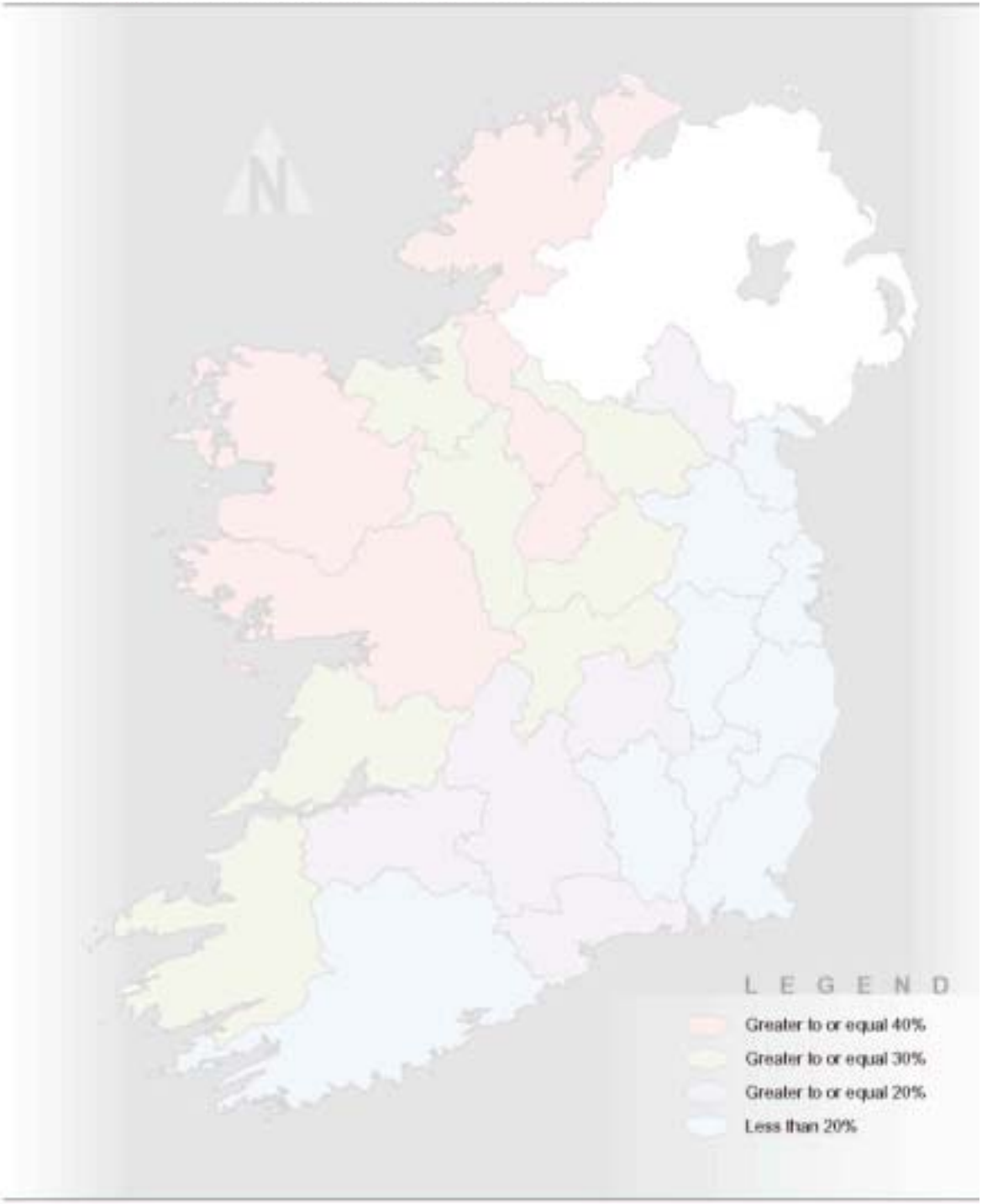
Rural Environmental Protection Scheme (REPS)

The Rural Environmental Protection Scheme (REPS) was introduced in 1994 following reform of the Common Agricultural Policy in 1992. The REPS Scheme is voluntary and is focussed on payments for farm management, protection of flora and fauna and wildlife habitats.

40,000 farmers had joined REPS in 1999 representing just less than 25.5% of all farms and over 30% of the total farmed area.

Uptake of REPS is highest in Connacht, Ulster and the Midlands and other areas associated with extensive grazing.

MAP 4: REPS AREAS AS % LAND FARMED 1999



Over 50% of the farmed area of Mayo, Galway and Donegal is included in REPS all of which contain overgrazed uplands. In comparison, in the South and East only about 15% of the farmed area is in REPS

REPS participants are characterised as having larger than average farm size in areas of low farming intensity. It ahs been suggested that low-income, small scale farmers find the high capital costs prohibitive while dairy farmers do not find the incentives attractive or eligibility conditions restrictive.

Conclusion

Wider economic trends and market forces over which Ireland has little influence now control farming in Ireland and the agricultural economy. The EU Common Agricultural Policy has resulted in concentrated output, resources and income to a reducing number of farmers. The income gap between large and small farms is increasing. There is increasing under-employment on farms in the marginal regions directly related to farm viability and economic size of unit. One estimate concludes that the number of farms will fall by 40,000 in the period 1997 to 2005, with the greatest fall in the farms that are currently not viable.

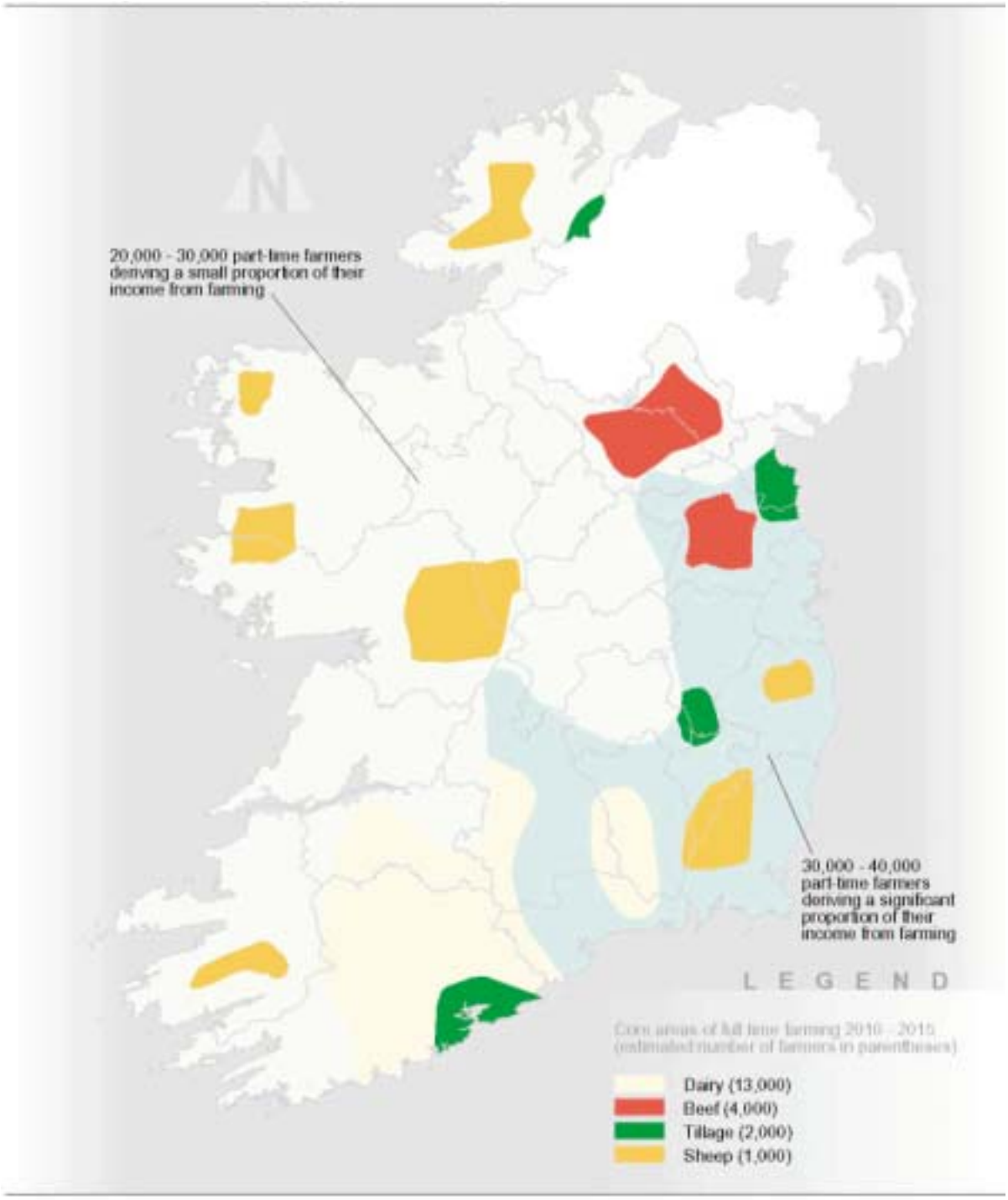
Future Trends

The future face of Irish farming may see a small number of extremely efficient, productive full-time farmers and a larger number of part-time farming. The full-time farms will be substantially larger, in area and production.

It is estimated that by the period 2010-2015 there will be about 100,000 farmers in Ireland, of these only 20,000 will be full-time, 60,000 will be part-time and 20,000 will be in transition from full to part time. Of the full-time farmers 60%(13,000) will be dairying and the remainder will be highly specialised intensive, large-scale tillage and livestock production.

Based both on existing farm characteristics and probable changes, the core area for dairy production will be in the south-west, in the less favoured areas of the west, north-west and midlands 20-30,000 part-time farmers will derive most of their income from off-farm employment. A further group of 30-40,000 part-time farmers will be located in the south and east and will be more commercially orientated and will derive more of their income from agriculture than the other area of greatest part-time farming.

MAP 5: GEOGRAPHY OF IRISH AGRICULTURE 2010 - 2015



Land Use Change

Current trends in agriculture Land Use Patterns that are likely to continue into the future are: -

- A change from primary agricultural production to forestry particularly in the W & NW.
- Dairying will contract from areas where it is currently marginal in economic terms eg Cavan /Monaghan to the Golden Vale.
- Sheep rearing will retreat to Uplands again as price structures are change.
- As farming moves continually towards lower intensity REPS will expand.
- There will be greater specialisation in farming.
- The number employed in farming will fall rapidly especially in the BMW Region.
- Balanced Regional Development and issues like economic development/ decentralisation will accelerate loss of agricultural labour.
- Conflicts are arising as a result of changing agricultural pattern & pressures of access to rural area.

Eg *access for walking*

Urban facilities located in the rural area cf landfill/incinerators

CPO Roads

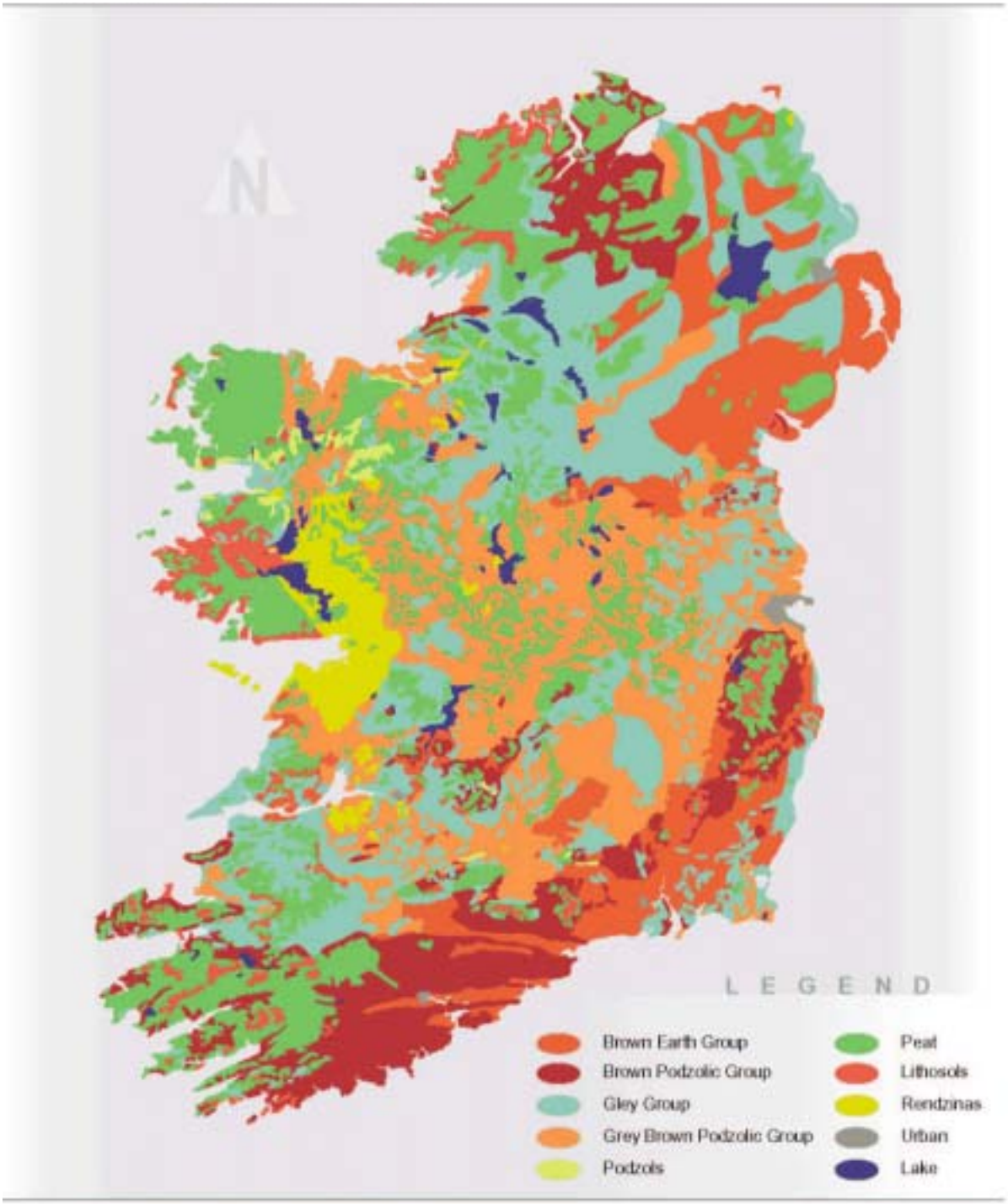
Recreation/Forest parks for urban dwellers.

3.2 Soil Type

At present there is no detailed soils map of the country (only 46% country has a detailed soil survey). TEAGASC are preparing a digital National Soils Classification Map for the Forest Information and Planning System (FIPS) that can be used for tasks other than forestry.

The General Soil map of country is not uniform in precision as it is derived from those counties surveyed and reconnaissance maps of those counties not surveyed in detail.

MAP 6: GENERAL SOILS MAP



The spatial distribution of soils derives from the interaction of three main factors, parent material, climate and physical relief. Most soils in Ireland are derived from glacial tills and as such are subject to the chemical & physical composition of the original rock material. Climatologically rainfall is the most important element since it controls leaching of soil nutrients and minerals. Physical relief is important in soil distribution because of the relationship between vegetation and climatic conditions with areas of high, rugged relief being associated with shallower, poorer soils.

Figure 1:

Broadly the distribution of soil types in Ireland is grey-brown podzols of the Midlands which are of good productivity, peats & peaty gleys of the uplands of the West, South-west and North-west. The gley soils of the mid-west are of limited productivity due to their impervious nature. Fertilisation and good management practices can overcome the poor nutrient status of the acid brown earth of the south-east and brown podzols of Cork.

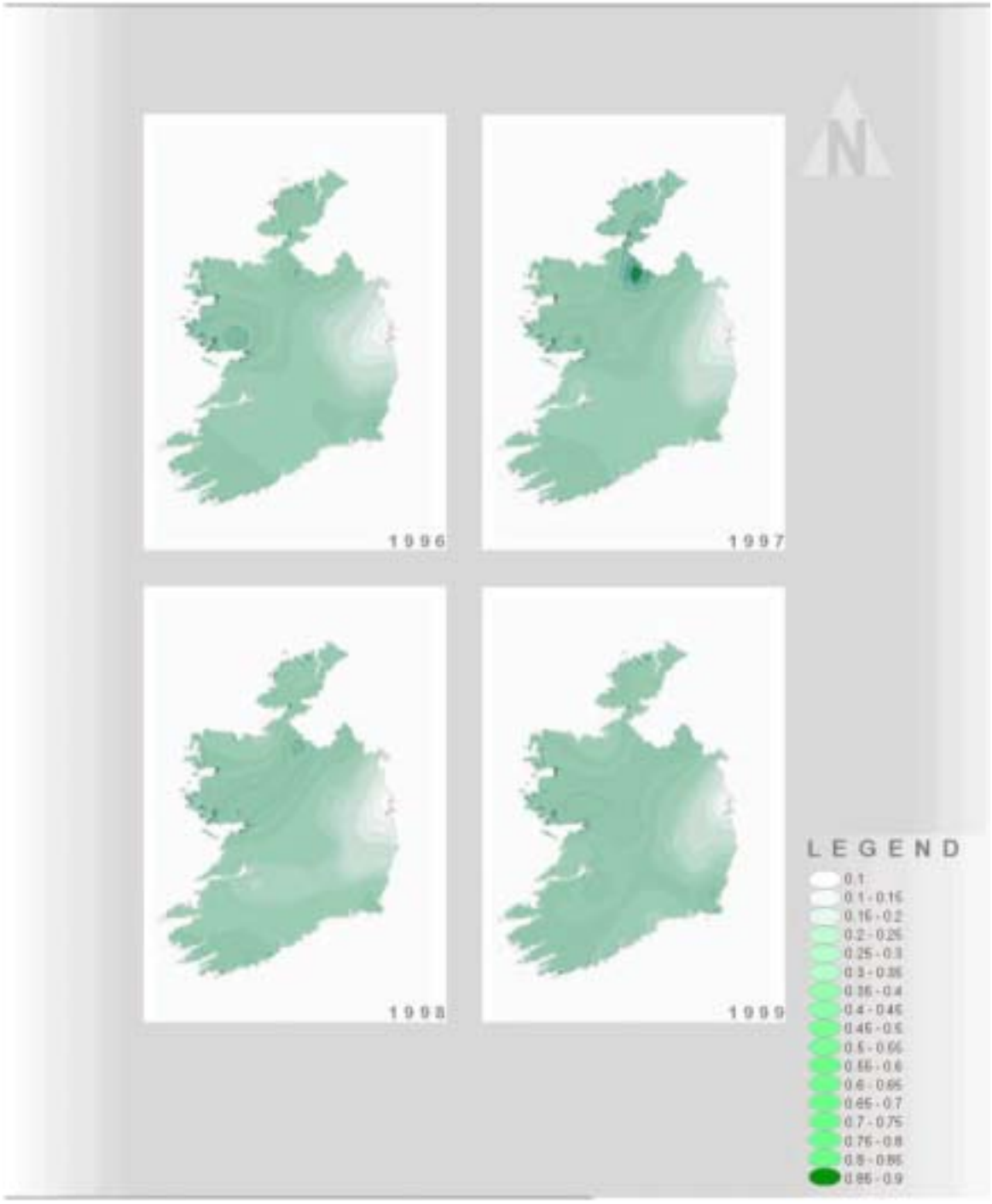
The soils of the midlands, east and south have the widest use range. The upland areas are clearly extremely limited in use and large parts of Connacht and the west are limited, very limited and extremely limited in capability.

Current Trends

Urban expansion has resulted in a loss of better agricultural land and therefore the most productive soils.

Urban generated housing has resulted in a proliferation of septic tanks, generally located on poorer soils that do not have the capacity to absorb the effluent.

MAP 7: URBAN GENERATED HOUSING



Agricultural production on poorer soils has resulted in increasing run-off to surface waters and resultant eutrophication.

The lack of a detailed soil survey means that there is little or very sporadic information on the heavy element status of Irish soils. What limited information on the heavy metal status of soils in Ireland exist indicate some 80% of soil samples do not meet the EU standard for heavy elements. This is important in the context of disposal of municipal sludge. Heavy metals from a major component of municipal sludge and while municipal sewage sludge in other EU countries is spread on tillage land, land farmed for tillage in Ireland is extremely limited and most often located adjacent to urban areas. Clearly this will have implications if the urban system is to be developed more widely in support of balanced regional development

Conclusion

Urban expansion has resulted in a loss of better agricultural land and therefore the most productive soils.

Urban generated housing has resulted in a proliferation of septic tanks generally located on poorer soils that do not have the capacity to absorb the effluent.

Agricultural production on poorer soils has resulted in increasing run-off to surface waters causing eutrophication of some rivers and lakes.

The move away from agricultural production to afforestation (especially broadleaf) is occurring on the more productive soils.

Most Municipal sewage sludge in other EU countries is spread on Tillage land but the land farmed for tillage in Ireland is extremely limited

Future Trends

As urban Ireland expands the issue of soil capability to accept increasing amounts of municipal sewage sludge particularly in the context of the preparation of Water Management plans will become important.

Agricultural reform will see an increase in intensive farm production associated with this will be increased spreading of agricultural slurry often on soils with poor effluent absorption.

The rate of urban generated housing is increasing dramatically, generally located where soils are of poorest quality.

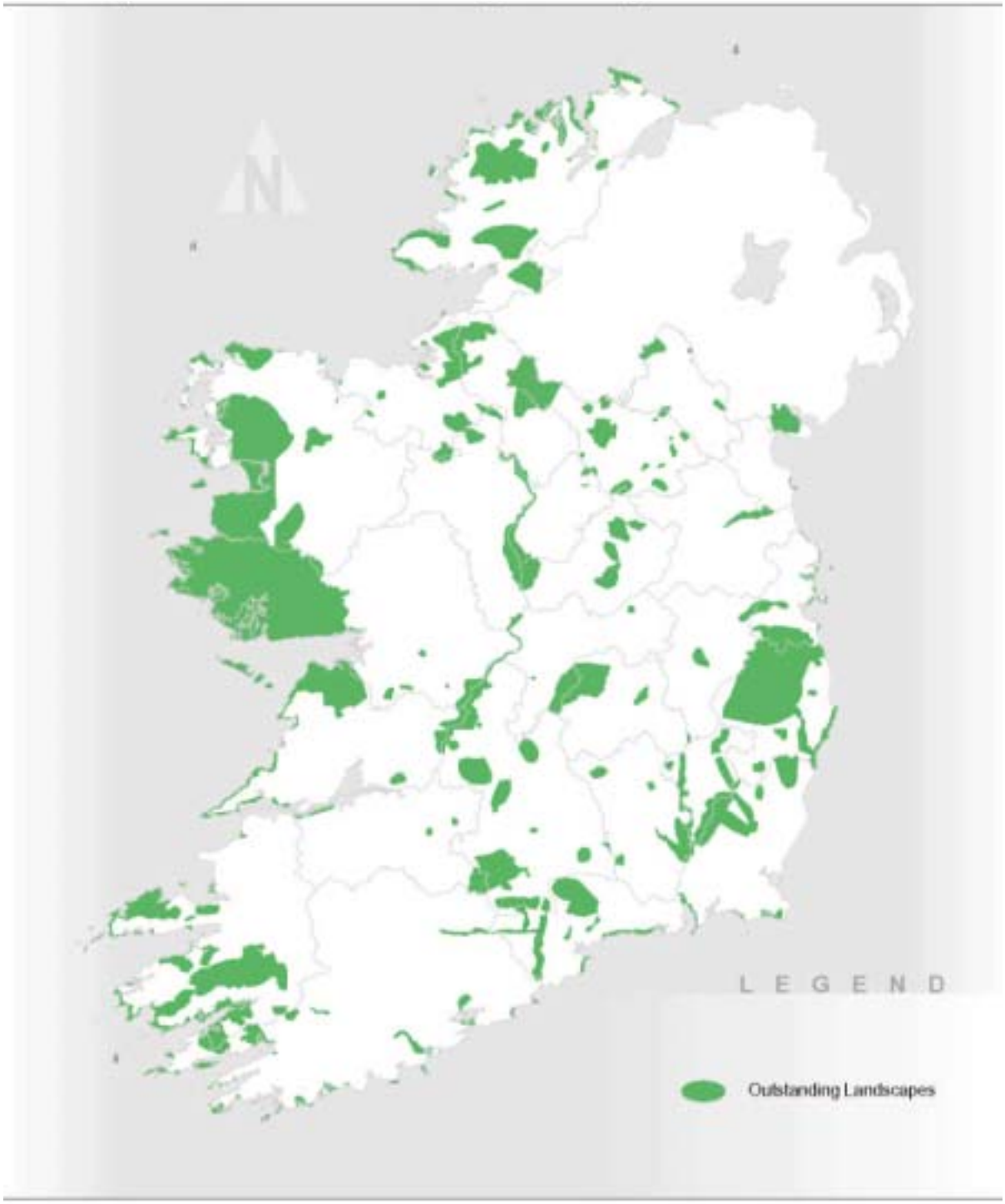
3.3 Landscape

Introduction

The Irish landscape is the product of a long history of the interrelationship of man and nature and may be more accurately described as a predominantly cultural landscape. There are obvious, enduring signs of human presence (field patterns, settlements, hedgerows, archaeological and historic monuments, woodlands etc), there are also areas of natural /semi-natural landscape where the influence of man is less pronounced. There is a wide range of characteristic landscape features and a wide variety of rural landscape types in Ireland.

The Foras Forbartha “Inventory of Outstanding Landscapes in Ireland” is the only comprehensive national scale study of the landscape of the country. Published in 1978 almost all of the areas identified still remain landscapes of high quality, although incorporating varying degrees of new development.

MAP 8: AREAS OF OUTSTANDING LANDSCAPE



A new approach to landscape is set out in the Draft Guidelines on Landscape & Landscape Assessment published by the DoELG. These guidelines take the view that all landscapes need to be evaluated by reference to its own character and the values that society places on the landscape, rather than the categorisation typical of earlier methodologies which had the effect of identifying only outstanding landscapes.

Current Trends

Agriculture

The Irish landscape is largely a product of agricultural practices and it is from agriculture that greatest change may spring. The structural changes currently under way in agriculture, ie. declining farm numbers and increasing farm size will accelerate changes to the landscape such as hedgerow removal for enlargement into larger economic units and farm abandonment in the marginal areas. Intensification of agriculture will most probably result in loss of semi-natural habitats and loss of bio-diversity. Evidence to date indicates that the REPS uptake is significantly lower in the South and East of the country where the larger, commercial farms consider the criteria too restrictive and fiscal incentives unattractive but where intensification is most likely to occur

Afforestation

One of the most significant elements in landscape change to date has been afforestation of monoculture coniferous trees. The target for planting set out in the Strategic Forestry Plan will radically alter the Irish landscape. Forest planting will increase from it's current level of 615,000 Ha in to 1.2 million Ha by 2030 (currently 9% of the State area, rising to 17% by 2030).

MAP 9: AFFORESTATION MAP

Afforestation policies in the recent past have seen a switch away from planting on upland blanket bogs to wet mineral soils that are estimated at 1 million Ha and are more productive. These soils are currently of only marginal agricultural value but are significantly more productive for forestry.

Current forestry policy now places greater emphasis on the planting of broadleaf including native oak and ash. The current target for the planting of broadleaf species is 20% annually which is being raised to 30% in view of the higher uptake than originally anticipated.

Infrastructure.

Infrastructure development particularly in view of the accelerated programming of the NDP will have an effect on the landscape, the road building programme in particular.

It is well documented that there is a power distribution divide within the country, with large areas of the North and West poorly served by the electricity network at 220 & 400 Kv. Improved distribution will necessitate pylons crossing high amenity areas and as such will severely impact on the landscape.

Connected with electricity is the development of windfarms which by virtue of the current pricing regime, are forced to locate on the west and north-west coast and in mountain areas in order to avail of higher windspeeds. The potential impact of the windfarms in areas of high landscape quality is an important factor in their siting. Current development in wind turbine design is for larger and higher models 1Mw turbines upto 80m high are beginning to replace the typical 600Kw, 40m high turbine commonly seen. Windfarms can occupy significant areas of land due to the separation required between turbines.

The larger windfarms require High Tension electricity connection to the national grid, electricity sub-stations, access roads etc, all of which can impact adversely on the landscape.

Housing, Second homes & Tourism Developments.

The impact of housing, second homes & tourism developments are often perceived as adversely affecting the character of the landscape, particularly in areas of high scenic quality. The current volume, location, scale and design of such developments appear to be increasing.

It is estimated that 1in 3 housing completions nationally is taking place in the open countryside with profound effects on the landscape.

There are some 15,000 second and holiday homes in the maritime counties, including their inland areas. Most of these houses are located in the coastal zone or inland scenic areas

The Seaside Resort Scheme has seen a concentration of self-catering units into a limited number of designated resorts. In the buoyant economy second and holiday home construction would have occurred anyway, as such the Scheme may have diverted holiday home developments into the resorts and away from the open countryside and even abroad. However with the expiry of the Scheme pressure will renewed in tourism areas which depend on high quality landscapes.

Conclusion

Landscape conservation is important for many reasons, maintenance of environmental quality, tourism, provision of drinking water, agricultural production, natural heritage and biodiversity.

The Irish landscape will undergo significant change over the next 20 years not only high quality landscapes that are currently under pressure but also "ordinary" agricultural landscape will be subject to higher levels of change than ever before. Urban expansion, housing & building generally, tourism and recreation and infrastructure provision will have major impacts on the landscape.

The increased range and type of pressures on the landscape will require careful management.

Future Trends

Agricultural reforms will lead to intensive farming hedgerow removal. The uptake of REPS is not wide spread where it is anticipated that intensive farming will take place.

Unmanaged development will adversely affect the landscape character and devalue landscape quality, to the detriment of both society at large and the tourism industry in particular. This point is specifically referred to in Bord Failte's Tourism Development Strategy 2000-2006.

3.4 Natural Heritage

Introduction

While it has taken some time to set up appropriate structures for the protection of the natural heritage and biodiversity in Ireland, there is nonetheless a serious commitment to conservation by the Department of Arts, Heritage, Gaeltacht & Islands. Expenditure, of which a substantial amount is for farmer's compensation, has risen from £7 million in 1993 to £25 million in 1998, indicating the importance now placed on protection and conservation of the natural environment.

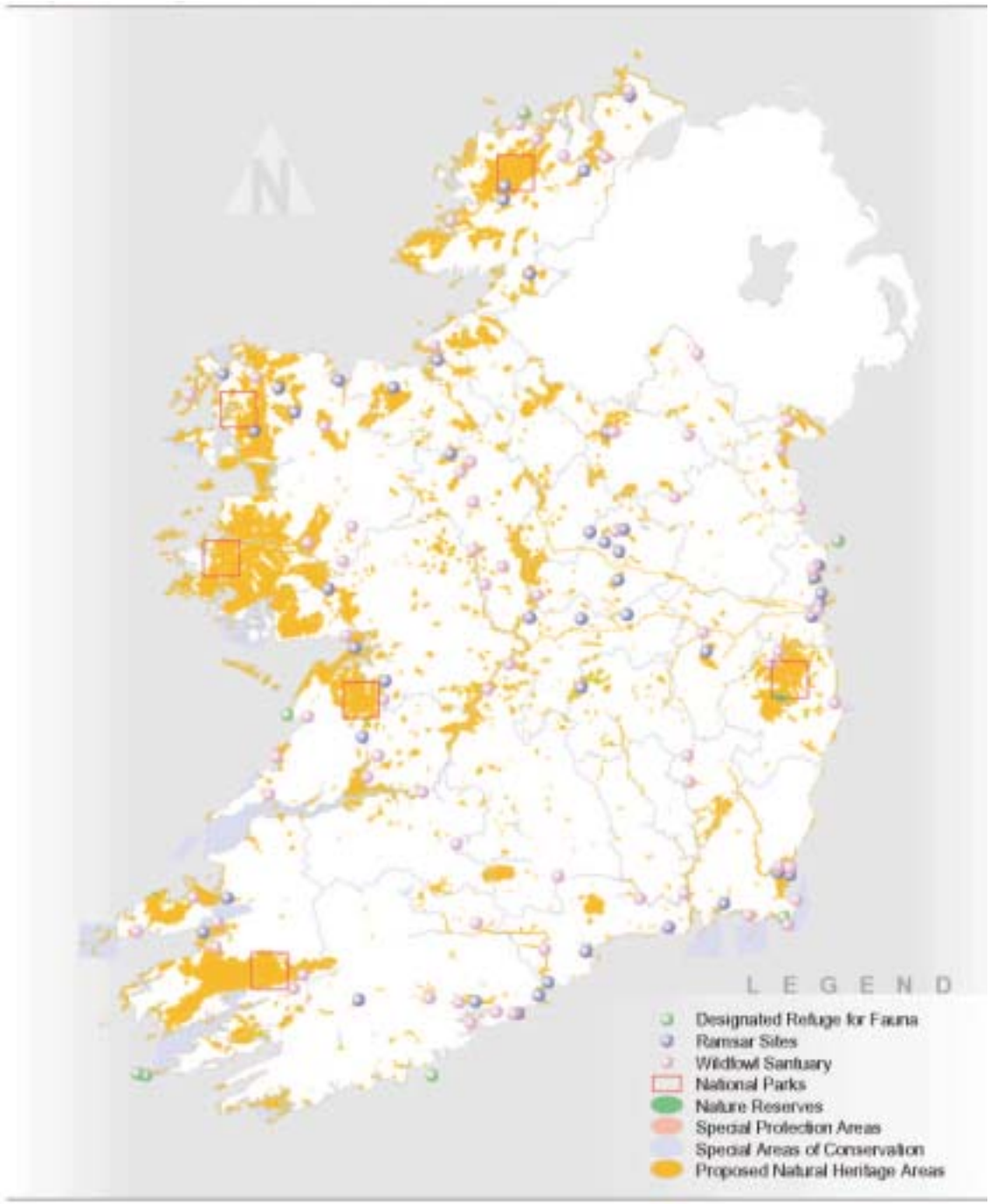
Current Trends

Some 10% of the area of Ireland is considered to be importance for nature conservation. An indication is given below of the main categories of protected areas. The natural heritage is protected under a number of domestic and EU legislative instruments. Primarily they are EU Birds Directive (SPA), EU Habitats Directive (SAC), Wildlife Act (NHA)(to be enacted).

Table 3: Major Areas of Conservation

Category	Objectives	No. Sites	Area Ha
Nature Reserves	Conservation of flora/ fauna/habitats	78	18,095
National Parks	Nature conservation and public use	5	47,287
SAC	Conservation of flora/ fauna/ habitats of European importance	400	650,000 ca
NHA (proposed)	Protection of flora/fauna/ habitats & geological sites of national importance	1000+	750,000 ca
SPA	Conservation of bird species/habitats of European importance	109	230,000
Ramsar	Conservation of wetlands of international importance under the Ramsar Convention	47	70,550
UNESCO Biosphere	Nature conservation & sustainable use	2	11,500

MAP 10: MAJOR AREAS OF CONSERVATION



Special Areas of Conservation (SAC).

Approximately 400 sites extending to some 650,000 Ha of land & water have been designated as SACs. Most of the SACs are located in the west, primarily Mayo, Galway, Donegal and Kerry. EU Commission has not yet approved the full list of SAC sites and some sites are still on appeal. The first phase of SAC concentrated on those sites of "priority" habitats such as peatlands, sand dunes & machair, turloughs, limestone pavement lakes, estuaries etc.

The list of candidate sites submitted to the EU Commission is comprehensive and except for some additional raised bog sites it is unlikely that many more sites will be added to the listing in the near future. It is expected that more Salmonid sites are to be added but these have still to be surveyed in depth.

Under the SAC scheme farmers are compensated for losses incurred due to designation and a second fiscal incentive is given where the farm is operated in accordance with the Rural Environmental Protection Scheme (REPS).

Natural Heritage Area (NHA)

Natural Heritage Areas cover sites of national importance or higher. There are about 1000+ NHA sites covering 750,000 Ha. Although not law at present the NHAs will be given statutory protection with the passing of the Wildlife Amendment Act, currently at Committee Stage, in the near future.

Special Protection Areas (SPA)

1100/1200 NHAs are proposed 90% of which are also SAC. NHAs are protected de facto because they are SACs.

Those NHA sites which meet the criteria of the EU Birds Directive have been designated as SPAs. In 1997 there were 109 SPAs covering 230,000 Ha.

Conclusion.

The area of land covered by natural heritage designations is most extensive on the western seaboard although the Shannon waterway (an NHA) is a significant feature in the Midlands.

By and large the various areas designated for nature conservation are also of importance from the point of view of landscape conservation. Those coastal sites coincide with areas under pressure from development in the form of tourism, holiday home developments etc.

The upland areas designated are also those areas of highest windspeeds that are attractive to windfarm developers.

Future Trends

It is expected that by 2020 the number of designated SAC sites will not change dramatically from the comprehensive list submitted to the EU Commission and that is currently being processed.

Farm management plans for each area to be put into place where current use is not compatible with SAC/NHA designation eg turf cutting on protected bogland and overgrazing by sheep. With regard to overgrazing Commonage Framework Plans / De-stocking Plans are currently under review

Conservation Plans which specify what is acceptable / or not are being prepared with the landowners. 200 Draft Plans have been prepared.

The Department of Agriculture, the IFA and Duchas have agreed Habitat Prescriptions at National Level for protection of the Burren, Uplands, Dunes/ Machair.

3.5 Water Resources

Introduction

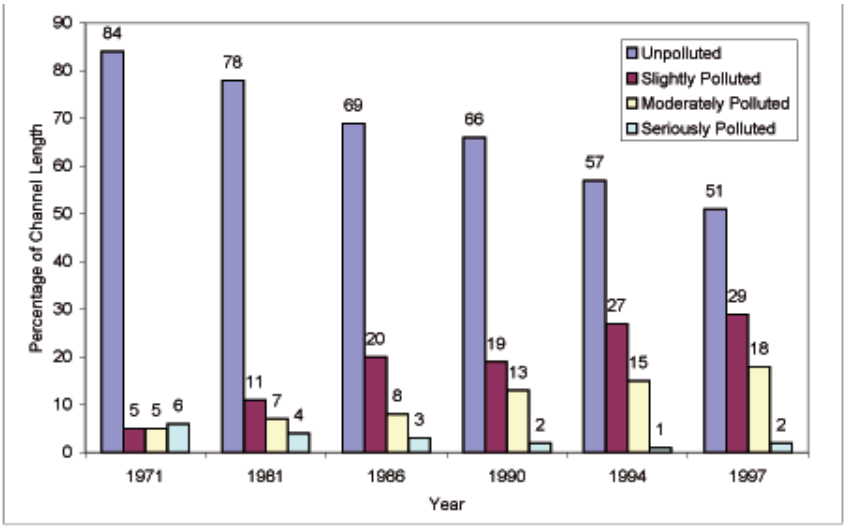
The natural fresh water supply of Ireland is one of the country's key economic resources. Principally the source of water for domestic use, drinking, industry and agriculture, Ireland's lakes and rivers contribute greatly to the landscape on which tourism and recreation depend, particularly angling, both game and coarse.

The number and size of the water catchments can cause difficulty, there are 400 separate catchments only 9 of which have drainage areas >2000 Km2. These 9 river systems drain 50% of the area of the State. The river Shannon is the largest single catchment, accounting for 32% of the area drained by the 9 rivers and 17% of the area of the State.

One of the characteristics of Irish rivers is that of low water flows. Typically the low water flow is only 5% of the mean flow, and often it can be <1%. The low summer flows can create water quality management problems, especially in the upper reaches of catchments. This has implications for pollution control.

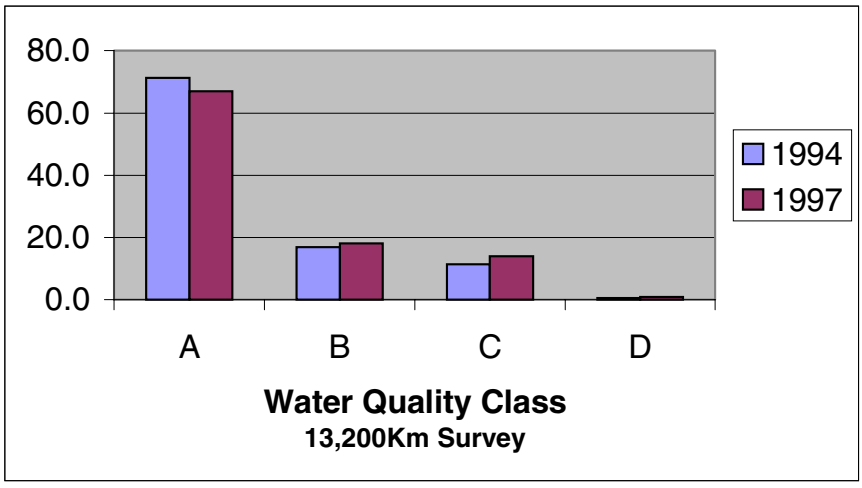
Current Trends

Figure 2: Long Term Water Quality Trends



The above figure illustrates the long term trend for the 2900Km baseline survey. There is a clear and continuous fall in Class A waters from 84% in 1971 to 51% in 1997 and a corresponding increase in slight and moderately polluted channel from 10% 1971 to 475 in 1997.

Figure 3: Water Quality Class



The 13,200Km baseline survey indicates the same trend with a fall of 4% 1994-97 in the unpolluted class, a rise of 1% in slightly polluted and 3% in moderately polluted. Over the longer period 1987-97 the increases in slight and moderate polluted were 4% and 4% respectively.

The national long term trend data mask serious changes at regional and local level.

MAP 11: HYDROLOGICAL AREAS MAP

Regionally the South-Eastern and Shannon regions showed the most significant change in loss of Class A channel length over the 1987-97 period. The South-Eastern had a drop of 15% and Shannon 16%. In comparison the Eastern region had a loss of Class A channel length of only 7%

The Mid-Western and in the Cavan-Monaghan part of the North-Western Region increased their proportions of unpolluted channel by 12% and 22%. The Southern region showed a 6% increase in Class A channel from 81% to 87%. The Western and Donegal-Sligo part of the North-Western region did not change significantly in the 10 year period. In most cases the improvements were as a result of increases or reductions in the lengths of channel classified as slightly or moderately polluted.

The consequence of the changes over the 1971-97 period has been the adverse effects on a considerable proportion of the sites showing the highest biological diversity in the earlier surveys. In the 1995-1997 period, the proportion of sampling locations rated as of high biological diversity was just over 25 percent. While many of the formerly high quality sites are still classified as satisfactory, they are no longer in the near pristine state found when first examined. The downgrading is due to the loss or decreased abundance of the more pollution-sensitive invertebrate species.

The source of pollution is increasingly from municipal sewage, in the 1995-97 period some 39.2% of recorded incidents of serious pollution were due to sewage discharges and the remainder, in generally equal measure to agriculture and industry. In the case of slight and moderate pollution incidents over the same period most incidences were due to agriculture and the majority of the remainder was due to sewage.

Figure 4: Suspected Causes of Pollution 1995 - 1997

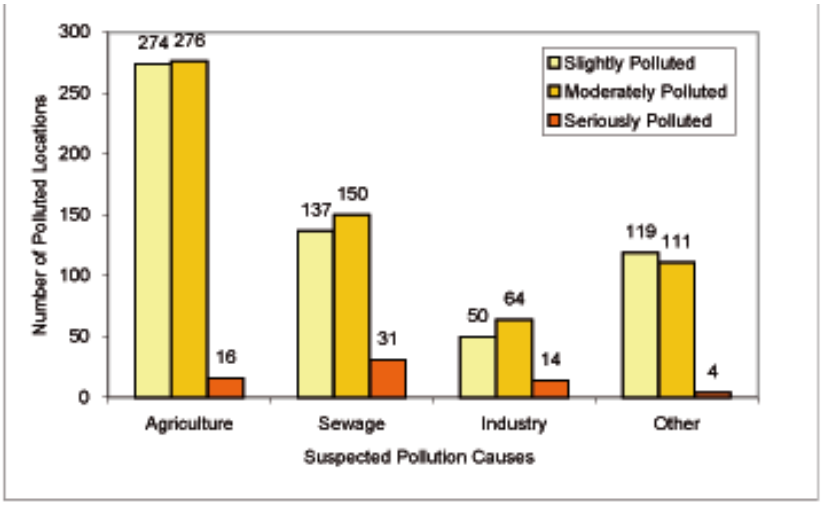


Table 4: Suspected Source of Serious Pollution 1995-97

Agriculture	24.5
Municipal	39.2
Industrial	22.0
Other	14.3

Groundwater

The total area of aquifers in Ireland is estimated to be in the order of 19,000km2 and form the source of drinking water supply and for use in food processing and related industrial operations.

Groundwater quality has been systematically monitored since 1995. The purpose of the programme is to define the state of groundwater quality, to detect trends and to determine the causes of any changes in quality that are identified. The network consists of some 300 sampling locations but not all of these have been included in the monitoring that has been undertaken to date. Sampling corresponds with periods when the highest and lowest groundwater levels are likely to occur.

The data arising from the monitoring surveys carried out in the 1995-1997 indicate that there is no widespread contamination of individual aquifers and most samples show generally unpolluted conditions. Intermittent and localised pollution was recorded, however, in an appreciable number of instances.

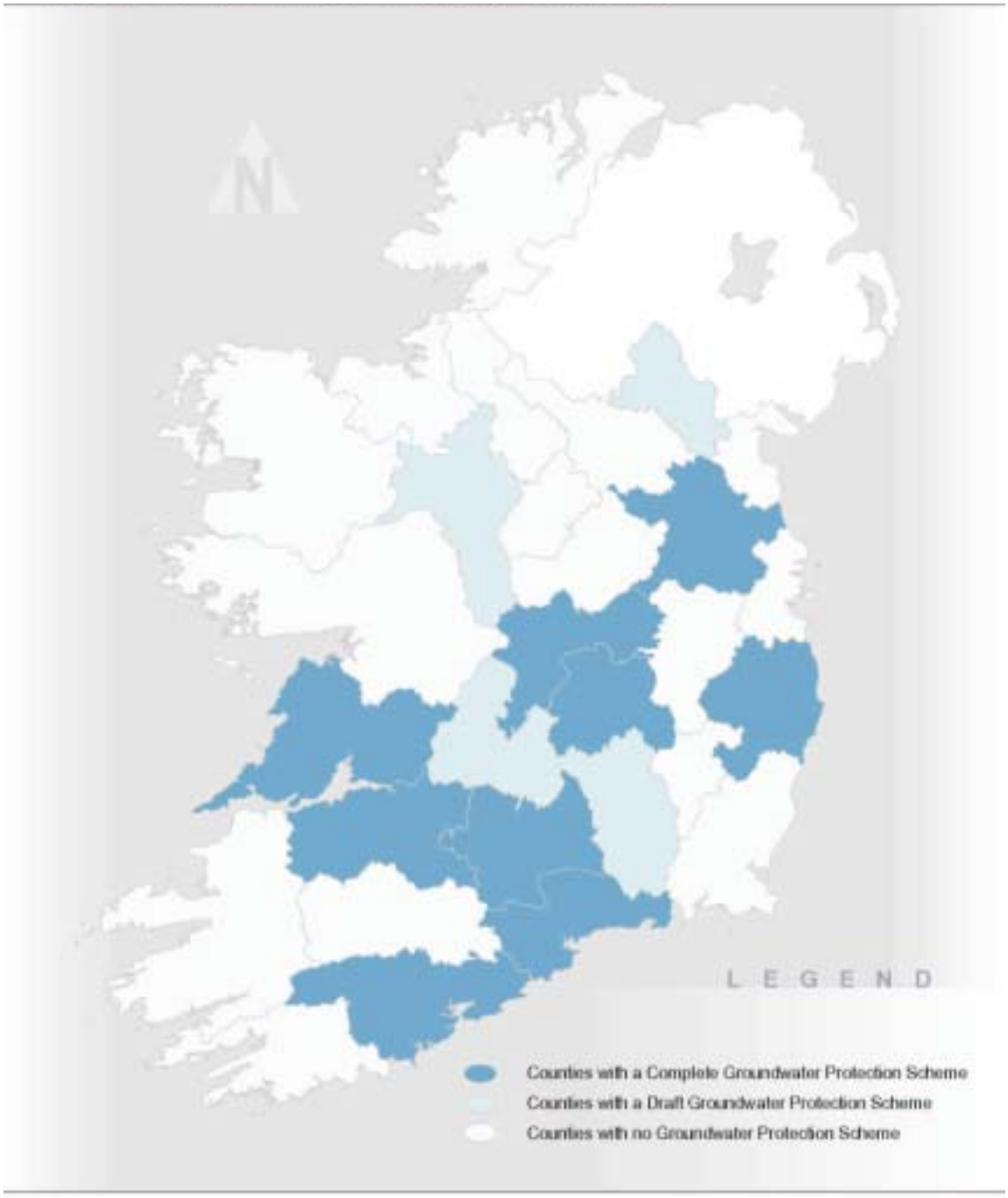
33% of the samples tested positive for the presence of faecal coliforms which indicating contamination with sewage or similar wastes. Such contamination has serious implications for the use of the waters concerned as sources of drinking water.

Annual reports on drinking water quality (e.g. EPA, 1999) draw attention to the relatively high incidence of faecal coliform contamination in samples from private water supply schemes. Since many of these schemes use grounwaters as a source, the results of the 1995-1997 monitoring suggest that some at least of this contamination may be due to the lack of or insufficient disinfection of the waters used in these schemes.

Groundwater is particularly vulnerable to nitrate contamination due to the high mobility of the substance in the soil and the consequent ease with which it can leach downward through the water table. Most at risk are those groundwater located in agricultural areas where there are high rates of applications of artificial fertilisers or animal manures.

National guidelines have been issued for the protection of aquifers through Groundwater Protection Schemes but as yet there is incomplete coverage of the country by such schemes.

MAP 12: GROUNDWATER PROTECTION SCHEMES



Conclusion

Water quality in surface waters continues to decline and it is significant that the causes of surface water pollution have been increasingly from domestic sewage and importantly it is smaller rivers and streams that have been most affected. One study indicates that a high proportion of septic tanks do not function properly, resulting in pollution of, in that case surface water.

The main concern regarding the quality of groundwater is their protection as a source of drinking water supply and for use in food processing and related industrial operations.

Future Trends

Special measures are needed to protect the quality of groundwater in areas where large amounts of waste are stored or where wastes are applied to land.

There is a need to address the infrastructure deficit and rural settlement strategy with the continued decline in water quality particularly from sewage sources including septic tank effluent.

Set against a background of rapidly increasing unserviced housing in the countryside, the deterioration in water quality, in both surface and ground water, from domestic sources can be expected to continue.

Climate change will see increased water levels in lakes, which will have implications for developments utilising septic tanks in the lake catchments.

Agriculture reform will increase agricultural inputs into the water catchments, emphasising the need for complete coverage of the water system with Water Catchment Management Plans.

3.5.1 Recreation

Introduction

Recreation is an important component of modern living and has a valuable social, economic and educational role to play in modern society. Recreation has land use implications for large areas of the countryside that are shared by an increasing number of urban-dwellers enjoying outdoor pursuits and seeking places for quiet relaxation and the agricultural sector.

Ireland's sporting and recreational facilities are an important attraction for tourism. In addition, people pursuing outdoor activities are attracted by the high quality and extensive range of leisure opportunities provided by the natural environment. The provision and enhancement of facilities and protection of resources should therefore be seen as potentially beneficial economically.

Sport and Recreation in Rural Areas

The countryside provides a wide range of locations for sport and recreation for the general population, with over 80% visiting the countryside for recreational or sporting purposes at least once a year. The most popular activity is `informal recreation', which includes hill walking and rambling. A smaller but growing number of people take part in organised sports. Visitors are attracted to the countryside by its natural beauty and landscape diversity, its nature conservation and cultural heritage interest, or its natural resources for specific activities (such as white water canoeing, hill walking and rock climbing).

The provision of sport and recreation facilities in rural areas has significant benefits in contributing to the retention of population and in promoting tourism, hence helping to diversify the rural economy. Concerns about rural recreation relate to conflicts between the environmental impact of recreational pursuits and their related developments, their relationship to rural land management, and how they can be harnessed to bring benefits to the rural economy without posing a risk for landscape, nature conservation and rural management objectives.

Sports and recreation can co-exist with sites designated for nature conservation, such as SPAs, SACs, NHAs and Ramsar sites although the priority is to safeguard the natural heritage. In areas designated for their national landscape or cultural heritage importance, the demand for recreation can be met generally so far as it is consistent with the conservation and enhancement of the interest for which the site or area is designated, and with respect for the needs of agriculture, forestry and other rural land uses.

Under the REPS Scheme and SAC Management Plans land may potentially be available for suitable sports facilities and for public access.

In rural areas the aim should be to reconcile environmental, economic and sporting objectives through careful planning and appropriate management measures. Sporting and recreational activities should avoid disturbance to the farming activities of agricultural businesses and be sustaining of the natural resource while maintaining the quality of the area.

Current Trends

Demographic Factors

In 1996, it is estimated that 74% of the population took part in some form of sport or physical recreation over the past year, falling to 63% in the previous month. As would be expected the 16-18 age group showed highest participation rates 95% and 85% of the 19 - 24 age group

Ireland compares favourably with England 65% of the population participated in some recreational activity in the previous month. 57% in Northern Ireland

Demographic changes over the next decade will however lead to a changing pattern of demand.

The school age population is likely to increase over the next ten years, following the decline of recent years,

The general ageing of the population is also affecting other age groups. Though there will be a decline in the immediate post school group, the 30-54 and the over 65 groups are growing. In consequence, recreation is likely to grow significantly.

Water based Recreation/Tourism

Water based recreation/tourism is totally dependent on a key sustainable natural resources, 4000miles of high quality coastal waters, 4000 lakes (covering 168,000 Ha or 2% of total surface area of the State) 75 major river catchments, 450 miles of navigable waterways. Future development of the water based recreation/tourism sector depends almost entirely on protection and sustainable development of the nations water resource.

Tourism growth in Ireland over the last 7 years has demonstrated exceptional growth. From 1993 to 1999, the number of overseas visitors to Ireland increased by 77%, from to 3.3 million to 5.9 million. Domestic and Northern Ireland tourism have also grown but at a lower rate since 1993.Overseas tourism revenue earnings increased by 83% between 1993 and 1999 while domestic and Northern Ireland earnings increased by 42% and 30% respectively over the same period.

Table 5: Tourism Growth 1993-1999

Market	1990 £M	Growth(%)
Britain	796.9	112.4
Mainland Europe	496.6	23.6
N.America	437.2	140.1
Other	114.3	108.9
Total Overseas	1845	82.0
Northern Ireland	89.4	29.6
Domestic	879.3	41.6
Total	2813.7	65.2

Table 6: Growth in Tourism Revenue 1993-99

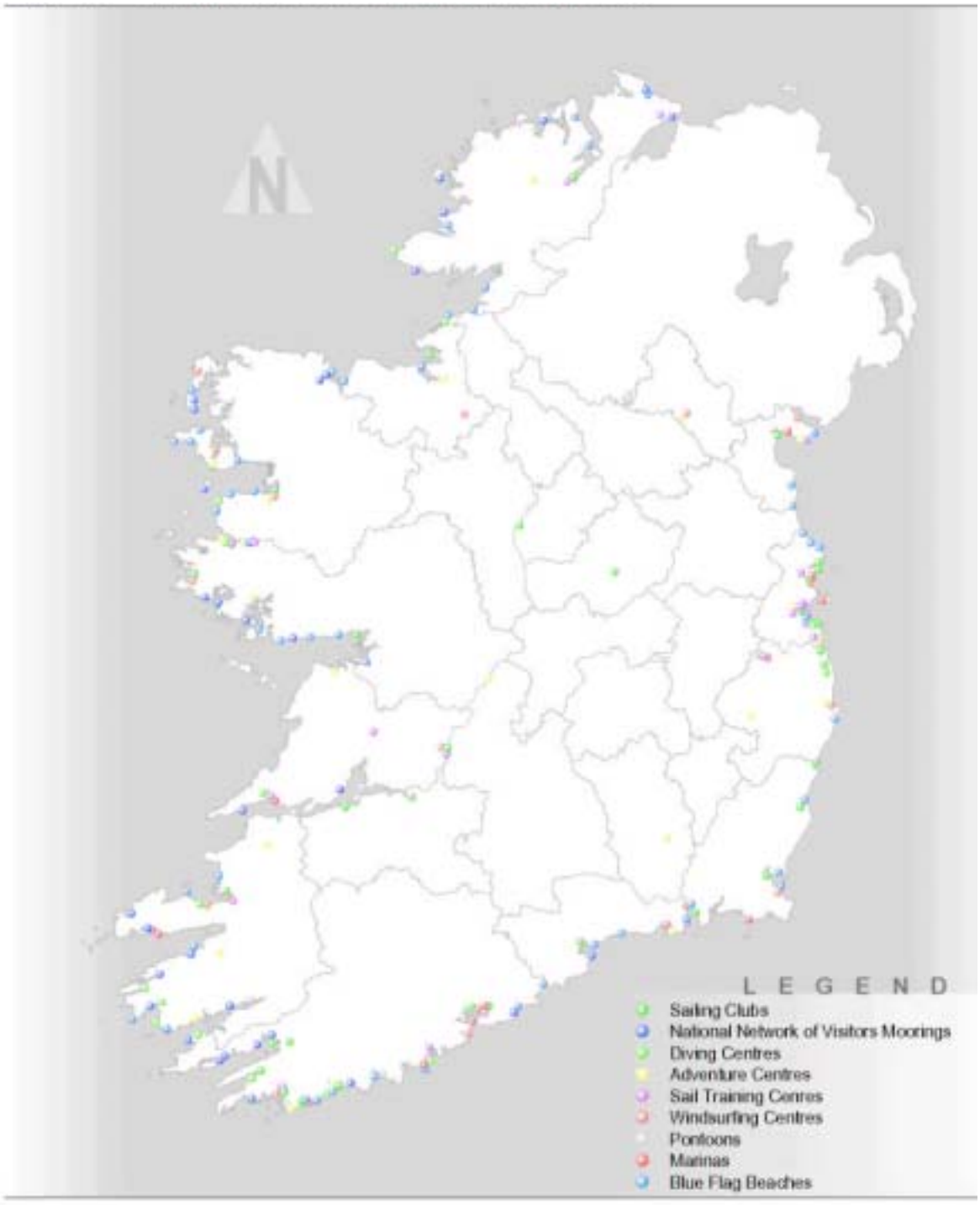
	1999 £M		Growth 1993-99 (%)	
	Overseas	Domestic	Overseas	Domestic
Dublin	577	130.5	99.1	7.5
South-east	122.9	154.0	48.6	40.3
South-west	389.6	198.5	90.7	53.2
Shannon	224.2	97.1	92.4	17.1
West	241.1	167.8	59.3	46.0
North-west	112.9	113.7	49.1	47.6
Midland-East	177.3	107.1	90.0	46.7
Total	1845	968.7	82.0	36.7
East	877.2	391.6	88.3	28.7

Table 6: Growth in Tourism Revenue 1993-99 ***(continued)***

	1999 £M		Growth 1993-99 (%)	
	Overseas	Domestic	Overseas	Domestic
West	967.8	577.1	76.7	42.7

There are regional disparities in tourism growth with a clear shift in the distribution of overseas tourism. Overseas revenue earned in Dublin, the South-East and Midlands-East combined, has grown by over 88% since 1993, compared to 77% for the four western tourism regions. Dublin's increase in tourism can be accounted for by it's popularity as a short-break urban destination,. There is also an element of "catch-up" in relation to Dublin because historically, Dublin's share of the market has been less than might been expected for a capital city. Domestic and Northern Ireland tourism revenue has to a degree compensated the western regions for the greater relative increase in overseas business to the East. About 60% of domestic/Northern Ireland business was attributable to the four western regions in 1999, compared to 57% in 1993.

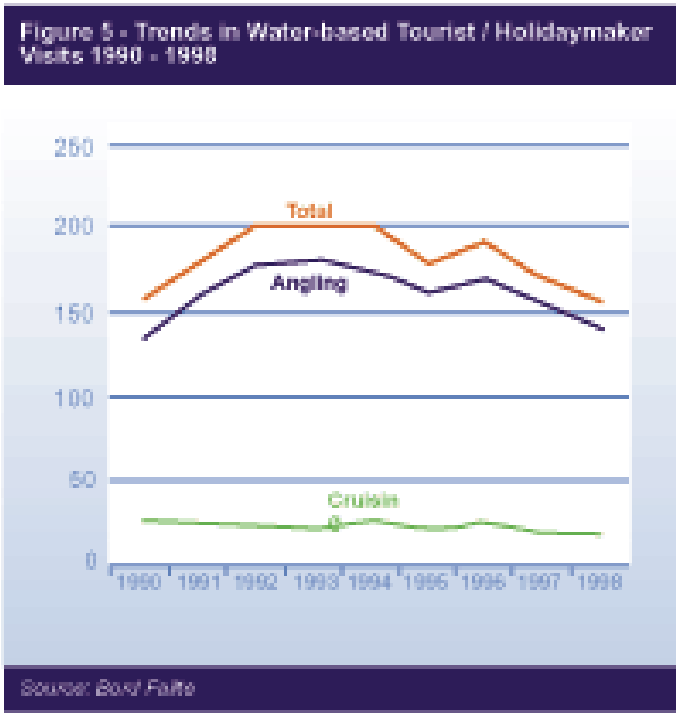
MAP 13: MARINE TOURISM & LEISURE



Data on the overseas performance of the water-based tourism and leisure sector is limited, especially for activities like jet skiing, water skiing, windsurfing, canoeing, scuba diving and other minority water-based activities.

In 1996 some 240,000 overseas visitors spent £89 million on water-based tourism and leisure activities, (6% of total overseas revenue earnings from tourism. About 160,000 of these visitors were specialist water-based tourism and leisure participants, spending £58 million.

Figure 5: TRENDS IN WATER BASED TOURISM 1990-98



The water-based tourism and leisure sector has not followed the overall growth in tourism. Trends in the number of angling holidaymakers and inland cruising visitors to Ireland between 1990 and 1998 were generally static or declining. A downward trend had been most noticeable since the mid 1990s.

Table 7: Water based Tourism 1996 (Overseas No. & Spend)

Activity	Visitors	Specialists	Visitor Spend (£mn)	Specialist Spend (£mn)
Angling	170000	97000	68.0	39.0
Sailing*	14000	7000	4.3	2.2
Cabin Cruising**	35000	35000	10.9	10.9
Watersports	18000	18000	5.6	5.6
Total	237000	157000	88.8	57.7

Note: Excludes carrier receipts.

* Bord Failte does not provide revenue estimates for sailing. As a proxy, a revenue figure has been derived on the basis of average overseas visitor spend in 1996. A significant proportion of sailing spend would not be captured by Bord failte's 'Survey of Travellers' (SoT) because it derives form visiting yachts that access the country at points other than the main ports of entry.

** Bord Failte do not provide revenue estimates for cabin cruising. As a proxy, a revenue figure has been derived on the basis of average overseas spend for 1996. Cabin cruising visitor numbers are taken from statistics available form the Irish Boat Rental Association (IBRA), which has estimates for the vast majority of the cabin cruising sector in Ireland. Bord Failte estimates for cruising visitors are somewhat lower.

Source: Marine Institute (derived from Bord Failte and the Irish Boat Rental Association)

The ESRI 'National Survey of Water- based Leisure Activities', carried out on behalf of the Marine Institute in 1996 estimates domestic spending on water-based leisure activities at £303 million pa. About 46% of this spend (£138 million) derives from water-based activity holidays, ie 18% of the total domestic tourism markets of £751 million is water-based. Coastal recreation (ie. trips to the beach/seaside) and swimming make up 70% of total domestic spend (£214 million), followed by angling (£27 million), sailing/cruising (£24 million), general boating (£19 million), nature-based tourism and water-sports (£9million each).

Table 8: Water based Tourism 1986 (Domestic Spend)

Activity	Day Trip/Equipment Spend (£mn)	Holiday Spend	Total Spend
Angling	23.7	3.3	27
Sailing	10	1.5	11.5
Cabin Cruising	4.8	8.1	12.9
General Boating	16.1	3.3	19.4
Watersports	5.1	3.5	8.6
Nature-based Tourism	4.2	4.9	9.1
Coastal Recreation/ Swimming	100.7	113.7	214.4
Total	164.6	138.3	302.9

Note: Holiday spend includes total national expenditure during over night trips on water-based leisure activities

Source: Marine Institute

Over 50% of the adult population engage in at least one water-based pursuit, the most popular being trips to the beach/seaside and swimming (at about one million participants). Many Irish people also engage in activities such as angling (190.000) and various types of boating (144,000). About 31,000 people engage in other water-sports, while significant activity is also recorded for visits to coastal nature reserves (85,000), bird watching (31,000) and dolphin/whale watching (16,000).

Over the past decade, the water-based tourism and leisure sector has received welcome levels of investment in the areas of product development and Infrastructure. In real terms, nearly £130 million had been invested in the Sector since 1989 (Table 3.6). Nearly half of this spend has come from the EU or IFI 18% has been contributed by national government with private enterprise contributing over 30% of total funding.

It has been estimated that water-based tourism and leisure contributed £301 million to GNP (1.15%) The most significant sectors were Coastal recreation £123 million, £71 Angling, £47 million Boating. 14,500 jobs are supported annually however "value-added" benefits arise due to the spatial distribution of the employment. Water-based tourism and leisure typically provides employment where there are few other employment opportunities or where it provides supplementary income.

Forest Recreation

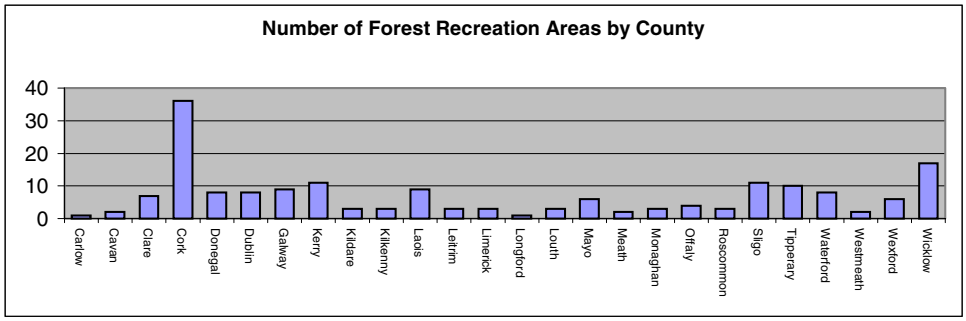
Forest and woodland within easy reach of population centres can fulfil an important social function. An attractive forest feature or recreational, sporting or leisure opportunity offered in a forest setting can provide a boost to the local economy.

Forests have been seen to benefit from large public investment in the past and there is a high expectation that public forests will be open to the public and amenity standards maintained. State-owned forests have generally been open to the public since the early 1970s when the Forest Service began to develop the "open forest policy" with the creation of forest parks, woodland walks, nature trails.

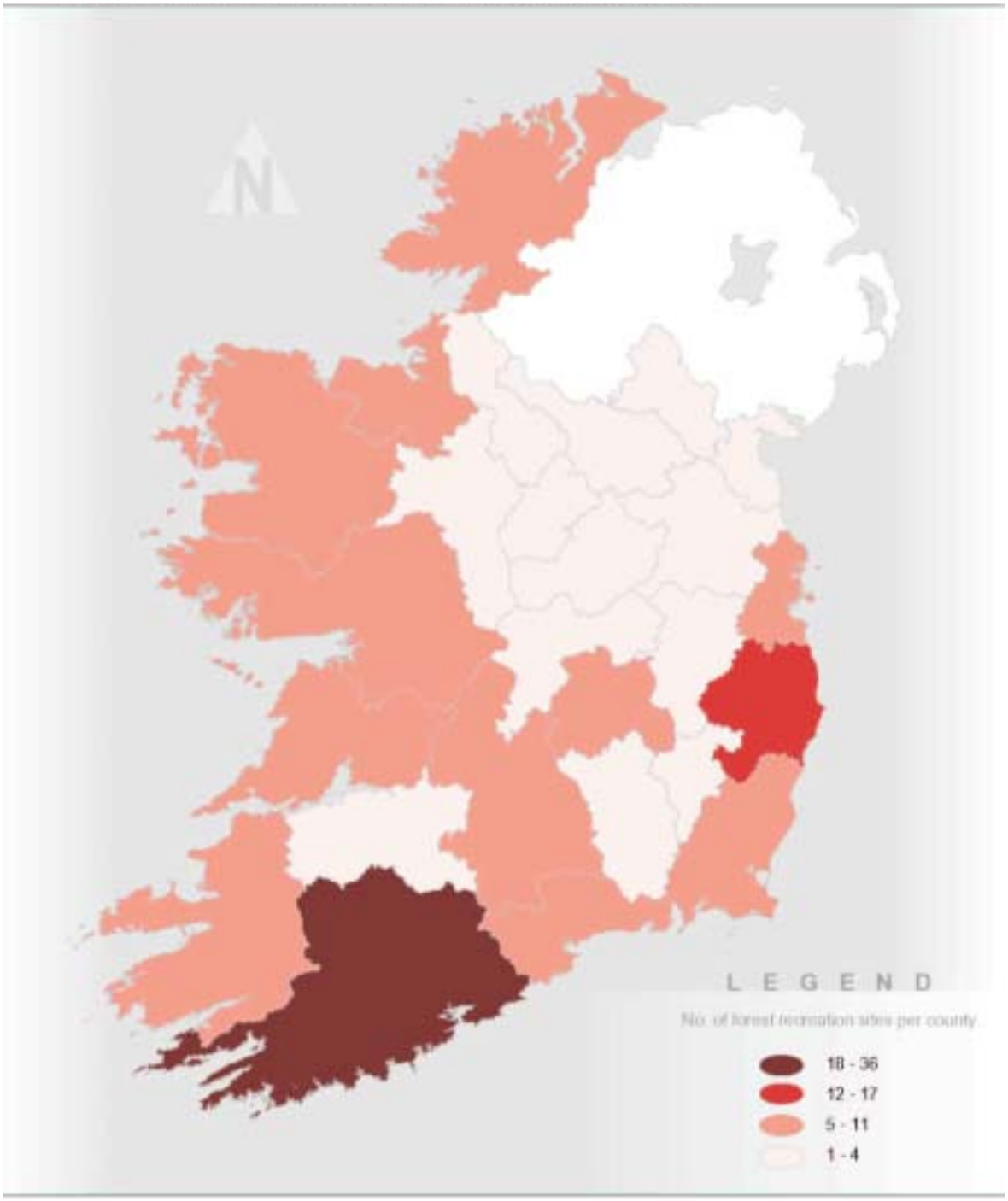
The economic principal of "multiple benefit return" from forestry encompasses amenity and recreation. Forestry must integrate with the social and economic fabric of local areas and multiple use for even passive public use is an important asset.

With urban expansion has come a noticeable deterioration in the quality of forestry near urban fringes, with increased evidence of illegal dumping and vandalism.

Figure 6: Forest Recreation Areas by County



MAP 14: FOREST RECREATION AREAS BY COUNTY



Within forested areas the principal recreation uses are walking, camping orienteering, pony trekking and appreciation of the landscape, amongst others.

Forest paths and roads provide a high proportion of the routes for the twenty or so waymarked trails in Ireland. As well as domestic walkers, Bord Failte estimates that some 250,000 overseas visitors walk as part of their holiday and some 100,000 came to Ireland specifically to walk and of this 45-50% was on the waymarked trails.

The sport of orienteering depends strongly on forest lands. It is estimated that in 1993 some 150 events attracted 30,000 participants.

While data on forest visits is limited one estimate suggests that in the early-to-mid 1990s some 1,475,000 visits were made to Irish forests, comprising 587,000 to Forest and others Parks, 30,000 orienteering, 230,000 walkers.

While the estimates show a high level of usage of State-owned forests there would appear to be little growth in numbers from previous data collected in 1976. The lack of growth is in marked contrast to the visits to the 37 National Monuments under the control of the OPW where visitor numbers rose from 836,000 in 1989 to almost 1.5 million in 1993.

Recent estimates (1998) indicate that domestic visits to forests totalled 7.7 million and that over 42% of all households visited a forest in the past year. It appears that since the majority of households did not visit a forest, those that did, did so regularly. Proximity to forests and lifestyle probably dictate visiting patterns. The 7.7 million is higher than Coillte figures indicate because Coillte only monitor “manned “ sites.

50% of those households with children visited a forest in the past year compared to just 37% of those without children. Only 25% of households where the respondent was retired visited a forest in the past year.

45% of the visitors to forests were urban dwellers 39% rural.

31% of foreign visitors visited a forest or forest park on their trip to Ireland although forests are not generally part of the tourist preconceptions of the country. In all some 770,000 overseas visitors visited forests. In total there is something in the order of 8.5million visits to forests in Ireland in the mid 1990s.

Angling

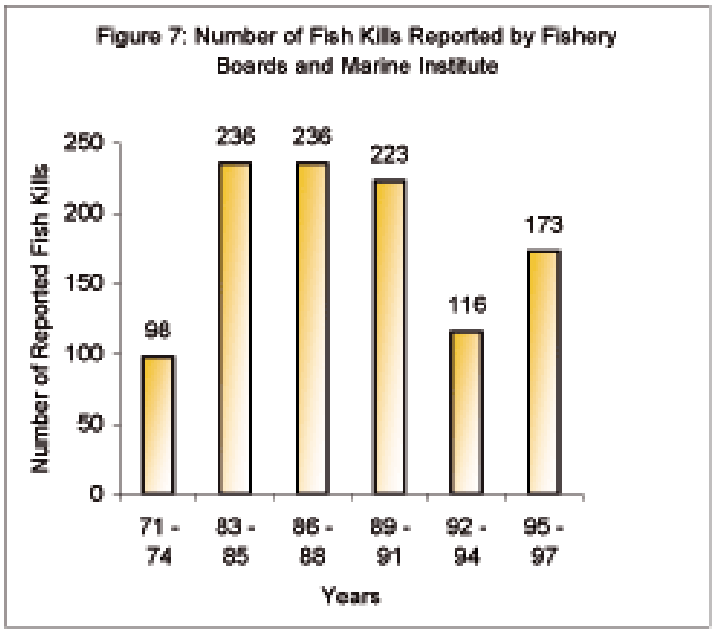
Angling contributes approximately £80 million to GNP and is a major element in extension of the tourist season, particularly in the tourist off-peak period.

The Central Fisheries Board document “ Sustainable Development and Management of Ireland’s Inland Fisheries and Sea angling Resources” set out the medium term strategy for the sector.

In 1996 it is estimated that 94,000 overseas anglers visited Ireland and that there were some 190,000 domestic. The Strategy aims to increase these numbers to 170,000 and 255,000 over the period 2000-2006.

The strategy is set against a chronic and persistent deterioration of water quality and an increase in fish kills from pollution over the period 1991-98.

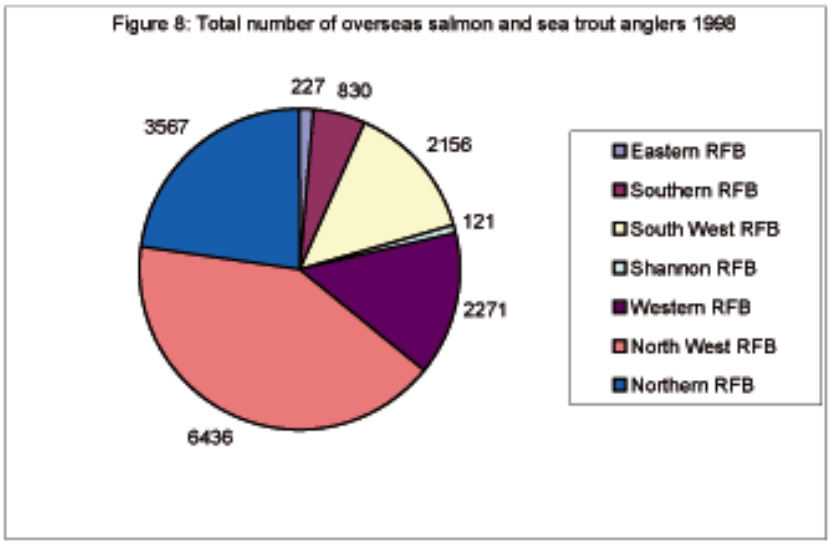
Figure 7: Graph from EPA Report



The Central and Regional Fishery Boards have a remit to improve manage and develop the inland and sea angling resource. They recognise that a holistic approach to the environment is necessary and are developing a partnership approach with other agencies. It is clear that the protection and improvement of the aquatic environment will contribute to the overall environment providing recreation, social and cultural opportunities fro the benefit of all users.

Angling provides one mechanism for off-farm employment, which, with the structural changes in agriculture, will be necessary to maintain viable rural communities.

Figure 8: Pie Chart from CFB Report



The development of recreational fisheries in a holistic, sustainable manner can contribute to the long-term welfare of rural communities as well as protection the natural environment.

Conclusion

The rural environment provides an increasingly important location for recreation by an increasing number of urban dwellers. Illustrative of the degree of increased usage are water based and forestry based recreation.

The use of the rural area for recreation is inextricably linked to the protection of the resources eg water quality, landscape character, rural land uses and reducing the extent of urban encroachment amongst other considerations.

Future Trends

The increasing demand for recreation space is taking place in a policy vacuum. There appears to be no national strategy on provision of recreation space, there is no clear hierarchy of needs established for the country relating to the continued growth urban centres on a regional basis.

3.6 Cultural Heritage

Introduction.

Cultural heritage is an integral component of the wider environment, interacting with all other aspects of the world around us. It is fundamentally important to the quality of life for people, for their education, culture, health and well-being, enjoyment and amenity and to the economy and special identity of Ireland.

One of the most noticeable elements of the cultural heritage is the presence of archaeological remains. It is estimated that over 136,000 archaeological remains pre 1700 AD have been recorded in archaeological surveys, although not all have an above ground presence.

Current Trends

Archaeology

Recent research indicates that, although a higher degree of protection of archaeological sites is now in place than previously existed, the rate of destruction of archaeological sites is increasing.

The study, covering some 2.2% of the area of the State found that 154 (17.3%) of existing monuments had been interfered with (71completely destroyed, 18 seriously damaged, 65 slightly damaged). It is probable that this figure is higher since 101 (10.2%) of the known monuments could not be located. It would appear that the rate of destruction is increasing. In the years 1838-1978 the rate of destruction was gauged at 2.1% per decade. In the period 1996-98 the rate was 2% (projected to 10% per decade) however in the year 1997-98 15 monuments were destroyed which represents 16.8% destruction rate over 10 years of known monuments surviving at the time Inventories were made in the early –mid 1990s.

The main reason for interference was Land Improvement (54.5%), Erosion (16.2%), Development (9.7%), Forestry (4.5%), and Drainage (3.9%).

The report concludes that the rate of destruction is accelerating, that land improvement particularly associated with intensive farming is the main reason for destruction of the monuments and that monuments set in pasture were most vulnerable.

The Irish Language

There is a strong perception that increasing urbanisation occurring in the Gaeltacht is weakening the strength of the Irish language. The example most often used is the expansion physically and economically, westwards of Galway city. The influx of population in to Galway, principally non-Irish speakers, has resulted in villages like Spiddeal and Bearna expanding rapidly with the proportion of native speakers falling.

MAP 15: GAELTACHT AREAS

A second source of development weakening the language is the development of second homes in Gaeltacht areas. One reference to NW Connemara shows that 40% of houses are owned by people not resident in the locality. In some areas this rises to over 60%.

The effect of both urban expansion and second homes is to push land values well above the affordability of local native speakers. In turn the predominant population change is likely to be that more property owners will be non-residents to the area. Peripheral areas require permanent residents to ensure socially and economically viable communities, and this is reflected in the linguistic viability of Gaeltacht areas where this population trend is most evident.

Conclusions

Agriculture is responsible for the greatest loss of archaeological monuments and while REPS at present provides some protection the level of uptake of the scheme is lowest where agricultural change is likely to be greatest.

Increasing urbanisation and economic development in the Gaeltachtaí may have the effect of weakening the language.

Second home development in the Gaeltachtaí has the effect of driving up land prices beyond the resources of local native-speakers and may have the effect of weakening the language.

Future Trends

The current trends are likely to continue, if not accelerate as the pace of agricultural reform and urbanisation continues.

3.7 Tourism

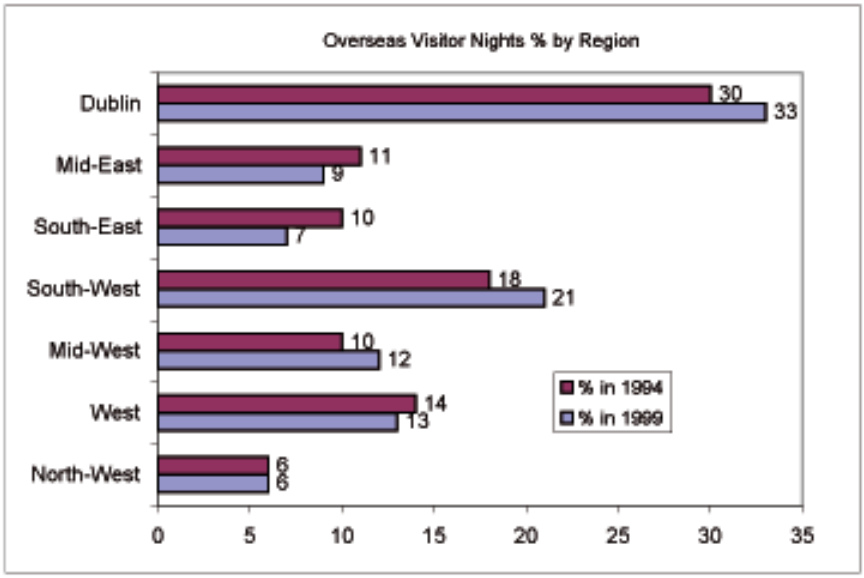
Introduction

In the period l994-1999, tourism both in absolute numbers and revenue generated has increased dramatically in Ireland. Overseas tourist trips had an average annual growth rate of 10% however due to reduced length of stay the average annual bed-night grew by only 6% from 34.8 million overseas tourist nights in l994 to 45.6 million in 1999.

Current Trends

The trend in tourism over the past few years has been to reinforce regional disparities. The dominance of Dublin and the SW has become even more pronounced as reference to Overseas Visitor bed-nights indicates.

Figure 9: Graph p3 BF Report

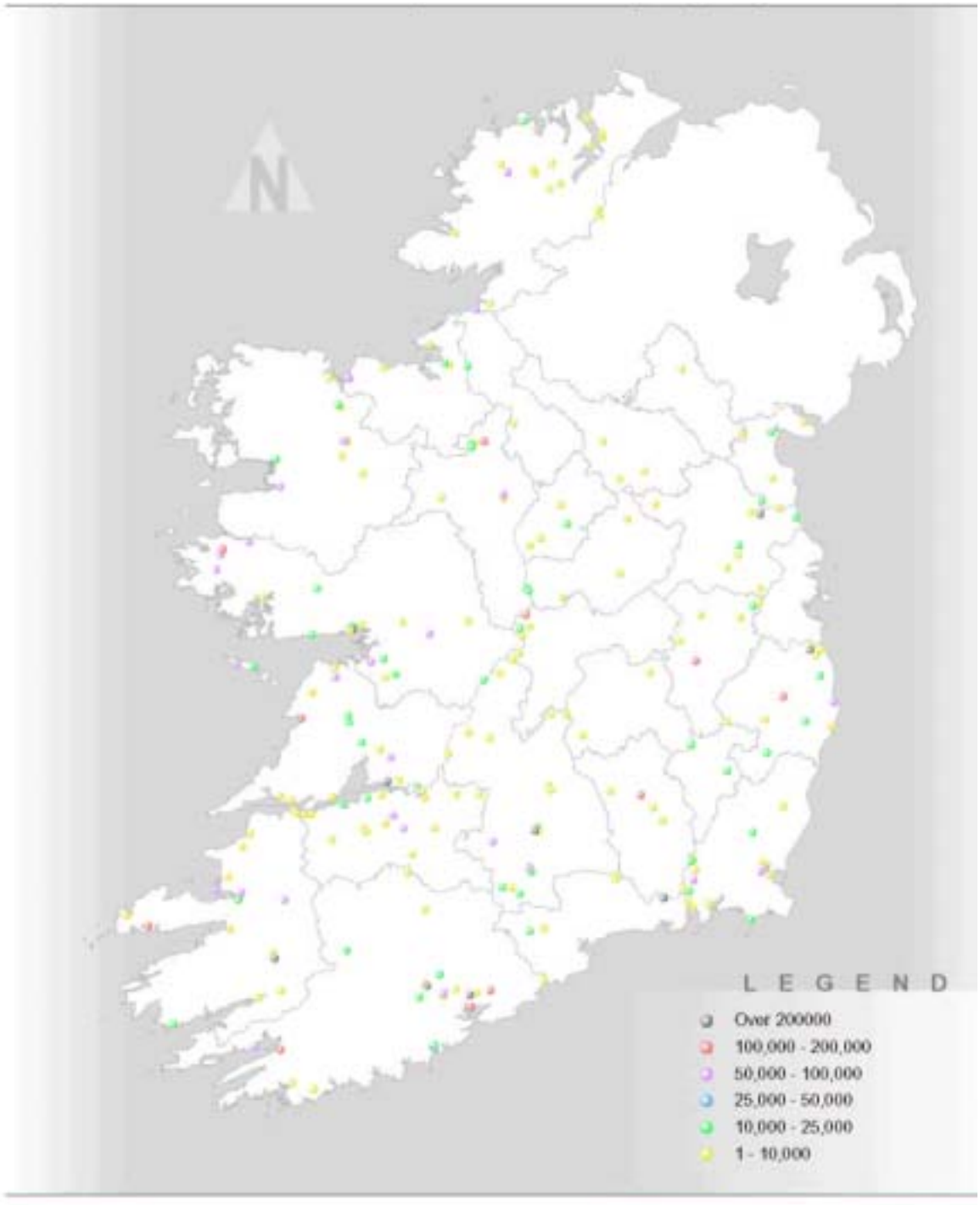


Dublin's increase in Tourism can be accounted for by its popularity as a short-break urban destination. There is also an element of "catch-up" in relation to Dublin because, historically, Dublin's share of the market had been less than might have been expected for a capital city.

It should be noted that even regions that lost relative shares did have some growth in tourism volume.

It is clear that within the regions there are variations, with some destinations at or near their peak season capacity given the current approaches to management of tourism traffic and infrastructure provision in those areas. It is, therefore, essential to focus on those areas that have the capacity to generate and absorb new growth in an sustainable manner.

MAP 16: TOURIST ATTRACTIONS



It is clear that a concentration of tourism activity, allied with strong growth in tourism numbers, has created increasing pressure in some established tourism areas. This, in turn, is giving rise to problems that, in certain cases, threaten to undermine the sustainability of the overall tourism product.

The distribution of tourist attractions, especially those drawing over 100,000 visits per annum, shows a very uneven pattern, with a concentration of all scales of attraction in the South and East.

Bord Fáilte is moving towards addressing Regional imbalance it has £1 million to market regions to the exclusion of congested areas. Under the National Development Plan, the Government's target is that the BMW's share of national foreign tourism revenue will increase by 3% relative to that of the S&E region.

There is a major shift in the format of holidays, it is no longer a complete two weeks break, but now has moved to more frequent breaks of short duration. 75% of GB visitors into Dublin now come on short break visits

This change in holidays has lead to greater development of low-cost airlines and ferries. The NDP has allocated money for the development of Regional Airports. Bord Fáilte/RTO market low-cost Regional Airports. Low-cost Airlines are given subsidies to move to regional airports, e.g., Government gave money to extend Derry City Airport (£1.35million Stg.) Bord Fáilte markets, with Ryanair/Aer Aran, the City of Derry Airport as part of marketing the North West.

The challenge for tourism policy is to create the instruments to facilitate the development of under-utilised potential in the less developed tourism areas in order to spread the economic benefits of tourism and also to reduce the growing pressure on the more established areas but to do so in a way that safeguards the tourism levels as well as the quality of the physical environment which is, after all, the basic tourism resource.

The Tourism Measures in the new Regional Operational Programmes of the NDP, which have been drawn up by the Department of Tourism Sport and Recreation in co-operation with the Regional Assemblies, incorporate a pro-active strategy to improve the spatial spread of tourism. The Tourism Measures aim to promote an improved spatial strategy by concentrating investment in:

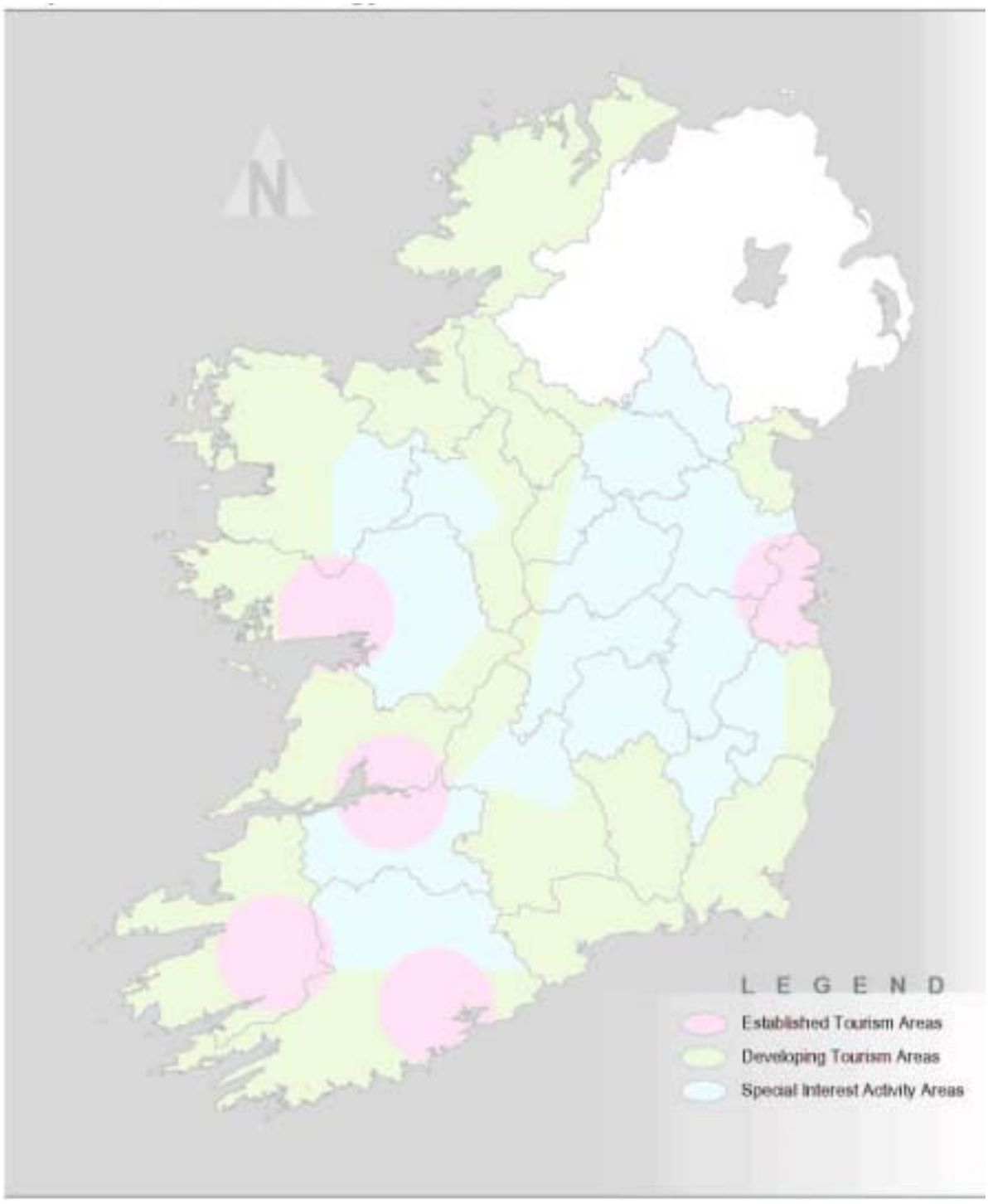
- up to 11 (6 in S&E and 5 in BMW), new major day-visitor attractions, capable of attracting over 100,000 visitors a year, in areas where none currently exist and which are capable, environmentally and economically, of supporting such attractions (the measures clearly list the tourism catchment areas which are regarded as priorities for this type of investment.);
- the upgrading and improved packaging of identified, geographically coherent and financially sustainable, clusters of existing attractions including, where necessary, support for investment in some new projects identified as essential for the completion of such clusters

- the development of special interest pursuits including cycling, walking, horse-riding, great gardens, outdoor activities, water-based and health tourism, etc.
- the promotion of the better management of the relationship between tourism and the environment, with a particular focus on the implementation of Integrated Tourism Management Plans in established tourism areas.

This spatial spread strategy is elaborated in Bord Fáilte's Tourism Development Strategy, 2000-06" where Bord Fáilte has developed the concept of Tourism Zones.

1. Established Tourism Zones focused on the main urban tourism centres - Dublin, Killarney, Galway, Cork, Limerick/Ennis
2. Developing Tourism Areas
3. Special Interest Activity Areas

MAP 17: TOURISM STRATEGY 2000-2006



Established Tourism Areas, as defined under the Bord Fáilte Strategy, will not attract tourism capital funding under the new Tourism Measures. The sector, in such areas, is already financially robust with the capacity to fund its own development. The priority for the sector in these areas is to ensure that integrated action is taken to address those pressures that may threaten its long-term viability.

While priority will be given to certain identified tourism catchments in relation to the location of major attractors, the onus will be on the areas involved to produce proposals of an acceptable quality. There is no guarantee that a sufficient number of quality proposals will emerge from these areas.

Projections for Irish Tourism Growth

In 2000, in is expected that 6.3 million visitors will have visited Ireland and that this figure could increase to over 8 million by 2006. Problems can arise when large numbers of visitors are concentrated in certain areas over short periods of time, e.g., Killarney has a population of 12,600 but this grows to 53,000 at peak season leading to pressure on the physical infrastructure.

Ireland's tourism sector has outperformed European averages, growing at 7% on average over the past 5 years, compared with the European average of 3%. Under the NDP, foreign revenue earnings from the Irish tourism sector are projected to grow by 5% on average.

Trends

Both nationally and internationally, holiday patterns are changing. The average duration of holidays appears to be decreasing. The number of short-term breaks is on the rise. This has implications for spatial spread of tourism given that large urban areas with international access, like Dublin, tend to be the primary beneficiaries of the international short-break business in particular.

Different nationalities have different preferences as between urban and rural locations. That means that increases/decreases in visitor numbers from different countries may have significantly different spatial implications.

Activity holidays are on the increase and this can be of benefit to non-urban areas provided international standard facilities and integrated marketing plans are in place to avail of growing opportunities.

Labour shortages may also have an effect on the spatial spread of the industry. With large student/migrant populations, the industry in Dublin may be better placed to acquire temporary/pert-time staff than the industry in other areas, especially in the BMW Region.

At present, the B&B sector is experiencing difficulties in more remote areas. The B&B sector has come under pressure from better facilities and lower prices at 3-star hotels in particular. It may also be affected by a large increase in self-catering and, in some areas at least, by an over-supply in the B&B market.

Threats

Although Ireland is performing well in attracting visitors from North America and Britain, it is loosing market share in the major Continental markets of France and Germany. It is worth noting that a major competitor like Scotland, has been experiencing decreasing visitor numbers in recent years.

One of the reasons for the softness in performance in some of the major Continental markets may be a perception in these markets that the core values of Irish tourism are in decline.

The continued development of Central and Eastern Europe markets may pose a competitive threat especially if Ireland's core values are perceived to be in decline.

The core values, which attract visitors to Ireland, according to ITIC/BFE analysis, are Landscape and People. There appears to be a growing concern in some markets about possible declines in these values.

There is a concern that Ireland is a less welcoming place, that the Céad Míle Fáilte is no longer so evident. In certain markets, the Celtic Tiger image can have a downside in relation to tourism as it conflicts with the traditional images that have attracted people to Ireland in the past.

There are also worries about environmental degradation, e.g., declines in domestic water quality in certain areas, pollution in rivers and lakes that erode the angling base, inappropriate development in scenic landscapes, etc.

The tourism industry is seeking to address some of these concerns through its People and Place Programme. Other tourism destinations, like Spain and Portugal have begun to take significant steps to redress the problems of over-development and to attempt re-orient their tourism industries in order to avoid such problems recurring in the future. It remains to be seen whether they will be successful.

On the environment side, the assessment of project proposals under the new Tourism Measures will take cognisance of environmental issues but it needs to be recognised that the tourism policy-makers and the tourism industry are not the key players in relation to decisions and practices affecting the environment.

It is the view of the Department of Tourism Sport and Recreation and Bord Fáilte that tourism product funding cannot be effective in isolation. There are clear lessons to be learned from areas that have experienced rapid, concentrated investment.

Where infrastructure networks are deficient, overload can be experienced, on the one hand, with consequent problems for both local and visiting populations. On the other hand, infrastructure deficits can inhibit the realisation of the tourism potential of less developed areas.

Successful realisation of the strategy set out in the Tourism Measures is dependent on, and directly linked to, the delivery by relevant local and other authorities of the necessary infrastructure, facilities and controls.

For National Development Plan purposes, the Department of Tourism Sport and Recreation drew up a detailed list of tourism-related infrastructure priorities - non-national roads, water and sanitation schemes. This list was complied from input by the Regional Tourism Managers who, in turn, consulted with relevant local authorities.

In the NSS context, therefore, it is important to bear in mind that infrastructure plans also need to serve tourism priorities and that those priorities will not always relate to areas which are a priority for general industrial/commercial/ residential development.

Conclusion.

The tourism industry, Bord Fáilte, CERT and other relevant players will have to tackle the challenges posed by perceived declines in core tourism values and by labour supply pressures.

The Established Tourism Areas will require integrated strategies in order to mange the challenges of success.

A better spatial spread of tourism will require the successful implementation of the new Measures and Development Strategies prepared by the Department of Tourism Sport and Recreation and the Regional Assemblies and by Bord Fáilte.

There will have to be a clear acceptance of the fact that successful realisation of the strategy set out in the Tourism Measures is dependent on, and directly linked to, the delivery by relevant local and other authorities of the necessary infrastructure, facilities and controls. This means that infrastructure decisions will need to reflect tourism priorities.

Protecting the quality of the physical environment will have to have increased priority nationally, regionally and locally.

4 SUMMARY AND POLICY IMPLICATIONS

Agriculture

Farming in Ireland and the agricultural economy is now controlled by wider economic trends and market forces over which Ireland has little control. The CAP has resulted in concentrated output, resources and income to a reducing number of farmers. The income gap between large and small farms is increasing. There is increasing under-employment on farms in the marginal regions directly related to farm viability and economic size of unit. One estimate concludes that the number of farms will fall by 40,000 in the period 1998 to 2010, with the greatest fall in the farms that are currently not viable.

Current trends in agriculture Land Use Patterns that are likely to continue into the future are: -

- A change from primary agricultural production to Forestry particularly in the W & NW.
- Dairying will contract from marginal areas eg Cavan /Monaghan to the Golden Vale.
- Sheep rearing will retreat to Uplands again as price structures are changing
- As farming moves continually towards lower intensity REPS will expand.
- There will be greater specialisation in farming.
- No. Employed in farming falling rapidly especially the BMW Region.
- Balanced Regional Development and issues like economic development/ decentralisation will accelerate loss of agricultural labour.
- Conflicts are arising as a result of changing agricultural pattern & pressures of access to rural area.

e.g. *access for walking*
Urban facilities located in the rural area cf landfill/incinerators
CPO Roads
Recreation/Forest parks for urban dwellers

Soil Type

Urban expansion has resulted in a loss of better agricultural land and therefore the most productive soils.

Urban generated housing has resulted in a proliferation of septic tanks generally located on poorer soils that do not have the capacity to absorb the effluent.

Agricultural production on poorer soils has resulted in increasing run-off to surface waters and resultant eutrophication.

The move away from agricultural production to afforestation (especially broadleaf) is occurring on the more productive soils.

As urban Ireland expands the issue of soil capability to accept increasing amounts of municipal sewage sludge particularly in the context of the preparation of Water Management plans will become important.

Most Municipal sewage sludge in other EU countries is spread on Tillage land but the land farmed for tillage in Ireland is extremely limited

The lack of a detailed soil survey means that there is no information on the heavy element status of Irish soils. Heavy metals from a major component of Municipal Sludge

Landscape

Landscape conservation is important for many reasons, maintenance of environmental quality, tourism, provision of drinking water, agricultural production, natural heritage and biodiversity.

The Irish landscape will undergo significant change over the next 20 years and not only High Quality landscapes but also "ordinary" agricultural landscape will be subject to most change. Urban expansion, housing & building generally, tourism and recreation and infrastructure provision will have major impacts on the landscape.

The increased range and type of pressures on the landscape will require careful management.

Natural Heritage

The area of land covered by Natural Heritage Designations is most extensive on the western seaboard although the Shannon waterway (an NHA) is a significant feature in the Midlands.

By and large the various areas designated fro nature conservation are also of importance from the point of view of landscape conservation. Those coastal sites coincide with areas under pressure from development in the form of tourism, holiday home developments etc.

The upland areas designated are also those areas of highest windspeeds, which are attractive to windfarm developers.

By 2020 the number of designated SAC sites will not change dramatically due to comprehensive nature of list submitted to the EU Commission and currently being processed.

Farm management plans area to be put into place where current use is not compatible with SAC/NHA Protection eg Turf Cutting on protected bogland and overgrazing by sheep. With regard to overgrazing Commonage Framework Plans / De-stocking Plans are currently under review

Conservation Plans which specify what is acceptable / or not are being prepared with the landowners. 200 Draft Plans have been prepared.

The Department of Agriculture, the IFA and Duchas have agreed Habitat Prescriptions at National Level for protection of the Burren, Uplands, Dunes/ Machair.

Water Resources

Water quality in surface waters continues to decline and it is significant that the causes of surface water pollution have been increasingly from sewage and additionally it is smaller rivers and streams that have been affected.

The main concern regarding the quality of groundwater is their protection as a source of drinking water supply and for use in food processing and related industrial operations.

Special measures are needed to protect the quality of groundwater in areas where large amounts of waste are stored or where wastes are applied to land.

Recreation

The rural environment provides an increasingly important location for recreation by an increasing number of urban dwellers. Illustrative of the degree of increased usage are water based and forestry based recreation.

Over 50% of the adult population engage in at least one water-based pursuit, the most popular being trips to the beach/seaside and swimming (at about one million participants). A lot of Irish people also engage in activities such as angling (190.000) and various types of boating (144,000). About 31,000 people engage in other water-sports, while significant activity is also recorded for visits to coastal nature reserves (85,000), bird watching (31,000) and dolphin/whale watching (16,000).

Recent estimates (1998) indicate that domestic visits to forests totalled 7.7 million and that over 42% of all households visited a forest in the past year. It appears that since the majority of households did not visit a forest, those that did, did so regularly. Proximity to forests and lifestyle probably dictate visit patterns. The 7.7 million is higher than Coillte figures indicate because Coillte only monitor “manned “ sites.

Cultural Heritage

Agriculture is responsible for the greatest loss of archaeological monuments. REPS at present provides some protection, REPS uptake is lowest where agricultural change is likely to be greatest.

Increasing urbanisation and economic development in the Gaeltachtaí may have the effect of weakening the language.

Second home development in the Gaeltachtaí have the effect of driving up land prices beyond the resources of local native-speakers and may have the effect of weakening the language.

Tourism

Tourism will grow target 9% currently 6% Internationally 3-3.5% esp. as leisure & wealth continue to increase.

In 2000 it is expected 6million tourists will visit Ireland, increasing by 2006 to 8 million. Problems arise when the 6m visitors are concentrated in certain areas for short period of time. eg Killarney 12,600 pop but at peak 53,000 overnights in town leads to infrastructure pressures.

Holiday patterns have changed from the traditional 2-week holiday to more short-break type holiday/Activity holidays also people are travelling further.

The core values that people visit Ireland for are Landscape & People, confirmed by ITIC/BF study.

It would appear that the reason for the downturn in visitor numbers is declining core values, Ireland is no longer perceived to be welcoming, the “green”, “clean” image is deteriorating evidenced in declining water quality (B&B now giving bottled water due to GWS contamination) angling tourism declining due to falling catches from pollution of water sources, adverse impact of development in the landscape.

Ireland is losing market share in tourism, German tourists appear to visiting in declining numbers, France has static visitor numbers and United Kingdom tourists are showing declining visitor numbers

The tourism industry acknowledges the need to arrest the decline. The question is “is it possible”???

With traditional core values gone inside 20 y Ireland will need to replace it tourism attraction but with what?

Other countries already have well developed tourism product in abundance.

E. Europe has what Ireland is losing and will therefore attract continental Europe already E Europe is catching up, they are actively marketing the image that Ireland has now.

Tourism development is levelling out and B&B operators are concerned. Tourism operators can get earn more and have better hours in industrial employment.

One important aspect is that Tourism needs to afforded greater consideration in County Development Plans which should aim for better policies to protect tourism, and the Landscape / Environment on which it depends. eg Tourism Zones within County Development Plans. The Department of Tourism sees the zonal approach as one method of integrating tourism concerns into development plans.

Policy Implications

Agriculture

- Significant numbers of off-farm employment will be required that will have to be spatially differentiated according to the particular needs of part-time farmers.
- With the aim of retaining population in the rural area service and infrastructure deficit will have to be addressed, particularly in the smaller towns and villages.
- With increased intensification in some areas and afforestation in others the landscape and environment will be radically altered. Agriculture as an economic sector will face challenges to be environmentally sustainable.
- Farm diversification & off-farm employment will require significant investment in the development of human resources.
- The retention of significant numbers in the rural area will necessitate continued focus on rural poverty and social exclusion.
- The integration of all of the above may require institutional changes for implementation.
- Climate change will see more agricultural land subject to winter flooding that will affect land usage.

Soil Type

- The continued and increasing dependence of most rural housing on septic tanks has implications for both soil and water quality.
- Increasing levels of urbanisation require the disposal of municipal sewage sludge and it is apparent even with limited data the appropriate soils are not widely available. The EU Waste Directive does not allow disposal to landfill.

Landscape.

- The area of greatest landscape change is probably agriculture and the measure that provides some protection, REPS. REPS uptake is lowest where change is likely to be greatest.
- The impact of infrastructure and in areas of high landscape value and in particular the tariffing of wind energy concentrating development on the west coast and uplands also of high landscape value.
- Tourism and second-home development outside towns and village need to be examined closely.

Natural Heritage.

- The impact of infrastructure in and adjacent to designated natural heritage areas.

Water Resources.

- The need to address the infrastructure deficit and rural settlement strategy with the continued decline in water quality particularly from sewage sources including septic tank effluent.
- Increasing septic tank use and groundwater protection and in surface water catchments generally
- Climate change will see increased water levels in lakes, which will have implications for housing in the lake catchments.

Recreation.

- Increasing demand for recreation space but no national strategy on provision, no hierarchy of needs established. As regional urban centres develop provision for recreation will increase.

Cultural Heritage.

- Agriculture is responsible for the greatest loss of archaeological monuments. REPS at present provides some protection, REPS uptake is lowest where agricultural change is likely to be greatest.
- Increasing urbanisation and economic development in the Gaeltachtaí may have the effect of weakening the language.
- Second home development in the Gaeltachtaí have the effect of driving up land prices beyond the resources of local native-speakers and may have the effect of weakening the language.

Tourism

- Tourism will have to be more spatially driven embracing the concepts of sustainable tourism ad carrying capacities. Some indications that this is happening are evident, notably Tourism Strategy 2000-2006.
- Tourism & agri-tourism can contribute to rural development and farm diversification but are often not seen as such and potential not realised.
- If traditional core elements of Irish tourism are destroyed as appears to be the case, what will be the attraction for tourists?
- Stronger consideration of tourism in development plan hierarchy.