Western
Development
Commission

The State of the West
Recent Trends and Future Prospects

July 2001

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Chairpersons Foreword

The Western Development Commission (WDC) report *Blueprint for Success: A Development Plan for the West 2000-2006* was published in 1999. This was at a time when the prosperity of the 1990s had led to public debate on the need to widen the distribution of economic growth, and on the poor state of much of Ireland's infrastructure. When the National Development Plan 2000-2006 (NDP) was published later that year, it contained much of the broad thrust of the WDC's recommendations and committed government to the goal of balanced regional development. The NDP also earmarked substantial resources for much needed investment in infrastructure.

Now, two years later, the WDC has compiled *The State of the West* in order set out how the Western Region has fared in recent years. One of the problems with such a task is the availability of good data so that the analysis is up to date. The WDC has been fortunate in being able to access new analyses and previously unpublished data for this report. This has enabled us to compile a detailed picture of key trends in each of the seven counties. Despite record rates of growth nationally, this reveals that economic growth, as reflected in industrial performance and employment growth in the region is limited and lags far behind more developed regions.

Poor infrastructure continues to be the main barrier to development and new sets of problems associated with deregulation of the utilities market have emerged. A major deficit in transport, power and telecommunications infrastructure is seriously undermining the Western Region's capacity to compete for investment, and is threatening the growth of key productive sectors.

The urgency of addressing the Western Region's infrastructure problem cannot be overstated. Companies and individuals do wish to work and live in the region. But access to good road, rail, and air links, as well as strong and reliable power and telecommunications connections, are essential for its competitiveness. In *The State of the West*, the Western Development Commission sets out a number of key strategic actions that need to be adopted immediately in order to tackle the infrastructure deficit. It also sets out specific actions that the WDC itself will institute to make more locations in the region attractive for investment, and to make key industrial sectors more globally competitive.

The very existence of the WDC is an acknowledgement of the particular problems of the seven western counties. It is difficult to envisage that there will ever be a better time to address these. I am confident that progress can be made and I believe that the WDC has a major role to play in achieving balanced sustainable growth in the region.

Sean Tighe
Chairperson
Western Development Commission
July 2001

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Executive Summary

Part I

Recent Trends in Population, Employment and Key Productive Sectors

Introduction

The Western Development Commission (WDC) has responsibility for promoting and fostering economic and social development in the seven western counties of Donegal, Sligo, Leitrim, Roscommon, Mayo, Galway and Clare.

In 1999 the WDC published a Strategic Action Plan *Blueprint for Success: A Development Plan for the West 2000-2006*. This contained a wide range of new information on the socio-economic performance of the Western Region[1] and set out an integrated strategy for the region that provided the basis for a radical improvement in economic performance.

Some two years later, this *State of the West* report provides an update of socio-economic conditions in the Western Region, which comprises 37 per cent of the landmass of the state[2].

The National Development Plan 2000-2006 (NDP), incorporated much of the broad strategic thrust of the *Blueprint* report and the latter's input to the development of a regional development strategy was acknowledged in the NDP. Fostering balanced regional development is a fundamental objective of the Plan.

A key commitment of the National Development Plan is the preparation of a National Spatial Strategy (NSS), part of which will be to identify regional gateways to drive development and provide a framework for spatial planning over the next two decades. The NSS is currently in preparation and is due to be completed at the end of this year.

Both the NDP and the NSS, therefore, provide the broad context for the analysis in this report.

Socio-economic characteristics

By the turn of the century, the Western Region had a larger, younger population than at the start of the 1990s. Between 1991 and 2000, the population increased by an estimated 5.2 per cent. We can only speculate as to the stimuli for this growth, or its components, but it can be linked to retention and in-migration of population due to employment growth and migration to the region for lifestyle, residential or retirement reasons.

Population growth is associated particularly with the larger towns, but the region is predominantly rural, with only four towns with populations in excess of 10,000 and a further five with more than 5,000 in 1996.

The number of planning applications in the Western Region increased substantially during the 1990s – at a rate higher than the state average. In five of the seven

[1] The term Western Region is used to delineate the seven western counties within the remit of the Western Development Commission.

[2] The terms 'state' and 'Ireland' throughout this report refer to the twenty-six counties.

counties, this process accelerated substantially over the two years 1997-99. These data confirm the trend of population growth. They also undoubtedly reflect the impact of tax incentives for the construction and refurbishment of residential accommodation in the Upper Shannon area.

Significant economic development in the region would undoubtedly have a major impact on stabilising the population in those parts still experiencing decline.

If present trends continue, regional population forecasts indicate a further concentration of population in the Dublin and Mid-East Regions 2001-2031. Under the most likely scenario, four-fifths of the population increase of 940,000 will occur in the Dublin and Mid-East regions.

Employment

There was an increase of 11 per cent in the numbers employed in the Western Region between 1998 and 2000, which is not much below the state average. However, after decades of out-migration, the Western Region is starting from a very low base and, given its relative position, it needs better than average growth rates.

The Western Region had just 15.9 per cent of total employment growth in the last two years. Nearly three quarters (73.4 per cent) of this growth occurred the Eastern & Southern region and just over a quarter (26.5 per cent) in the BMW region.

Two-thirds of the increase in employment in the Western Region was in female employment and one-quarter of this was part-time. Much of the increase in female employment in the last two years has been in the financial and other sector (+3,600) and in education and health (+6,300).

The increase in male employment in the Western Region was just half of the female increase over the last two years. Over 70 per cent of the increase in male jobs was in the construction industry. While female employment increased in all economic sectors, male employment declined in four - agriculture, other production industry, hotels and restaurants and education and health.

White-collar occupations – managers and administrators, clerical and service occupations –are underrepresented in the Western Region, whereas the more traditional craft and manufacturing occupations are over-represented.

The proportion of farmers in the Western Region is almost twice the national average but the numbers of farmers there are declining at a faster rate.

Analysis of new entrants to the labour market in the Western Region reveals that they are disproportionately concentrated in building, and have a less than average representation in white collar occupations such as banking, finance and insurance.

Unemployment in the region has fallen considerably, but is still high among 15-19 year olds, with the female rate nearly twice the national average.

The Brain Drain from the Region
The seven Western counties have higher than average rates of admission to third level education, but much of this human capital is being lost to the region through a persistent brain drain to better jobs outside the region.

In 1999, only 6.6 per cent of all new graduates with primary degrees found work in Sligo, Leitrim and Donegal, whereas 60.5 per cent of them found work in counties Dublin, Kildare, Meath and Wicklow.

In 1998, 37.7 per cent of graduates originating from the Western Region found their first job in Dublin. This is higher than the total proportion who got their first job after graduation in the seven Western counties (34.2 per cent).

The pattern is somewhat different for sub-degree award recipients where there is a much higher retention rate in the region of origin. However there is still a high proportion (43.5 per cent) of sub-degree award recipients gaining their first employment in the East of the country.

The net effect of high educational participation and insufficient attractive employment opportunities is a brain drain from West to East whereby much of the human resource potential of the region is lost to other areas with more and better employment opportunities.

Industrial Performance
Industrial activity in the Western Region is smaller in scale than that in the Eastern and Southern region as measured by the value of output per local unit and per person.

Nationally, net industrial output grew by 14.6 per cent per annum between 1991 and 1998; the equivalent figure for the Western Region was just 4.5 per cent.

In 1991, the Western Region accounted for 14.6 per cent of all industrial output in the state. This proportion declined to 9.6 per cent in 1996 and 7.6 per cent in 1998. All counties in the Western Region experienced a decline in their share of net national output between 1991 and 1998. The Eastern and Southern region increased its share of national net output from 69 per cent in 1991 to nearly 81.9 per cent in 1998.

In the Western Region, wages and salaries are considerably lower than average. In 1998, annual wages and salaries per employee in the seven Western counties averaged £15,357, compared to a national average of £18,106.

In the seven Western Counties net output per local unit is lower than the average, reflecting the higher concentrations of traditional labour intensive industries located there.

Net output per worker in the Western Region was less than half the national average in 1998. In the period 1996 to 1998, net output per worker increased by just 5.6 per cent in the Western Region compared to an increase of one third nationally.

Some counties have particularly high sectoral concentrations; notably food and textiles in Donegal and food in Roscommon. Employment forecasts suggest that textiles and agricultural occupations will be most prone to employment losses in the future. These employment forecasts taken together with the current sectoral distribution of economic activity in the Western Region point to a real need to diversify and develop employment opportunities there.

State Supported Employment Creation

In 2000, there were 55,290 persons employed in agency assisted jobs in the Western Region, but more than a third of these (18,854) were in Galway (city and county) and a further 20 per cent (11,166) were in Clare. Thus, more than half of all state-assisted jobs in the seven counties were in Galway or Clare.

The share of agency-assisted employment located in the Western Region has declined from 19.4 per cent in 1995 to 17.5 per cent in 2000. At the same time, the Eastern and Southern Region had an increased share (from 71.9 per cent to 76.1 per cent). Of the Western counties, only Galway increased its share of employment over this period. All other counties in the Western Region had a decline in share.

Over the second half of the 1990s (1995-2000) the number of assisted jobs in the Western Region increased by 9,649. But 6,877 of these (71.3 per cent) went to Galway and a further 2,333 to Clare (24.2 per cent), leaving a net gain for the other five counties of just 439 jobs or less than five percent of the total to the region. The Western Region accounted for just 11.9 per cent of the national total, while the Eastern and Southern region accounted for 88.1 per cent.

In 1999-2000, the Western Region got 2,807 (11.9 per cent) of the national increase of 22,908 assisted jobs. Of these jobs Galway accounted for 78.0 per cent of the increase and Clare a further 15 per cent. The remaining five western counties had a net gain of just 201 jobs. Counties Donegal, Leitrim and Roscommon actually had a net decline in agency assisted employment.

Since 1994, 4,087 full-time jobs were created in the Western Region with the assistance of County Enterprise Boards (22.4 per cent of the total).

Employment in Irish-owned agency assisted companies has been increasing each year since 1995, both nationally and in the Western Region. Over the period 1995-2000, within the Western Region, all counties except Galway had a decline in share of employment in Irish owned assisted companies.

Since 1999, employment in foreign-owned assisted companies has exceeded employment in Irish-owned assisted companies nationally. However, the Western Region's share of employment in foreign companies has declined consistently, from 22.0 per cent in 1995 to 18.7 per cent in 2000. Correspondingly, the share going to the Eastern and Southern region has increased consistently, from 72.6 per cent in 1995 to 79.0 per cent in 2000.

Jobs in foreign-owned assisted companies are concentrated in Galway and Clare. Between them, these two counties account for 61 per cent of all such employment in the Western Region.

The Western Region has a disproportionate share of assisted employment in industrial sectors vulnerable to job losses and attracts a smaller share of growing, high value added sectors such as financial and international services. The region accounts for 18.9 per cent of assisted employment in manufacturing, but a quarter of all clothing and footwear employment and one third of textiles employment.

There was actually a net loss of 300 assisted jobs in manufacturing in six of the seven Western counties between 1999 and 2000. The greatest losses occurred in the 'traditional' industries of food, clothing and textiles. The greatest gains were in electrical and optical equipment, with an increase of 1,434 jobs in the Western Region of which 93 per cent were located in Galway. There was an increase of 1,128 jobs in international services between 1999 and 2000, of which over 40 per cent were located in Galway.

Only 5.5 per cent of all employment in financial services is in the Western Region and 9.3 per cent of international services. These are the high value-added growth sectors and the Western Region is not attracting its share of these industries. Indeed, Enterprise Ireland has recently pointed out that, among their client firms in the BMW region, international traded services is the smallest sector and that more than half of the 150 firms it supports in this region are trading out of Galway.

Agriculture

Only a minority of farmers in the Western Region are at present generating an adequate income from farming, and, even on these farms, incomes lag considerably behind the national average.

There is a high dependence on off-farm income among farm families in the Western Region. Pressures on farming over the coming years are likely to increase the need for additional off-farm income.

Given the income prospects, and the alternative opportunities available, fewer farm children will opt for a career in full-time farming.

At best, by the end of the decade, a small minority of farm families in the Western Region will generate an adequate income from full-time farming and the remainder will be heavily reliant on off-farm income.

Diversification within farming can provide a viable income on some farms and an important income supplement for those with off-farm jobs. Organic production, horticultural crops, farm forestry and on-farm enterprises are among the options that should be encouraged and facilitated.

The WDC *Blueprint for Organic Agri-Food Production in the West* argues that the Western Region is at a critical juncture in terms of the development of the organic sector. The indications are that affirmative action can lead to a vibrant industry that contributes positively to rural communities in the Western Region – both in terms of economic and environmental benefits.

Detailed recommendations on the development of organic production, domestic and overseas market development, expansion of added value processing and development of distribution channels, research and development, education and training and information technology and the development of organic production are all set out in the Blueprint report.

Forestry

Forestry is an important sector in the Western Region; the region accounts for 40 per cent of all afforested land in the state. The area of afforested land is increasing in all the Western counties.

An estimated thirty per cent of those engaged in the forestry sector are in the Western Region.

Farm forestry is increasing as afforestation grants and premia make forestry an attractive land use option for farmers.

The Marine Sector

The fisheries industry is concentrated along the Western seaboard with approximately 40 per cent of employment located in the Western Region. While the tonnage decreased, the value of Irish sea fish landings have increased over the last three years. During the same period there has been an increase in Irish landings at foreign ports.

The EU Common Fisheries Policy and quota restrictions limit the possibilities for expansion of the fisheries sector.

The aquaculture sector has grown significantly in the last decade. Production is concentrated along the Western seaboard. Forty three per cent of producers are located in the Western Region. There are further opportunities for expansion of this sector but marketing and business development is urgently needed in the sector.

More than half of employment in the seafood-processing industry is located in the Western Region, concentrated in Donegal.

The WDC in the report *Adding Value to Seafood compiled in 2000,* identified the issues facing the seafood sector in the Western Region and made a total of 49 key recommendations for the development of the sector. This report was submitted to the Department of the Marine and Natural Resources and many of the recommendations were included in the national seafood strategy *The Way Forward for Irish Seafood – Strategy for the Development of the Irish Seafood Processing Sector.*

Tourism

Ireland has experienced rapid tourism growth. Growth has been uneven, with Dublin experiencing the fastest rate of growth. Within the Western Region, growth rates, both in terms of volume and value, have also varied considerably.

County Galway is the region's tourism capital, capturing almost half the bed nights for the entire region. Accommodation clusters hug the coast. There are no major (250+ rooms) concentrations of accommodation away from the coast. Almost two thirds of visits to fee paying attractions occur in counties Galway and Clare.

The vast majority of visitors to Ireland enter on the east coast. Improving speedy access to the Western Region is critical to developing the sector.

The revenue generated by tourism to rural areas is currently estimated to contribute £205m to the Western Region. This is less than one-third of total revenues to Dublin.

There is potential for tourism to make an increased economic contribution to the West's rural areas but this requires the creation of a driving force for change which can give a clear strategic direction and deliver integration of support to deliver it. There are both benefits and costs associated with rural tourism development and developing a sustainable approach is critical.

Infrastructure development must underpin tourism development in the regions and deliver improved access to the region.

Implementation of well financed, co-ordinated marketing strategy for the West of Ireland as a rural destination and the development of creative product packaging to meet customer needs is required.

There is a need to create capacity to co-ordinate and deliver a quality product and excellent customer care through appropriate support and the fostering of partnership between the various tourism interests.

The WDC in its publication *Blueprint for Tourism Development in the West* has already outlined a zonal approach to tourism development in the Region. The strategy addresses the infrastructure requirements for tourism development in the region as well as the need to achieve a more co-ordinated approach to developing, marketing and managing the tourism potential of the Western Region. A particular feature of the strategy is that it focuses on enabling local communities and the private sector to develop tourism projects which cover a larger local area and which have greater economies of scale.

A Steering Group under the leadership of Bord Fáilte is already in the process of implementing the strategy.

Executive Summary
Part II
Transport, Energy and Telecommunications Infrastructure

Road Access
The key road routes to the Western Region are shown on Figure 9.1
These are

- East-west access routes N2, N3, N4, N5, N6, N7, N26 and N60
- North-south corridors N13, N15, N17/18, N19 and N61 which include access to Knock, Shannon and Derry airports
- The coastal/tourist route from Clare to Inishowen
- Key regional link roads N16, N56, N58, N59, N63, N83, N84 and N85.

Given the peripherality of the Western Region and the significance of road infrastructure in achieving balanced regional development, it is essential to substantially improve the links between the Western Region and the rest of Ireland and within the region in order to

- Facilitate existing and future economic activity
- Ensure speedy and efficient access to the airports
- Improve access to and between towns in the region
- Improve the coastal routes to support tourism and marine development.

While the N4, N6, N7, N15, and N17/18 are designated as major inter-urban routes and earmarked for significant investment in the NDP, other major **primary road routes** into and through the region, notably the N2 and N5, are in need of major upgrading. Businesses in the region are constantly pointing out to the WDC the cost to them of the inadequate road quality, especially the N5 that is the main primary route to the east coast for counties Mayo and Roscommon. There is ample evidence from them and from the development agencies that poor road quality is a major deterrent to investment in the region.

Given the importance of the N60 as an access road to and through Roscommon and Mayo and the function of the N61 as a **link** between Sligo and Athlone, there is a case for investing in significant improvements to bring them up to a standard comparable to primary routes.

The **coastal roads** are vitally important for the tourism and marine sectors in the region and for local access for coastal communities. The coastal route should be maintained to a standard to ensure safe and adequate levels of service for probable increasing volumes of tourism and local traffic.

Regional roads are important arteries between primary routes and in providing access to smaller towns in the region and facilitating local linkages. They are also important in helping economic hubs to develop within the region and must be upgraded and maintained to an adequate standard.

The WDC is conscious of the fact that road development is both an inter and intra regional issue. While key roads in the region are in need of urgent attention as outlined above, it is necessary to adopt a strategic approach to developing road infrastructure as detailed in Key Recommendation 1.

Air Access

Air access is very important for both tourism and business interests in the Western Region. Because they are spatially well located with international runway facilities, there is a need to prioritise Shannon and Knock airports for international access. This means that they must be enabled to compete for commercial and tourism business.

There is strong evidence of additional unserviced demand for a year-round Knock/London service, particularly among the business community who believe they are disadvantaged by their location in the region.

Additional demand can only be fully capitalised on when access to airports is improved through upgrading the road network, particularly the N17/N18 to Shannon and Knock.

The regional airports are at a disadvantage compared to the Aer Rianta managed airports (Dublin, Cork and Shannon), where landing fees and rates are much lower.

Rail Access

Rail transport can be an alternative to the road network, only if it is a quality service which is safe, reliable and efficient. The quality of the rolling stock is a serious issue for the Western routes. However, new carriages for routes into the Western Region will not be available until the rolling stock on the Dublin/Cork/Belfast routes has been upgraded.

Until the *OnTrack 2000* investment programme is completed, capacity constraints in terms of rolling stock and access to stations in Dublin are impeding the upgrading of existing services and the introduction of additional quality services. There should be consideration of new timetabling, particularly in relation to early and late express services between major centres.

The development of a Western Rail Corridor (Sligo-Limerick) has the potential to provide significant freight and passenger transport and facilitate tourism in the region. Serious investigation of the feasibility of a Western Rail Corridor should be undertaken. The Western Rail Corridor could also be linked to the development of commuter routes between centres in the region.

Energy Infrastructure

The Western Region has significant energy infrastructure problems. Electricity infrastructure is hampered by both generation and transmission weaknesses. Loss of a major generator during the winter peak would give rise to severe difficulty in maintaining voltage levels, in parts of the region (i.e. the West and North-West).

While there is a relatively sparse 220kV network in the south and east of Ireland, there is no 220kV transmission at all west or north of a line from Galway to Carrick on Shannon. The Western Region is served only by long 110kV lines, which in the case of a number of western 110kV stations are not meshed. This means that even one line outage can have a severe impact on system performance (see Figures 11.1, 11.2).

The electricity transmission system in the Western Region is, therefore, neither reliable nor robust and there are large parts of the region experiencing low voltage, low capacity and the threat of voltage collapse. There is considerable risk of unplanned outages due to the weaknesses in the transmission system. This has immense implications for investment in the region and effectively precludes much of the region from attracting industries that are particularly reliant on quality power supply.

Currently all of the potential customers for Corrib gas are located in the east and south regions. The Western Region has no existing natural gas infrastructure and, until the discovery of the Corrib field, had no real prospect of a generally available gas supply to population centres in the region.

The primary focus of both gas and electricity infrastructure development in Ireland is to serve the majority of the population as quickly as possible i.e. the Dublin region and other major centres of population. Expansion of the infrastructure to the rest of the population takes place at a pace controlled by the provider not by Government policy or infrastructure requirements. A free market situation associated with deregulation will exacerbate the Western Region's weak position, as profit-driven investors concentrate on areas of greatest demand.

Perception of the relative remoteness of the Western Region reduces the emphasis on providing an adequate infrastructure. This is best understood by the lack of urgency in providing an electricity infrastructure that is robust and has sufficient spare capacity to allow the West to compete with, for example, urban centres in the east of the country for ICT/e-commerce investments. Without adequate infrastructure, the Western Region cannot compete for mobile investment and the growth potential of existing businesses may be hampered.

Actions Necessary to Address the Power Deficit in the Western Region

The provision of adequate energy infrastructure to drive development in the region requires government action and commitment. Only Government intervention can accelerate the extension of the gas grid to major centres in the Western Region. In this context, the announcement that the pipeline will be extended to the North-West is significant and an acknowledgement of 'market failure' in the region.

To increase the electricity generation capacity in the region, the construction of one or more smaller power plants in the Western Region, by the private sector, using Corrib gas is recommended. The use of 'smaller' output stations (100MW) will put less strain on the distribution system. The impact of the outage of such a station would be less damaging than the loss of an 'optimal' 400MW station. These power stations could be located at any location where the pipeline offtakes are adjacent to the national power grid.

There may be a case for a partnership-type arrangement between the ESB/Eirgrid and a gas producer (such as a Corrib partner) to build such a power station in the Western Region. This would also provide a balance between grid/infrastructure investment and power station investment. At least two locations should be studied – Galway and Bellacorrick: Galway because it is a population centre, and Bellacorrick because there

is an existing power station and an overhead cable infrastructure which could minimise planning disruption.

It is necessary to actively promote the construction of CHP plants particularly, as they are more efficient and environmentally friendly, regardless of the fuel they burn. This should include the lifting of regulatory restrictions that currently impede development of CHP.
In situations of 'market failure', ways of encouraging private sector investment in energy infrastructure through state support (as in the case of telecommunications) or by fiscal measures should be instituted.
The routing and construction of the Ballina/Sligo gas pipeline should be linked to facilitate future links to Donegal and Northern Ireland. The routes of the Galway and Sligo gas pipelines should allow maximum feasible access to gas by towns in the region and by Knock airport in particular.

Telecommunications
Ireland has very good international connectivity, but internally provision and competition is very uneven and mainly confined to the larger centres. International access from the Western Region (essentially transmission to and from Dublin) incurs additional cost to the user. This extra connection cost, as well as the poorer quality of this service, acts as a deterrent to businesses locating outside of Dublin. It also adds to the cost base of businesses currently located in the region.

Backbone infrastructure in the Western Region is considerably weaker than in the East and South, both in terms of capacity and choice of provider. This means that the Western Region cannot compete for mobile investment.

Broadband access is underdeveloped. The delays in Unbundling of the Local Loop (ULL - ending of the Eircom monopoly) mean that there is, as yet, little competition for SME and residential users. In addition, the planned roll-out of technologies is seriously delayed.

There is no 'dark fibre' available anywhere in the Western Region. Dark fibre is designed to be managed by a purchaser rather than the carrier/owner. The availability of dark fibre would allow other carriers to enter the market more easily and offer additional services, as well as stimulating competition.

The Digital Subscriber Line (DSL or xDSL) suite of technologies is recognised as one way of dealing with access to the fibre backbone. This technology is well established in the US. However, the planned DSL development has been cancelled, as both Eircom and Esat have pulled out from state-sponsored rollout plans.

Another appropriate technology for more remote areas is Wireless Local Loop (WLL). Again the planned development of WLL has been restricted due to the closure of Formus.

NTL who had announced plans to provide advanced digital, interactive TV services nationwide, have now decided to confine rollout of new services to areas where there is high demand (essentially large urban centres).

As the deregulation process is evolving, rollout is proceeding in areas with high-density business and residential usage. It is the free market that is largely determining supply and provision. If free market principles continue to determine rollout, then much of the Western Region will have extremely limited provision and capacity. This will hamper the efforts at enticing new investment into the region as well as limiting the development of existing businesses there.

Eircom may continue to be a monopolistic provider in the Western Region, so that consumers have no choice of service or price. This will postpone private investment, which could prove detrimental to the region's ability to participate in e-commerce, further widening the digital divide.

Executive Summary

Part III

Developing the Western Region – Key Priorities

The success of any development strategy for the Western Region, is fundamentally hampered by its infrastructure deficit. Put simply, this centres on the state of road, rail and air infrastructure and on the availability of power and telecommunications capacity to underpin and sustain a modern competitive economy.

The Western Development Commission Act 1998 specifically requires the WDC

> *to promote, foster and encourage the provision and maintenance and, if appropriate, the enlargement of and procure the provision of assistance for, such infrastructure projects, both local and regional, as it considers necessary or expedient for the purposes of economic and social development in the Western Region* (WDC Act 1998, Part II s.8d).

The report concludes by addressing two of the most pressing issues for regional development by proposing strategies that will:

- tackle the Western Region's transport, power and telecommunications (trans/powercom) infrastructure deficit – this largely involves actions where it is appropriate for the WDC to act as a catalyst and facilitator; and
- revitalise the Western Region's economy through supporting investment – a set of actions where it is appropriate for the WDC to play a proactive role.

Specifically, the WDC makes three key recommendations in relation to **Access, Power and Telecommunications, and Investment in the Region.** These are set on the following pages.

Key Recommendation 1 – Reaching the Western Region

Given the critical importance of road infrastructure for the development of the Western Region, and in the light of the issues highlighted in this report, the WDC believes that there is a need for a strong strategic response to the provision of road infrastructure.

Accordingly we recommend the establishment of a **Western Region Roads Infrastructure Consultative Group** chaired by a senior official in the National Road Authority and comprising officials of the National Roads Authority, Department of Environment and Local Government, Forfás, Western Development Commission and local authorities.

This Group should

1. Review the current level of investment in road infrastructure in the seven counties in the light of the issues raised in this report, and the urgent need to improve access to and through the Western Region.
2. Examine the level of planned investment in the Region and identify where and how much additional investment is required.
3. Identify key priorities based on a clear development rationale, rather than only on existing traffic flows.
4. In view of the critical importance of cross-border routes for the north-west of the region, identify a structured approach to cross-border co-operation in relation to road development.
5. Decide whether a more permanent steering committee with a similar composition should be established in order to bring about a more strategic and structured approach to road infrastructure development in the region and foster co-operation between local authorities.

This Group should be set up by September 2001 and report its findings together with a costed development schedule by February 2002, with an interim report for consultation in December 2001 .

Key Recommendation 2 – Powering And Connecting The Western Region

Notwithstanding the limits of the market and of the state's responsibility in ensuring access to power and telecom facilities for all regions, the deterioration in infrastructure provision and the worsening situation in the context of deregulation, a new approach is needed.

Accordingly, the WDC recommends the establishment of a **High Level Strategic Working Group on Power and Telecommunications in the Western Region.** The Working Group should be chaired by a senior official in the Department of Public Enterprise (Assistant Secretary Level) and should comprise relevant officials from DPE, Department of Marine and Natural Resources, Department of Enterprise, Trade and Employment and the relevant statutory bodies.

The Group should

- Develop an appropriate strategy for the rollout of power and telecommunications infrastructure ('powercoms') in the Western Region. This should include commissioning a gap analysis to provide a comprehensive picture of the outstanding weaknesses in 'powercoms' in the Western Region. Údarás na Galetachta has already undertaken a similar study of telecom infrastructure for the Gaeltacht areas. The gap analysis should include consideration of the recommendations regarding power generation and transmission outlined above. It should also identify strategies to maximise the rollout of fibre, cable and other telecom technologies in the region.
- Ensure co-ordination and co-operation in relation to digging and ducting between relevant infrastructure operators/providers.
- Develop specific proposals on how best to deploy the NDP funding for telecoms. These might include specific proposals for a 'carriers carrier' approach to the provision of basic fibre infrastructure in association with local authorities.
- Give consideration to ways of accelerating the competitive process such as enticements to operators to extend rollout beyond the commercially viable areas. De-regulation of the 'powercom' market is proving difficult with the telecom incumbent (Eircom) reluctant to share its network. This would help to speed up this process. Similar problems are emerging in the deregulation of electricity.
- Address the issue of price and tariff structures at regional level so that lower density areas are not disadvantaged by higher prices. 'Powercom' costs must be relatively inexpensive to encourage take-up in the residential and SME sectors and enhance competitiveness in the latter.
- Identify ways of overcoming the current segmented approach to 'powercoms' and transport infrastructure provision e.g. shared access routes and facilities, as well as the potential of public private partnerships in ICT[3] provision.

This Group should be set up by September 2001 and report its findings together with a costed development schedule by February 2002 with an interim report for consultation in December 2001 .

[3] Information and Communications Technology.

Key Recommendation 3 – Invest in the West

In addition, to the addressing the infrastructure deficit, it is necessary to implement an initiative to enable more towns to compete successfully for new mobile inward investment in the context of a region where both population centres and businesses are widely dispersed. It is intended that this initiative will add value to national strategies currently in place by the state development agencies by addressing the particular challenges in the Western Region

Towns over 5,000 Population.
These towns are already acting as foci for growth and as suggested in the WDC's *Blueprint for FDI in the West* should establish partnerships to maximise their attractiveness to investors. IDA, Enterprise Ireland and Shannon Development should develop a joint strategy to facilitate and promote investment into these towns.

They should also actively encourage and support the establishment of a Knowledge Centre for the North West Region based on collaboration between existing third level institutions on both sides of the border.

Locations less than 5,000 Population.
It is proposed that the WDC's Western Investment Fund should be augmented to spearhead a three-year investment programme, which will be used to support plans by local town partnerships to attract employers to locate in their area. Locations will be invited to apply for investment support and the most feasible locations will be assisted. It is envisaged that investment plans for towns would contain measures to provide business facilities such as sites, accommodation, and initiatives to improve the attractiveness of towns, including measures to provide social and cultural facilities. The WDC investment would be used to lever additional support from national and local bodies, and add value to the work of other agencies, so that the maximum level of resources are channeled into effective and viable plans to create and attract investment and jobs into local areas.

For areas with less than a population of 1,000, support would, in general, be aimed at putting in place critical services which will ensure an attractive environment for working and living.

In addition to these key recommendations, the WDC sets out other proposals across a range of sectors. These are outlined in detail in Chapter 13.

Conclusion
The conclusion to be drawn from state of the West is that the scale of the infrastructure and investment deficit in the Western Region is unacceptably high, and that the specific measures currently flowing from the National Development Plan are insufficient to redress that deficit. The reasons for the deficit come, not only from a lack of expenditure, but from a failure to sufficiently address the broader regional implications of the current regulatory, legislative and national planning framework. This failure at central government level is a major cause of the persistent disadvantage the Western Region.

As a first step, ownership for resolving these deep-seated problems needs to be vested with the appropriate government departments in a way that involves them in taking a more regionally centred approach to infrastructure policy planning. To facilitate this, the WDC has proposed the establishment of a Western Regional Road Infrastructure Group and, in regard to power and telecommunications, a High Level Strategic Working Group. We have suggested that each of these should report their final proposals by February 2002, with in an interim report for consultation in December 2001.

Such levels of responsibility, ownership and action at central level can then be complemented by a initiatives at regional level where private, public and voluntary sectors work together in more effective partnerships to make more parts of the region investment ready, and key sectors more globally competitive. Private sector investment in the region cannot be expected to flourish in the absence of a significant, tangible and immediate commitment by government to provide the infrastructure conditions to underpin such investment.

Hence, regional partnership and central commitment are the two driving forces for successful development of the Western Region.

List of Tables and Figures

Part I

PART I

Recent Trends in Population, Employment and Key Productive Sectors

1. INTRODUCTION

1.1 Background and Context

The Western Development Commission (WDC) has responsibility for promoting and fostering economic and social development in the seven western counties of Donegal, Sligo, Leitrim, Roscommon, Mayo, Galway and Clare.

In 1999 the WDC published a Strategic Action Plan *Blueprint for Success: A Development Plan for the West 2000-2006*. This contained a wide range of new information on the socio-economic performance of the Western Region[1]. The analysis in the report represented an independent evaluation of the economic and social performance of the region and demonstrated clearly that it has lagged behind the more developed parts of Ireland. It was concluded that, unless there is an acceleration in relative economic performance of the seven western counties, the position of the Western Region will worsen.

Blueprint for Success set out an integrated strategy for the region that provided the basis for a radical improvement in economic performance. The core of this combined a rigorous prioritisation of investment decisions and a strategy to widen the distribution of economic growth. As the first comprehensive study of the Western Region, it also provided a benchmark for evaluating progress.

Some two years later, this *State of the West* report provides an update of socio-economic conditions in the Western Region, which comprises 37 per cent of the landmass of the state[2]. Specifically, this study has three objectives:

1. To determine, in as far as is possible, by updating the data on key indicators of progress, how the Western Region has fared in the two years since the *Blueprint* report.
2. To determine the extent to which the key priorities and targets set out are being addressed and to assess future prospects for the region.
3. To expand and refine aspects of the original analysis and examine areas that have emerged as important in the intervening two years.

The National Development Plan 2000-2006 (NDP), incorporated much of the broad strategic thrust of the *Blueprint* report and the latter's input to the development of a regional development strategy was acknowledged in the NDP. Fostering balanced regional development is a fundamental objective of the Plan, and this is given effect in commitments to infrastructural investment, to spreading the benefits of growth to smaller urban and rural areas, and in the BMW Operational Programme which supports local infrastructural development, the productive sectors and the promotion of social inclusion.

A key commitment of the National Development Plan is the preparation of a National Spatial Strategy (NSS), part of which will be to identify regional gateways to drive development and provide a framework for spatial planning over the next two decades. The NSS is currently in preparation and is due to be completed at the end of this year. Both the NDP and the NSS, therefore, provide the broad context for the analysis in this report.

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[1] The term Western Region is used to delineate the seven western counties within the remit of the Western Development Commission.

[2] The terms 'state' and 'Ireland' throughout this report refer to the twenty-six counties.

1.2 Methodology and Data Sources

This report draws on various national and county data sources. As with the earlier report, the latest data available are analysed. Several data sources have been used, primarily the 1991 and 1996 Censuses and the Central Statistics Office (CSO) Quarterly National Household Surveys (QNHS) conducted in 1998 and 2000. The CSO wish us to point out that these latter data for the Western Region are indicative only. The QNHS are survey rather than census based data and results for the WDC are compiled from an amalgamation of counties rather than the NUTS 3[3] regions on which CSO calculations and analysis are based.

Other data used in the preparation of this report were sourced from relevant government departments, state agencies and research reports.

It is important to note that all data sources are not necessarily comparable with each other. Both CSO publications, the QNHS and the Census of Industrial Production are based on NACE Rev. 1 Classification[4]. The QNHS covers the entire range of economic sectors while the Census of Industrial Production is confined to the Manufacturing sectors. The Forfás/IDA data broadly conform to NACE Rev.1; however, these are not directly comparable with the CSO data when examining financial and internationally traded services as some industries are classified differently. The Revenue data conform to a different NACE classification. All the data sources used are internally consistent, but data sets may not always be easily compared with each other as they may be measuring different phenomena.

The focus of the data analysis in the report is on trends in recent years in the Western Region and on national and regional comparisons. Throughout, where appropriate, conditions in the Western Region are compared with Ireland generally and with the BMW[5] and Eastern & Southern regions (NUTS 2). In cases where no data is available for the Western Region specifically, the NUTS 2 and 3 regions are used.

1.3 Structure of Report

This report is set out in two parts. In Part I, recent trends in population, employment and the key productive sectors are explored. Trends in the Western Region over recent years are presented and are compared with other regions. In the first four chapters, population trends, labour force and employment patterns, and the 'brain drain' from the region are analysed. Chapters 5-8 are focused on the productive sectors. Recent performance and potential in industrial production, in state assisted employment and in the agriculture, forestry, marine and tourism sectors are examined.

It is evident from Part I that good quality infrastructure is crucial to underpin the development of the Western Region. In Part II, Chapters 9-12, current infrastructure provision in key sectors of transport, energy and telecommunications is assessed,

[3] NUTS regions refers to Nomenclature of Territorial Units which is the classification used by Eurostat. The NUTS3 regions correspond to the eight Regional Authorities that came into operation on 1 January 1994. The NUTS2 regions are groupings of the NUTS3 regions into Border, Midlands and West and Eastern and Southern.

[4] NACE Rev.1 is the statistical classification of economic activities in the European Communities.

[5] Of the seven counties in the Western Region, six (Donegal, Sligo, Leitrim, Roscommon, Mayo and Galway) are in the NUTS2 BMW region. Clare is classified within the NUTS2 Eastern and Southern Region. Table 1A in the appendix illustrates these classifications.

particularly in the light of the impact of deregulation. In a final chapter entitled Developing the Western Region – Challenges and Priorities, the WDC's sets out recommendations and strategies necessary to address the development issues for the Western Region that emerge from the analysis.

2. THE HUMAN RESOURCE

2.1 Population Trends

The population of the Western Region increased during the 1990s (Table 2.1). By 2000, the population of the seven western counties was estimated at 675,600 while for the state as a whole the population had grown to 3.79 million. In the first half of the decade, population increased by 2.4 per cent – a little less than the state as a whole, which grew by 2.8 per cent. (Within the Western Region there were considerable disparities – Galway City increased its population by 12.6 per cent in the same period, Roscommon remained stable, while Leitrim had a population decline of one per cent.) In the period 1996-2000, population growth accelerated nationally, growing by 4.4 per cent, while estimated growth in the Western Region was lower at 2.8 per cent.

Over the nine years then, the population of the region increased by 5.2 per cent.

Table 2.1 Population of the Western Region and Ireland 1991, 1996, 2000

Region	1991	1996	2000
Western Region	642,066	657,231	675,600
Ireland	3,525,719	3,626,087	3,786,900

Source: CSO, Census 1991, 1996. QNHS 2000. Figures for 2000 are estimates only.[6]

Table 2.2 Population by Age and Region 1996, 2000

	1996		2000	
Age	Western Region %	State %	Western Region %	State %
14 years and under	24.3	23.7	21.9	21.8
15-65 years	62.0	64.9	65.0	67.0
65 and over	13.7	11.4	13.1	11.2

Source: CSO, Census 1996. QNHS 2000. Figures for 2000 are estimates only.

The population of working age is increasing relative to that in the dependent age groups (Table 2.2). In 2000, 65 per cent of the population in the Western Region was of working age – up three per cent on 1996.

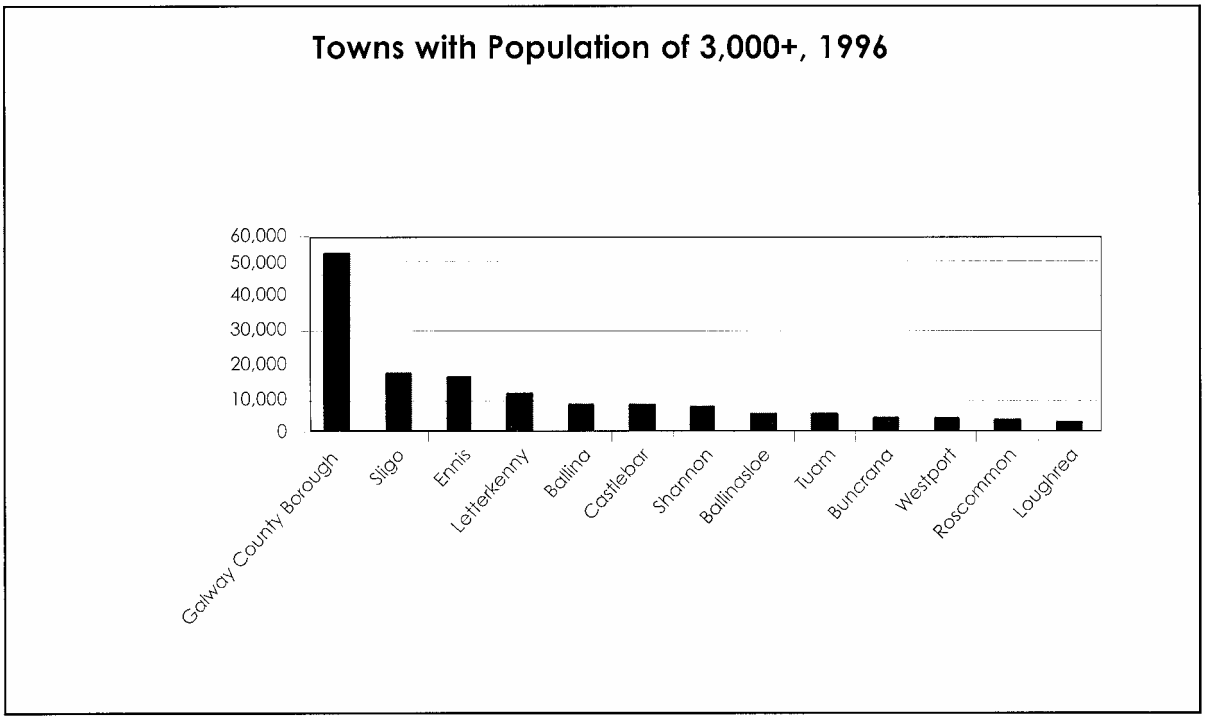
In summary, by the turn of the century the Western Region had a larger, younger population than it had at the start of the 1990s.

2.2 The Growth of Towns

Figure 2.1 illustrates towns in the Western Region that had populations in excess of 3,000 in 1996. Only four of these towns had a population greater than 10,000. Nine towns had populations over 5,000 (from Tuam through to Galway). It is worth noting that research elsewhere on the factors associated with enterprise location shows a tendency for grant-aided enterprises to favour towns with populations of 5,000 persons and upwards.[7]

[6] The 2000 estimates are taken from the QNHS Qtr 2, 2000, Special Runs.
[7] See Commins, 2000; Commins and McDonagh, 2000.

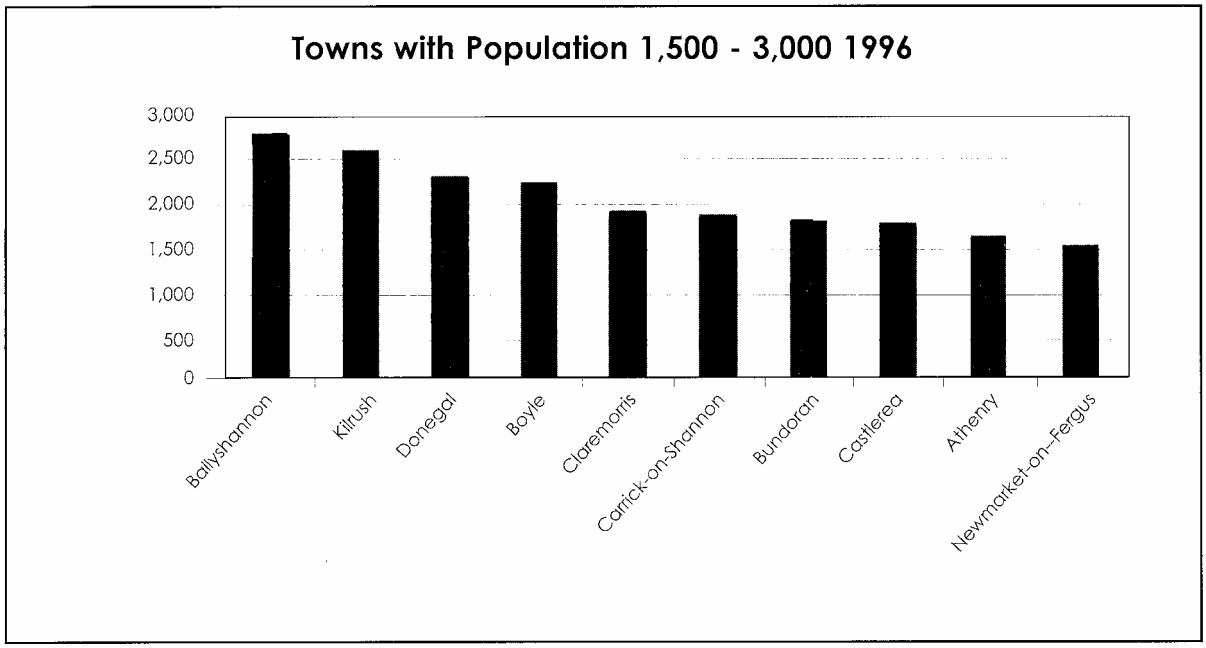
Figure 2.1



Source: Census of Population 1996.
Note: Town populations include suburbs or environs.

Figure 2.2 below illustrates those towns in the Western Region that had populations of between 1,500 and 3,000 persons in 1996.

Figure 2.2



Source: Census of Population 1996.
Note: Town populations include suburbs or environs.

Table 2.3 illustrates the population change for towns located in the Western Region between 1991 and 1996.

Table 2.3 Population Change: Towns in the Western Region 1991-1996

Towns	1991	1996	% change
Galway	50,853	57,363	+12.8
Sligo	17,964	18,509	+3.0
Ennis	16,058	17,726	+10.4
Letterkenny	10,726	11,996	+11.8
Ballina	8,167	8,762	+7.3
Shannon	7,920	7,939	+0.2
Castlebar	7,648	8,532	+11.6
Ballinasloe	5,892	5,723	-2.9
Tuam	5,540	5,627	+1.6
Buncrana	4,388	4,805	+9.5
Westport	3,688	4,520	+22.6
Roscommon	3,427	3,915	+14.2
Loughrea	3,271	3,335	+2.0
Ballybofey-Stranorlar	2,972	3,047	+2.5
Ballyshannon	2,838	2,775	-2.2
Kilrush	2,740	2,594	-5.3
Boyle	2,197	2,222	+1.1
Donegal	2,193	2,296	+4.7
Claremorris	1,907	1,914	+0.4
Carrick-on-Shannon	1,858	1,868	+0.5
Castlerea	1,822	1,790	-1.8
Athenry	1,612	1,614	+0.1
Newmarket-on-Fergus	1,583	1,542	-2.6
Carndonagh	1,541	1,580	+2.5
Killybegs	1,522	1,408	-7.5
Bundoran	1,463	1,796	+22.8
Bunbeg-Derrybeg	1,427	1,400	-1.9
Moville	1,392	1,394	+0.1
Lifford	1,359	1,275	-6.2
Kilkee	1,315	1,331	+1.2
Ballyhaunis	1,282	1,287	+0.4
Ballaghaderreen	1,270	1,248	-1.7
Ballinrobe	1,229	1,309	+6.5
Swinford	1,216	1,386	+14.0
Crossmolina	1,202	1,103	-8.2
Oranmore	1,192	1,410	+18.3
Sixmilebridge	1,191	1,144	-3.9
Gort	1,093	1,182	+8.1
Raphoe	1,090	1,065	-2.3
Tobercurry	1,069	1,089	+1.9
Portumna	1,017	984	-3.2
Ballymote	1,014	994	-2.0

Source: CSO, Census 1996.

Of these forty two towns, two thirds experienced population growth 1991-96. However, growth is occurring mainly in larger towns. More than 40 per cent of Western towns with populations of between 1,500 and 3,000 experienced population loss between 1991 and 1996. This is in line with national trends[8].

Detailed examination of population growth patterns must await the results of the 2002 Census. One way of making a crude assessment of population growth is to examine recent trends in planning applications (Tables 2.4 and 2.5).

Table 2.4 Planning Applications by Local Authority 1995–1999

County	1995	1996	1997	1998	1999	% Change '95-97	% Change '97-99
Donegal	2,222	2,520	2,831	3,652	5,520	27.4	95.0
Sligo	882	942	946	1,172	1,309	7.3	38.4
Leitrim	402	427	575	729	922	43.0	60.3
Roscommon	824	885	986	1,258	1,479	19.7	50.0
Mayo	1,981	2,409	2,679	3,377	3,618	35.2	35.1
Galway Co. Co.	2,615	3,160	3,833	4,886	5,588	46.6	45.8
Galway Corp.	761	851	855	912	864	12.4	1.1
Clare	1,483	1,831	1,957	2,342	2,842	32.0	45.2
Western Region	**11,170**	**13,025**	**14,662**	**18,328**	**22,142**	**31.3**	**51.0**
State	45,261	50,732	55,929	67,075	80,261	23.6	43.5

Source: Department of the Environment, The Planning Statistics 1999.

Table 2.5 Planning Applications by Local Authority and Class of Development 1993, 1996, 1999

	1993		1996		1999	
County	Dwellings	Commercial	Dwellings	Commercial	Dwellings	Commercial
Donegal	1,115	258	1,599	304	4,276	427
Sligo	395	93	445	122	751	78
Leitrim	180	64	265	71	629	72
Roscommon	279	109	486	119	967	116
Mayo	877	247	1,335	314	2,948	277
Galway Co. Co.	1,286	287	1,819	439	4,249	421
Galway Corp.	231	161	258	193	297	237
Clare	680	216	1,006	232	1,813	231
Western Region	**5,043**	**1,435**	**7,213**	**1,794**	**15,930**	**1,859**
State	-	-	-	-	46,804	9,021

Source: Department of the Environment, The Planning Statistics 1999. The definition of commercial development includes class 5 and class 10 as defined by the Department of the Environment.

These tables indicate that the number of planning applications in the Western Region increased very substantially during the 1990s – at a rate higher than the state average. With the exception of Galway City and county, this process accelerated substantially over the two years 1997-99. As is evident from Table 2.5, the bulk of these applications are for domestic dwellings and the greatest increase has occurred among this category – applications for domestic dwellings in the Western Region more than trebled between 1993 and 1999.

[8] See Walsh (1996).

Recent planning permissions data from the CSO revealed that previous statistics on planning permissions granted had understated the level of activity. These data are set out in Table 2.6 and provide a more comprehensive picture of the number and type of developments that have been granted planning permission.

Table 2.6 Planning Permissions Granted by Local Authority 1999, Q1, Q2 & Q3 2000

	1999			2000 Q1, Q2, Q3		
County	**New Houses**	**New Apartments**	**Total**	**New Houses**	**New Apartments**	**Total**
Donegal	3,397	109	3,506	3,392	133	3,525
Sligo	786	77	863	1,046	84	1,130
Leitrim	647	109	756	696	143	839
Roscommon	957	34	991	1,023	42	1,065
Mayo	2,756	231	2,987	2,510	138	2,648
Galway Co. Co.	3,498	217	3,715	2,277	112	2,389
Galway Corp.	1,322	771	2,093	841	787	1,628
Clare	2,367	216	2,583	2,079	104	2,183
Western Region	**15,730**	**1,764**	**17,494**	**13,864**	**1,543**	**15,407**
State	63,795	12,801	76,596	55,520	13,275	68,795

Source: CSO, Planning Permissions, Dwelling Units 1st quarter 1999, 3rd quarter 2000, June 2001.
Note: These data are revised based on an exercise undertaken by the CSO which found that previous data had understated the level of activity. The table illustrates the numbers of planning permissions granted in respect of new dwellings. The reason why permissions granted (Table 2.6) may outnumber applications (Table 2.5) is that permissions may apply to applications made in previous years also.

In 1999 the number of new dwelling units for which planning permission was granted in the Western Region was 17,494 representing 22.8 per cent of permissions in the state. The figures for the 1st, 2nd and 3rd quarters of 2000 show an increased level of permissions granted (15,407 new units) in the Western Region and 68,795 for the state as a whole. In the first nine months of 2000 the number of units granted planning permission in the Western Region represented 22.4 per cent of the total. These data confirm the trend of population growth. They also undoubtedly reflect the impact of tax incentives for the construction and refurbishment of residential accommodation in the Upper Shannon area.

According to the latest Annual Housing Statistics Bulletin 2000, housing completions rose in all counties in the Western Region over the period 1996 to 2000. During this period, housing completions in the Western Region as a whole increased by 66.7 per cent. This compares with an increase of 47.7 per cent for the state over the same period. Counties Leitrim and Mayo had increases far higher than the state average, at 197.7 per cent and 103.9 per cent respectively.

Table 2.7 Total Housing Completions by County and Region 1996–2000

County/Region	1996	1997	1998	1999	2000	% Change '96-'00
Donegal	1,548	1,507	1,883	2,393	2,545	64.4
Sligo	563	666	903	865	708	25.8
Leitrim	221	265	295	396	658	197.7
Roscommon	332	292	305	406	411	23.8
Mayo	1,097	1,431	1,527	1,797	2,237	103.9
Galway Co. Co.	1,093	1,295	1,849	2,113	2,117	93.7
Galway Corp.	1,047	1,223	1,026	875	1,116	6.6
Clare	966	1,435	1,221	1,487	1,652	71.0
Western Region	**6,867**	**8,114**	**9,009**	**10,332**	**11,444**	**66.7**
BMW	9,298	10,607	12,368	14,140	16,055	72.7
Eastern & Southern	24,027	27,835	29,581	31,972	33,357	38.8
State	33,725	38,842	42,349	46,512	49,812	47.7

Source: Department of the Environment, Housing Statistics Bulletin 2000.
Notes: Total Housing Completions include both social housing and private housing figures.
The figures for the BMW and Eastern & Southern Regions do not sum to the state total as there are unassigned conversions included.

2.3 Looking to the Future

Regional population projections from the CSO[9] indicate a likely increase of 940,500[10] (or 25.9 per cent) in the population of the state between 1996 and 2031. The CSO make the point that the regional distributions of forecasted population, take no account of future public policy initiatives such as the National Spatial Strategy. On this basis it is projected that over four-fifths of the total increase (750,000) will take place in the Dublin and Mid-East regions, leaving the remainder (188,100) distributed throughout the rest of the country. All regions except the Midlands are predicted to experience population growth over the period. The Border region will experience an increase of 19,300 or 4.7 per cent to 2031. The West (Galway, Mayo, Roscommon) is forecasted to increase by 76,300 or 21.7 per cent. This compares to a predicted population growth of 56.0 per cent in the Dublin region and 49.7 per cent in the Mid-East. Regrettably, we do not have population projections for the Western Region, as such, but it is certain that growth will not necessarily be uniform across all counties and this presents a major development challenge.

[9] *Regional Population Projections*, 2001-2031, CSO, June 2001.
[10] This figure is based on the CSO's 'most likely scenario according to current trends' - M1F2.

Key Points

2.4 The Human Resource

- By the turn of the century, the Western Region had a larger, younger population than at the start of the 1990s. Between 1991 and 2000, the population increased by an estimated 5.2 per cent. We can only speculate as to the stimuli for this growth, or its components, but it can be linked to retention and in-migration of population due to employment growth and migration to the region for lifestyle, residential or retirement reasons.

- Population growth is associated particularly with the larger towns, but the region is predominantly rural, with only four towns with populations in excess of 10,000 and a further five with more than 5,000 in 1996.

- The number of planning applications in the Western Region increased substantially during the 1990s – at a rate higher than the state average. In five of the seven counties, this process accelerated substantially over the two years 1997-99. These data confirm the trend of population growth. They also undoubtedly reflect the impact of tax incentives for the construction and refurbishment of residential accommodation in the Upper Shannon area.

- Significant economic development in the region would undoubtedly have a major impact on stabilising the population in those parts still experiencing decline.

- If present trends continue, regional population forecasts indicate a further concentration of population in the Dublin and Mid-East Regions 2001-2031. Under the most likely scenario, four-fifths of the population increase of 940,000 will occur in the Dublin and Mid-East regions.

3. EMPLOYMENT TRENDS

3.1 The Labour Force

Table 3.1 illustrates recent trends in labour force participation rates.[11] For the period March – May 2000 the labour force participation rate for the state as a whole was 58.9 per cent. The east-west divide is still apparent however with higher participation rates (60 per cent) in the Eastern & Southern region than in the BMW region (55.9 per cent). Dublin and the Mid-East had the highest rates (62.7 per cent and 62.4 per cent respectively). The participation rate in the Western Region was close to the BMW average at 56.3 per cent.

Labour force participation rates in all regions have increased since 1998, on average by 2.4 per cent. Interestingly, participation rates in the Western Region have increased more than average. This could partly be explained by traditionally lower rates in the region and the associated greater potential for growth. The greatest increase has been in the West (counties Galway, Mayo, Roscommon) with an increase in labour force participation rates of 4.7 per cent over the two years. Most, if not all, of this increase can be accounted for by the huge growth in employment in Galway City and the associated immigration into the region.

Table 3.1 Labour Force Participation Rates by Region 1998-2000

Region	Mar-May 1998	Mar-May 1999	Mar-May 2000	Change 1998 - 2000
West	53.1	56.2	57.8	+4.7
Border	52.2	54.2	54.1	+1.9
Mid-West	55.8	56.9	58.7	+2.9
Midland	53.2	54.0	55.9	+2.7
Dublin	60.5	61.7	62.7	+2.2
Mid-East	60.3	61.7	62.4	+2.1
South-East	54.3	55.7	56.2	+1.9
South-West	54.5	55.1	56.5	+2.0
Western Region	**53.2**	**-**	**56.3**	**+3.1**
Eastern & Southern	57.8	59.0	60.0	+2.2
BMW	52.7	54.9	55.9	+3.2
State	56.5	57.9	58.9	+2.4

Source: CSO, QNHS. 1998 – 2000, Special Runs.

There are considerable differences between the sexes in relation to these trends (Table 3.2)

[11] The labour force comprises those in employment and those unemployed. The labour force participation rate is the number of employed and unemployed as a proportion of the relevant population aged 15 years and over. The ILO definition of economic status is used here since it involves more precision than the formerly used PES (Principal Economic Status) definition. It is assigned, rather than self-ascribed and takes account of hours worked, availability for work and search for work in the definition of employment, unemployment and the inactive population (those not in the labour force). The ILO definition was not used in the 1996 Census of Population.

Table 3.2 Labour Force Participation Rates by Region and Sex 1998-2000

	Males		Females		Persons	
	Western Region	State	Western Region	State	Western Region	State
Mar-May 1998	66.8	69.4	39.7	44.0	53.2	56.5
Mar-May 1999	-	70.2	-	46.0	-	57.9
Mar-May 2000	67.5	71.0	45.3	47.2	56.3	58.9
Change 1998-2000	+0.7	+1.6	+5.6	+3.2	+3.1	+2.4

Source: CSO, QNHS 1998 – 2000. This refers to ILO economic status.

In 2000 the male participation rate in the Western Region was lower than the state (3.5 per cent lower), while female participation was also lower but the differential is smaller (1.9 per cent). There have been dramatic increases in the female participation rate over just two years and this is continuing a trend that has been apparent since the 1980s. Between 1998 and 2000 the increase in the female rate nationally was twice that of males. However, in the Western Region, the female participation rate increased at a rate eight times greater than the male rate. Women in the Western Region are also catching up with women in other regions, with their participation rate in 2000 being estimated at less than two points below the national average.

3.2 Employment Distribution – How Did the Western Region Fare?

Employment growth in the Western Region, the NUTS3 regions and in Dublin and for the last two years is set out in Table 3.3.

Table 3.3 Persons Aged 15 years + in Employment[12] by Region 1998-2000

Region	Mar-May 1998	Mar-May 1999	Mar-May 2000	Change 1998-2000	% Change	% Share of Employment Growth
Western Region	**253,700**	**-**	**281,800**	**+28,100**	**11.0**	**15.9**
Eastern & Southern	1,131,500	1,201,100	1,260,900	+129,400	11.4	73.4
Dublin	482,600	511,200	533,800	+51,200	10.6	29.0
BMW	363,000	390,100	409,800	+46,800	12.9	26.5
State	1,494,500	1,591,100	1,670,700	+176,200	11.8	100.0

Source: CSO, QNHS.

There was an increase of 11.0 per cent in the numbers employed in the Western Region between 1998 and 2000, which is not much below the state average. However, given the Western Region's relative position, it needs better than average growth rates. Moreover, when we look at employment performance in detail, several features become evident.

Of total employment growth in the last two years, 73.4 per cent occurred in the Eastern & Southern region while just over a quarter of employment (26.5 per cent) occurred in the BMW region. The Western Region accounted for just 15.9 per cent of employment growth, amounting to 28,100 jobs.

[12] ILO Economic Status. The ILO definition of employment (as above) refers to those persons who worked in the week before the survey for one hour or more for payment or profit, including work on the family farm or business and all persons who had a job but were not at work because of illness, holidays etc. in the week.

More detailed examination of these data indicates that two-thirds of this increase in employment in the Western Region was among females (18,000 jobs in all) and just one-quarter of this was part-time. Much of the increase in female employment in the last two years has been in the financial and other business services (+3,600) and in education and health (+6,300). This is illustrated in appendix Table 3.3A[13].

The increase in male employment in the Western Region over the last two years amounted to 9,500 and was just half of the female increase. Over 70 per cent of the increase in male jobs was in the construction industry. While female employment increased in all economic sectors male employment declined in four - agriculture, other production industry, hotels and restaurants, and education and health. The distribution by occupation is illustrated in appendix Table 3.3B.

3.3 Sectoral Employment – High proportion in agriculture and industry, while new service sectors underrepresented

The Western Region has a sectoral profile somewhat different to the national average (Table 3.4). The share of employment in agriculture, forestry and fishing is almost twice the national average (14.2 per cent compared to 7.8 per cent). The proportion employed in construction is also higher than average, as is the case for the proportion employed in hotels and restaurants, education and health and other production industries. All other economic sectors have a smaller share employed in the Western Region compared to the national average. Financial and other business services are particularly under-represented with only a 7.7 per cent share compared to the state average of 12.6 per cent. Key changes in the last two years include falls in agriculture and other production industries and an increase in the proportion employed in construction.

Table 3.4 Distribution of Persons in Employment by NACE[14] Economic Sector Mar-May 1998, 2000

	State %		Western Region %	
NACE Economic Sector	**1998**	**2000**	**1998**	**2000**
Agriculture, forestry & fishing	9.0	7.8	16.2	14.2
Other production industries	20.2	18.5	20.9	18.7
Construction	8.4	9.9	9.9	11.6
Wholesale and retail trade	14.1	14.1	12.1	12.3
Hotels and restaurants	6.5	6.5	6.9	6.9
Transport, storage & communication	5.8	6.0	4.5	4.5
Financial & other business services	11.4	12.6	6.0	7.7
Public administration & defence	4.7	4.6	3.8	4.2
Education & health	13.8	14.0	14.2	14.7
Other	5.6	5.5	4.9	4.7
Total Employed (000s)	**1,494.5**	**1,670.7**	**253.7**	**281.8**

Source: CSO, QNHS 1998, 2000, Special runs. Totals may not actually sum to 100 due to rounding.

This sectoral mix is reflected in the **non-farm** occupational profile for the Western Region which is shown in Table 3.5.

[13] As noted already, these CSO data for the Western Region are indicative only.
[14] NACE refers to the General Industrial Classification of Economic Activities within the European Communities. This NACE classification used here and in subsequent tables refers to NACE Rev.1.

Table 3.5 Distribution of Persons in Non-Farm Employment (ILO) by Occupation 1998, 2000

	State %		Western Region %	
SOC[15] Occupations	**1998**	**2000**	**1998**	**2000**
Managers and administrators[16]	13.0	12.8	10.9	10.3
Professional	10.7	10.7	9.8	9.3
Associate professional & technical	8.7	8.9	8.7	8.8
Clerical and secretarial	13.4	13.1	10.7	11.6
Craft and related	14.4	14.4	16.2	16.6
Personal and protective service	10.2	10.7	10.8	11.3
Sales	8.4	8.8	8.0	7.9
Plant and machine operatives	11.6	11.5	14.4	13.6
Other	9.1	8.6	10.1	10.0
Total Employed (000s)	**1,365.4**	**1,545.3**	**214.8**	**243.9**

Source: CSO, QNHS 1998, 2000, Special runs.
Note: Percentage columns do not actually add to 100 due to rounding.

Comparing the Western Region's share of each occupational group with the national average, some differences are evident. For example, the proportion of those employed who are managers and administrators is considerably lower in the West whereas the proportion of craft-related and plant and machine operatives is higher than the national average. Other occupations that are relatively under-represented in the Western Region are the professional occupations, clerical and secretarial, and sales occupations.
The number in farm occupations is estimated in Table 3.6 below. The proportion of farmers in the Western Region is almost twice the national average but the number of farmers is declining at a faster rate.

Table 3.6 Distribution of Farmers in Employment 1998, 2000

	State %		Western Region %	
SOC Occupations	**1998**	**2000**	**1998**	**2000**
Farmers[17]	7.0	6.1	13.6	11.8
Total Employed (000s)	**105.3**	**102.4**	**34.7**	**33.3**

Source: CSO, QNHS 1998, 2000 Special runs.

3.4 New Entrants to the Labour Market

Data from the Revenue Commissioners allow us to examine what can broadly be described as new entrants to the labour market. The data are based on new RSI numbers issued to new workers. There are however some caveats with these data. Contrary to expectation, the numbers actually decrease as the years progress[18].Despite these qualifications, it is useful to look at the data in a comparative way insofar as they reveal trends in sectoral job distributions for the region.

[15] SOC refers to Standard Occupational Classification, which is based on the UK definition.
[16] This excludes farm owners and farm managers.
[17] Derived from the ILO category of Managers and Administrators.
[18] This is due to (1) the filtering out of resumed employment, the process becoming more efficient in the later years. Employments prior to 1997 are only included if they still exist, so the numbers for 1998, and to a lesser extent 1999, are overstated. (2) Incorporation of employments for 2000 are not yet complete and so there is some understatement for the 2000 data.

Table 3.7 New Entrants to Employment in Ireland by Sector 1998-2000

NACE Sector	1998 %	1999 %	2000 %
Agriculture, Forestry & Fishing	2.7	2.9	2.7
Energy & Water	0.3	0.1	0.1
Extraction Processing/Chemical Industry	2.1	1.4	1.4
Metal Manufacture/Engineering	7.2	4.7	5.0
Other Manufacturing Industries	7.0	6.0	5.7
Building & Civil Engineering	6.8	8.5	7.8
Distributive Trades, Hotels, Catering, Repairs	32.4	35.8	38.1
Transport & Communication	3.8	2.9	2.9
Banking, Finance, Insurance, renting	15.8	15.5	15.9
Other Services	21.9	21.8	19.9
Total New Entrants	**294,129**	**184,704**	**160,424**

Source: Revenue Commissioners 2000, Unpublished.

Firstly, looking at the data for the state in Table 3.7, the sectoral distribution changes little over three years. More than one third of new employments are concentrated within the distributive trades, hotels, catering and repairs. There is also a high proportion (15 per cent) concentrated in the banking, finance, insurance and renting sector.

Table 3.8 New Entrants to Employment in the Western Region by Sector 1998-2000

NACE Sector	1998 %	1999 %	2000 %
Agriculture, Forestry & Fishing	3.6	3.9	3.2
Energy & Water	0.3	0.1	0.1
Extraction Processing/Chemical Industry	2.7	1.7	1.8
Metal Manufacture/Engineering	9.6	6.6	6.0
Other Manufacturing Industries	8.2	7.3	7.0
Building & Civil Engineering	9.4	11.4	12.1
Distributive Trades, Hotels, Catering, Repairs	32.8	36.5	39.3
Transport & Communication	2.0	1.8	1.9
Banking, Finance, Insurance, renting	8.2	8.4	8.2
Other Services	23.2	22.2	20.4
Total New Entrants	**40,546**	**27,036**	**23,888**

Source: Revenue Commissioners 2000, Unpublished data.

Table 3.8 illustrates the sectoral distribution of new entrants to employment in the Western Region. Comparing the distribution in the state (Table 3.7) with that of the Western Region (Table 3.8), overall concentrations are similar. However, the share of employment in banking, finance, insurance and renting in the Western Region is half (8 per cent) that for the state as a whole (16 per cent). On the other hand, the proportion employed in the building and civil engineering sector in the Western Region is higher than for that in the state.

3.5 Unemployment

In 1998 there was little difference between the national and the Western Region ILO unemployment rate (numbers of unemployed as a proportion of the labour force). However, in 2000 the rate was higher in the Western Region than in the state, 5.2 per cent and 4.3 per cent respectively. The difference was higher for women where the respective rates were 5.8 and 4.2. Within the Western Region the female unemployment rate was also higher than the male rate, 5.8 per cent and 4.9 per cent respectively (Table 3.9)

Table 3.9 Unemployment Rates classified by Sex and Age Group, and Region 2000

	State %			Western Region %		
Age	**Persons**	**Male**	**Female**	**Persons**	**Male**	**Female**
15 - 19	10.0	9.8	10.3	13.6	9.5	19.3
20 - 24	4.9	4.4	5.5	7.1	5.3	9.0
25 - 34	4.1	4.4	3.7	4.8	4.7	5.0
35 - 44	4.0	4.3	3.6	4.5	5.1	3.6
45 - 54	4.0	4.2	3.5	5.2	5.6	4.7
55 - 59	2.9	2.9	2.8	2.9	3.1	2.4
60 - 64	1.9	2.1	1.6	1.1	1.0	1.3
65+	0.4	0.1	1.3	0.0	0.0	0.0
Total	**4.3**	**4.3**	**4.2**	**5.2**	**4.9**	**5.8**
Total Unemployment	74,900	44,900	30,000	15,600	8,600	7,000

Source: CSO, QNHS, Second Quarter 2000, Special runs. Note: ILO definition.

There is a general trend apparent for both the state and the Western Region where unemployment rates are higher the younger the age. For the 15-19 age cohort the rate is particularly high; 10 per cent for the state and 13.6 per cent in the Western Region.

Comparing the rate for the state and the Western Region, there are higher rates in the West for all age cohorts from 15 years through to 54 years. Generally, youth female unemployment is higher than that for males and this is even more pronounced in the Western Region where up to the age of 34 years the female unemployment rate is considerably higher than the male rate. For the older age-cohorts (35-60 years) the male rate is generally higher than the female rate.

The overall rates for the region mask considerable differences within it and this is evident from Table 3.10, where the live register figures for the Western Region at a detailed local level are presented. While this is not a measure of unemployment[19] these are the most detailed data available on those without full time employment in the Western Region.

[19] It includes those who work part-time (up to three days a week) and seasonal and casual workers entitled to unemployment assistance or unemployment benefit.

Table 3.10 Numbers on the Live Register by Area 1998-2000

County/Local Office	August 1998	August 1999	August 2000	% Change 1998-2000
Donegal	**12,565**	**12,224**	**10,622**	**-15.5**
Ballybofey	1,646	1,569	1,282	-22.1
Ballyshannon	743	701	545	-26.6
Buncrana	2,403	2,298	2,024	-15.8
Donegal	669	653	535	-20.0
Dunfanaghy	946	893	830	-12.3
Dungloe	1,757	1,743	1,549	-11.8
Killybegs	1,351	1,249	1,170	-13.4
Letterkenny	3,050	3,118	2,687	-11.9
Sligo	**3,432**	**3,134**	**2,716**	**-20.9**
Sligo	2,946	2,656	2,305	-21.8
Tubercurry	486	478	411	-15.4
Leitrim	**1,855**	**1,589**	**1,284**	**-30.8**
Carrick-on-Shannon	1,298	1,217	989	-23.8
Manorhamilton	557	372	295	-47.0
Roscommon	**2,045**	**2,046**	**1,719**	**-15.9**
Boyle	556	633	527	-5.2
Castlerea	1,089	1,027	840	-22.9
Roscommon	400	386	352	-12.0
Mayo	**8,765**	**7,825**	**6,673**	**-23.9**
Achill	477	384	296	-37.9
Ballina	2,823	2,430	2,003	-29.0
Ballinrobe	552	485	414	-25.0
Belmullet	1,125	1,047	997	-11.4
Castlebar	1,022	973	884	-13.5
Claremorris	694	631	546	-21.3
Swinford	1,069	1,034	907	-15.2
Westport	1,003	841	626	-37.6
Galway	**12,529**	**11,040**	**9,368**	**-25.2**
Ballinasloe	1,202	1,088	1,064	-11.5
Clifden	925	848	799	-13.6
Galway	7,356	6,461	5,221	-29.0
Gort	639	534	400	-37.4
Loughrea	956	804	687	-28.1
Tuam	1,451	1,305	1,197	-17.5
Clare	**4,336**	**3,661**	**3,096**	**-28.6**
Ennis	2,288	1,982	1,673	-26.9
Ennistymon	767	623	519	-32.3
Kilrush	819	699	605	-26.1
Tulla	462	357	299	-35.3
Western Region	**45,527**	**41,519**	**35,478**	**-22.1**
State	230,494	198,670	159,026	-31.0

Source: CSO, Live Register Area Analysis, 1998-2000.

Between 1998 and 2000 the numbers on the live register in the state declined by 31 per cent. The equivalent decrease for the Western Region was less at 22.1 per cent. Counties Donegal, Sligo and Roscommon had decreases of 15.5, 20.9 and 15.9 per cent respectively.

Key Points

3.6 Employment Trends

- There was an increase of 11 per cent in the numbers employed in the Western Region between 1998 and 2000, which is not much below the state average. However, after decades of out-migration, the Western Region is starting from a very low base and, given its relative position, it needs better than average growth rates.

- The Western Region had just 15.9 per cent of total employment growth in the last two years. Nearly three quarters (73.4 per cent) of this growth occurred the Eastern & Southern region and just over a quarter (26.5 per cent) in the BMW region.

- Two-thirds of the increase in employment in the Western Region was in female employment and one-quarter of this was part-time. Much of the increase in female employment in the last two years has been in the financial and other sector (+3,600) and in education and health (+6,300).

- The increase in male employment in the Western Region was just half of the female increase over the last two years. Over 70 per cent of the increase in male jobs was in the construction industry. While female employment increased in all economic sectors, male employment declined in four - agriculture, other production industry, hotels and restaurants and education and health.

- White-collar occupations – managers and administrators, clerical and service occupations – are under-represented in the Western Region whereas the more traditional craft and manufacturing occupations are over-represented.

- The proportion of farmers in the Western Region is almost twice the national average but the numbers of farmers there are declining at a faster rate.

- Analysis of new entrants to the labour market in the Western Region reveals that they are disproportionately concentrated in building, and less than average white collar occupations such as banking, finance and insurance.

- Unemployment in the region has fallen considerably, but is still high among 15-19 year olds, with the female rate nearly twice the national average.

4. THE BRAIN DRAIN FROM THE WESTERN REGION

4.1 Patterns of Participation in Third Level Education

Participation in third level education is particularly high in the Western counties. This is a reflection of the traditionally strong value placed on educational attainment among farm families in the West. Table 4.1 below illustrates the rates of admission to higher education in 1992 by county of permanent residence.

Table 4.1 Admission Rates to Higher Education in 1992 by County of Permanent Residence

County	Admission Rate*
Donegal	27.4
Sligo	41.9
Leitrim	42.0
Roscommon	40.9
Mayo	42.2
Galway	46.0
Clare	42.9
Dublin	32.8
Cork	37.2
Limerick	37.4
State	**35.9**

Source: Clancy (1995).
Note: The admission rate is calculated on the basis of the average of the populations of the single years of age from which more than seventy-five per cent of the new entrants come.

The admission rate to higher education, for the state as a whole, was 36 per cent in 1992. The rates varied across county; however, all the Western counties had higher than average admission rates except for County Donegal[20]. Of the 26 counties in the Republic, only seven counties had admission rates in excess of 40 per cent, the six Western counties above and Kerry. In addition, all these counties (except Donegal) had rates higher than those counties with established third level institutions – Dublin, Cork and Limerick.

However, much of this potential value to the region has been lost through a persistent brain drain through out-migration. Two aspects of the current educational profile of the Western Region illustrate the effects of this brain drain. Firstly, those who remained in the region when there was little employment were often those with the lower levels of attainment. This is reflected in the educational levels of the labour force in the region in 1997 where there was a higher than average proportion of the labour force with primary education only – 21.4 per cent in the Western Region compared to 16.1 per cent nationally (Table 4.2).

[20] The rate of admission to higher education from County Donegal increases to 34.8 per cent (+7.4 per cent) when admission to Northern Ireland Colleges is included.

Table 4.2 Labour Force classified by Highest Level of Education Attained 1997

Education Levels	State ('000)	State (%)	Western Region ('000)	Western Region (%)
Primary	248.4	16.1	56.5	21.4
Lower Secondary	390.8	25.4	65.5	24.8
Upper Secondary	483.5	31.4	85.3	32.3
Third Level-Non University	220.5	14.3	34.4	13.0
Third Level University	193.3	12.6	22.2	8.4
Not Stated	2.5	0.2	0.1	0.0
Total	**1,539.0**	100.0	**264.0**	100.0

Source: CSO, Labour Force Survey 1997.

Secondly, at the other end of the spectrum, there is a lower proportion of the labour force in the Western Region with third level education. This can be accounted for by the regional brain drain whereby those who grew up in the Western Region left to be educated in other regions and have also gained employment elsewhere. In the next section patterns in this regard are identified.

4.2 Destination of Primary and Higher Degree Recipients from the Western Region

The education system, particularly at third level can strongly influence new award recipients and their employment destinations. Historically this has led to a situation where students originating from the West have attended third level institutions in urban centres, and then gained employment outside of their home county or abroad. This trend may not be as extreme as it once was but a 'brain drain' is still evident and it is this, and the corresponding potential labour supply, that we examine below in data taken from the survey *First Destinations of Award Recipients in Higher Education 1999*[21]. Table 4.3 illustrates the distribution of the first destination of graduates employed in 1999 by geographic area.

Table 4.3 Graduates in Employment in Ireland by Region 1999

Region	Primary Degrees %	Higher Degrees %	Total N
North-West	6.6	9.0	497
West	9.5	9.0	664
Mid-West	7.0	4.5	461
Midlands	3.0	2.4	426
South-West	6.6	3.6	243
South-East	3.6	2.9	181
East	60.5	65.6	4,348
North-East	2.7	1.9	203
Northern Ireland	0.6	1.1	52
Totals	**100 (N= 5,731)**	**100 (N=1,344)**	**7,075**

Source: First Destinations of Award Recipients in Higher Education 1999, Department of Education and Science. These regions are defined in appendix Table 4.5B.

Nearly two thirds of higher degree recipients and three fifths of those with primary degrees found their first job after graduation in the East Region (counties Dublin, Kildare, Meath and Wicklow). Only 6.6 per cent of primary degree graduates found their first job in the North-West (counties Donegal, Sligo and Leitrim) in 1999.

[21] This data is based on a survey, which is carried out annually by the HEA and NCEA. The response rate for 1999 was 71.7 per cent.

Table 4.4 illustrates the county of origin and county of first employment of graduates in 1998. Of all the graduates originating from the Western Region 37.7 per cent gained employment in Dublin. This is higher than the total proportion who got their first job after graduation **within** the seven Western counties (34.2 per cent). Some counties have higher proportions gaining employment in Dublin compared to others. For example, 48.9 per cent of students originating from Roscommon gained employment in Dublin while only 6.8 per cent of respondents originating from Roscommon got a job in their home county.

Table 4.4 Employed Graduates by County of Origin and of First Employment 1998

County of Origin →	**Donegal**	**Sligo**	**Leitrim**	**Roscommon**	**Mayo**	**Galway**	**Clare**	**Total (West)**
County of Employment ↓								
Donegal	**18.9**	1.3	-	1.1	1.3	0.5	-	2.3
Sligo	5.6	**21.3**	14.8	-	1.3	0.5	0.6	3.0
Leitrim	-	1.3	**7.4**	1.1	0.4	-	-	0.5
Roscommon	-	-	3.7	**6.8**	0.4	1.1	-	1.1
Mayo	-	2.5	-	1.1	**17.0**	1.6	0.6	4.6
Galway	8.9	5.0	-	11.4	12.7	**37.7**	2.2	18.3
Clare	-	-	-	2.3	0.9	1.9	**20.1**	4.4
Dublin	**47.8**	**41.3**	**48.1**	**48.9**	**45.0**	**29.0**	**32.4**	**37.7**
Other, Irl	5.5	17.2	18.5	15.9	9.5	12.9	31.1	15.6
Other	13.3	10.1	7.4	11.4	11.3	14.8	13.0	12.6
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	**90**	**80**	**27**	**88**	**229**	**369**	**179**	**1,062**

Source: Higher Education Authority, *First Destinations of Award Recipients in Higher Education* 1998. Special Analysis for WDC.

Figure 4.1 Employed Graduates by County of Origin and Region of First Employment 1998

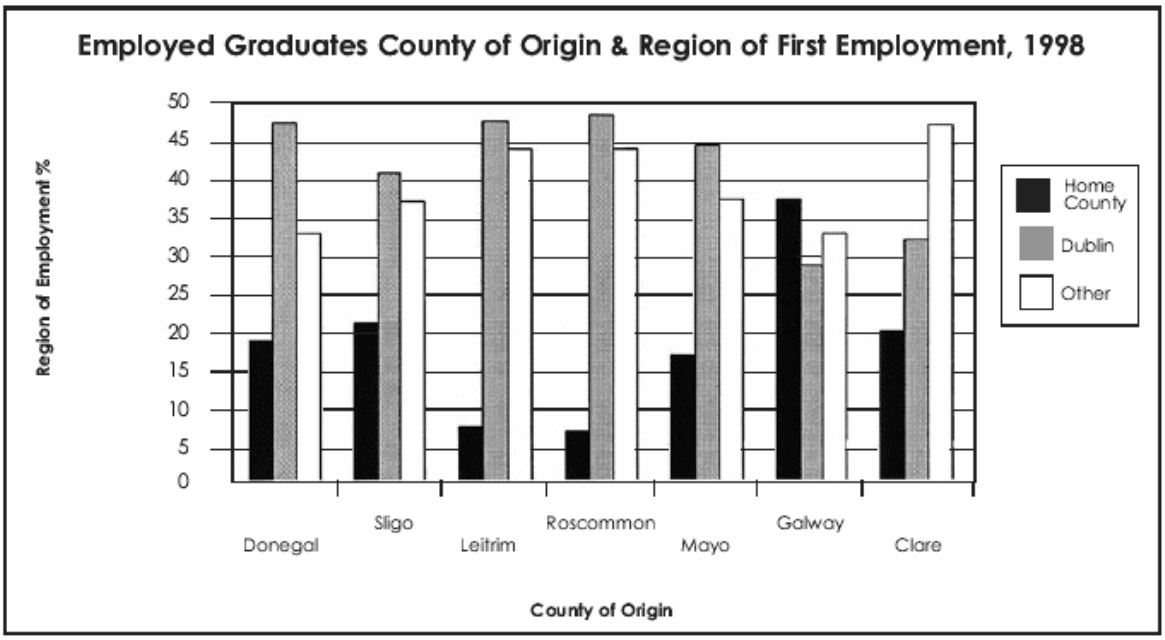


Figure 4.1 illustrates these data by broad region (home county, Dublin and all other locations). For five out of the seven Western counties, Dublin is the major employment destination (all except Galway and Clare). Six out of the seven counties have more employed in Dublin than their home county, the exception being Galway. Six out of the seven counties have more employed elsewhere (other than Dublin or their county of origin), again the exception being Galway. The two broad exceptions to these patterns - counties Galway and Clare - illustrate the impact of proximity to a large urban centre. Clare has a particularly high proportion (31.1 per cent) gaining employment elsewhere in Ireland (rather than their home county or Dublin). This can be explained by the close proximity of Clare to two large urban centres – Limerick and Galway.

The pattern is somewhat different for sub-degree award recipients where there is a much higher retention rate in the region of origin. For example the North-West (counties Donegal, Sligo and Leitrim) had a retention rate of 59.5 per cent and the West region (counties Galway and Mayo) had retention rate of 68.7 per cent. This is illustrated in appendix Table 4.5A.

While the destination of employment is undoubtedly a matter of personal choice, lack of employment opportunities in the seven Western counties limits the choices available to new graduates.

It is worth mentioning that ‘leakage’ of the best and brightest students to institutions outside of the region may be accentuated in coming years by the active recruitment of students from the Western Region by the large Dublin colleges faced with declining numbers in the relevant age cohorts.

Key Points

4.3 The Brain Drain from the Western Region

- The seven Western counties have higher than average rates of admission to third level education, but much of this human capital is being lost to the region through a persistent brain drain to better jobs outside the region.

- In 1999, only 6.6 per cent of all new graduates with primary degrees found work in Sligo, Leitrim and Donegal, whereas 60.5 per cent of them found work in counties Dublin, Kildare, Meath and Wicklow.

- In 1998, 37.7 per cent of graduates originating from the Western Region found their first job in Dublin. This is higher than the total proportion who got their first job after graduation in the seven Western counties (34.2 per cent).

- The pattern is somewhat different for sub-degree award recipients where there is a much higher retention rate in the region of origin. However there is still a high proportion (43.5 per cent) of sub-degree award recipients gaining their first employment in the East of the country.

- The net effect of high educational participation and insufficient attractive employment opportunities is a brain drain from West to East whereby much of the human resource potential of the region is lost to other areas with more and better employment opportunities.

5. INDUSTRIAL PERFORMANCE IN THE WESTERN REGION

5.1 Introduction

In this section we examine the current structure and recent performance of manufacturing and services across the seven Western counties. The key data source here is the Census of Industrial Production and the latest data available are for 1998. The unit of analysis is industrial local units[22] with three or more persons engaged (i.e. employed).

5.2 Net Industrial Output

In Tables 5.1 and 5.2 net industrial output for the years 1991, 1996 and 1998 is outlined. Net industrial output stood at over £27.8 billion for the state as a whole in 1998. The equivalent figure for the Western Region was over £2.1 billion. The right hand column summarises the annual average change over the period 1991 to 1998. Net industrial output for the state grew at an annual average rate of 14.6 per cent over the period. However, net industrial output grew by an annual rate of 17.5 per cent in the Eastern and Southern region and by only 7.0 per cent in the BMW region. For the Western Region the equivalent figure is 4.5 per cent. There are considerable differences between the counties, however, with Sligo recording an annual average growth of over 11 per cent while Roscommon had an annual average growth of 2.4 per cent. (It is worth noting that the greater Dublin region - Dublin and the Mid-East combined - had an annual average growth rate of 16.3 per cent for the years 1991 to 1998.) Galway actually had a decline in net industrial output over the period. This can largely be attributed to the earlier part of the period and is mainly due to the decline in net output of larger companies (with 50+ employees)[23].

Table 5.1 Net Industrial Output by County and Region 1991, 1996, 1998

County/Region	1991 (£000s)	1996 (£000s)	1998 (£000s)	Change 1991–1998 (£000s)	Ann. Av. Change 1991-1998 %
Donegal	169,647	240,645	309,268	139,621	9.0
Sligo	63,667	110,385	132,993	69,326	11.1
Leitrim	18,561	21,061	29,151	10,590	6.7
Roscommon	42,548	64,304	50,360	7,812	2.4
Mayo	191,234	320,341	402,117	210,883	11.2
Galway	812,533	710,952	722,436	-90,097	-1.7
Clare	261,413	404,033	476,781	215,368	9.0
Western Region	**1,559,603**	**1,871,721**	**2,123,106**	**563,503**	**4.5**
Eastern & Southern	7,378,734	14,725,675	22,787,811	15,409,077	17.5
BMW	2,549,372	3,872,528	4,088,222	1,538,850	7.0
State	10,699,532	19,483,250	27,812,345	17,112,813	14.6

Source: Census of Industrial Production, 1991, 1996, 1998.
Note: The figures for the BMW and Eastern and Southern Regions do not sum to the state total as some local units were not assigned to a region.

[22] The *Census of Industrial Local Units* covers all local units with three or more persons engaged. The different geographical locations in which an enterprise conducts industrial activities are treated as separate local units. A separate return is sought for each industrial local unit.
[23] The closure of Digital in Galway in 1993 accounts for a large component of the decline in net industrial output in Galway between 1991 and 1996.

Table 5.2 illustrates the distribution of net industrial output for each of the three years. In 1991, the Western Region accounted for 14.6 per cent of all industrial output in the state. This proportion declined to 9.6 per cent in 1996 and it declined further to 7.6 per cent in 1998 illustrating the relatively poor performance of the Western Region. The BMW region also recorded a proportionate decline over the period, from 23.8 per cent in 1991 to 14.7 per cent in 1998. The Eastern and Southern region had a corresponding increase in its share of national output over the period. Examining changes by county, all those in the Western Region had a declining share of industrial output between 1991 and 1998.

Table 5.2 Distribution of Net Output by County and Region 1991, 1996, 1998

County/Region	1991 (% of Total)	1996 (% of Total)	1998 (% of Total)
Donegal	1.5	1.2	1.1
Sligo	0.6	0.6	0.5
Leitrim	0.2	0.1	0.1
Roscommon	0.4	0.3	0.2
Mayo	1.8	1.6	1.4
Galway	7.6	3.6	2.6
Clare	2.4	2.1	1.7
Western Region	**14.6**	**9.6**	**7.6**
Eastern & Southern	69.0	75.6	81.9
BMW	23.8	19.9	14.7
State	100.0	100.0	100.0

Source: Census of Industrial Production, 1991 1996 1998.
Note: These data are based on the results from Industrial Local units with three or more persons engaged. The sum of the proportions may not be 100 as there are some data that are not attributable to a particular region.

5.3 Productivity and Structure

Tables 5.3a , 5.3b and 5.3c below allow us to examine in more detail the profile of the industrial base of the Western Region.

Table 5.3a Industrial Local Units - Employee Numbers by County and Region 1996, 1998

County/Region	Number of Local Units		Industrial Employees		Other Employees	
	1996	1998	1996	1998	1996	1998
Donegal	175	165	8,495	8,100	1,488	1,381
Sligo	74	78	2,963	3,149	767	821
Leitrim	34	31	893	859	171	206
Roscommon	51	49	1,715	1,648	311	374
Mayo	132	134	5,241	5,666	1,135	1,391
Galway	222	222	8,170	9,646	3,163	3,734
Clare	141	150	5,545	6,031	2,246	2,480
Western Region	**829**	**829**	**33,022**	**35,099**	**9,281**	**10,387**
Eastern & Southern	3,438	3,544	119,859	123,874	48,508	56,665
BMW	1,320	1,346	49,409	52,666	13,196	14,196
State	4,803	4,932	176,750	183,713	66,242	75,125

Source: Census of Industrial Production, 1996 1998.Note: These data are based on the results from Industrial Local units with three or more persons engaged. In 1996 there were 45 local units that were not classified by region. In 1998 the number not classified by region was 42.

In 1998 there were 829 industrial units in the seven Western counties. This represented 16.8 per cent of the state total, which numbered 4,932 units. The total number of employees engaged in these units in the Western Region was 45,486, with an average of 55 employees in each unit.

Table 5.3b Industrial Local Units - Persons, Wages and Salaries by County and Region 1996, 1998

County/Region	Av. Numbers of Persons engaged per Local unit		Av. Annual wages & salaries per employee (£)		Av. Annual wages & salaries per industrial worker (£)	
	1996	1998	1996	1998	1996	1998
Donegal	57	58	10,852	12,557	9,810	11,266
Sligo	51	51	12,646	13,715	10,917	12,049
Leitrim	32	35	11,181	13,047	10,422	12,036
Roscommon	40	42	12,794	13,718	12,210	12,487
Mayo	49	53	12,567	13,858	11,322	12,492
Galway	51	60	14,420	16,503	11,994	13,307
Clare	55	57	17,139	19,361	14,634	16,441
Western Region	**51**	**55**	**13,513**	**15,357**	**11,641**	**13,060**
Eastern & Southern	48	51	17,068	18,777	14,806	16,129
BMW	47	50	13,362	14,853	11,729	12,883
State	51	53	16,395	18,106	14,341	15,511

Source: Census of Industrial Production, 1996 1998.

Note: These data are based on the results from Industrial Local units with three or more persons engaged. In 1996 there were 45 local units that were not classified by region. In 1998 the number not classified by region was 42.

Annual average wages and salaries were considerably lower in the Western Region than the state average. In 1998, annual average salaries and wages per employee was £15,357 in the Western Region and £18,106 for the state. Within the Western Region there were also considerable differences. Donegal fared the worst with an annual average salary of £12,557 in 1998. Counties Sligo, Leitrim, Mayo and Roscommon all had annual average salaries per employee of less than £14,000. Conversely counties Galway and Clare were well above the average for the Western Region with annual average wages and salaries of £16,503 and £19,361 respectively. There was a similar disparity in the annual average wages per industrial worker with the average for the Western Region lower than that for the state. Similarly there were significant disparities within the Western Region with the average industrial wage in Donegal being only £11,266 whereas the equivalent figure for Clare was £16,441 which was higher than the state average.

Table 5.3c Industrial Local Units – Output by County and Region 1996, 1998

County/Region	Net Output per Local Unit (£000s)		Net Output per Person Engaged (£)	
	1996	**1998**	**1996**	**1998**
Donegal	1,375	1,874	23,993	32,476
Sligo	1,492	1,705	29,523	33,357
Leitrim	619	940	19,304	27,067
Roscommon	1,261	1,028	31,506	24,747
Mayo	2,427	3,001	49,828	56,644
Galway	3,202	3,254	62,392	53,829
Clare	2,865	3,179	51,667	55,783
Western Region	**2,258**	**2,561**	**43,994**	**46,469**
Eastern & Southern	4,283	6,430	86,882	125,494
BMW	2,967	3,776	61,396	76,545
State	4,056	5,639	79,658	106,824

Source: Census of Industrial Production, 1996 1998.
Note: These data are based on the number of Industrial Local Units with 3 or more persons engaged.

Apart from Roscommon, net output per local unit increased in all counties and regions between 1996 and 1998. All counties and regions apart from counties Roscommon and Galway reported an increase in net output per person engaged between 1996 and 1998.

Net output per local unit was lower in the seven western counties than for the state. Similarly, the value of net output per person engaged was much lower in the Western Region. While net output per person nationally increased by one third during 1996-98, in the Western Region the corresponding increase was just 6 per cent. These data are summarised in appendix Table 5.4A

5.4 Sectoral Composition of Industry

In Table 5.4 the sectoral composition of the Western Region by county in 1996 and 1998 is outlined. This is important in both identifying current concentrations of industry and, along with forecasts of future industrial growth, in identifying which industrial sectors can be developed. The right-hand column provides the share of industry operating within the Western Region as a proportion of the total in the state.

Table 5.4 Number of Industrial Local Units by Sector and County (1996) 1998

Nace	Donegal	Sligo	Leitr-im	Rosco-mmon	Mayo	Galway	Clare	Western Region	State	WR as % of State
Total Manufacturing	(171)**161**	(72)**76**	(33)**30**	(46)**44**	(128)**130**	(214)**216**	(135)**145**	(799)**802**	(4,599)**4,702**	**17.1**
Food, Beverages & Tobacco	(45)47	(9)11	(4)3	(11)11	(27)24	(32)30	(10)11	(138)**137**	(830)810	**16.9**
Textiles & Textile Products	(48)44	(1)3	(6)2	(3)2	(17)15	(16)14	(5)4	(96)**84**	(370)344	**24.4**
Leather & Leather Products	(1)1	(-)-	(-)-	(-)-	(-)-	(1)1	(1)1	(3)**3**	(31)28	**10.7**
Wood & Wood Products	(11)10	(8)7	(3)6	(3)1	(9)10	(16)13	(6)5	(56)**52**	(215)226	**23.0**
Pulp, paper; Printing and Publishing	(6)5	(4)5	(2)1	(8)7	(7)8	(19)22	(8)12	(54)**60**	(539)581	**10.3**
Chemicals, chemical products & man-made fibres	(3)3	(3)3	(-)1	(4)4	(6)5	(6)9	(9)9	(31)**34**	(237)242	**14.0**
Rubber & Plastics	(9)7	(10)11	(2)3	(3)2	(6)10	(6)11	(6)6	(42)**50**	(241)273	**18.3**
Other non-metallic mineral products	(13)12	(5)7	(2)2	(3)4	(8)9	(13)12	(7)9	(51)**55**	(282)290	**18.9**
Basic metals & fabricated metal products	(9)11	(7)7	(2)4	(3)5	(13)10	(29)24	(14)19	(77)**80**	(534)535	**14.9**
Machinery & Equipment n.e.c	(2)-	(13)13	(4)3	(3)2	(12)15	(15)13	(22)19	(71)**65**	(352)370	**17.6**
Electrical & Optical Equipment	(8)7	(4)4	(1)1	(2)3	(7)9	(35)40	(30)31	(87)**95**	(428)454	**20.9**
Transport Equipment	(6)6	(2)-	(2)1	(1)1	(4)2	(8)7	(8)9	(31)**26**	(143)125	**20.8**
Manufacturing n.e.c.	(10)8	(6)5	(5)3	(2)2	(12)13	(18)20	(9)10	(62)**61**	(397)424	**14.4**
All Sectors	(175)**165**	(74)**78**	(34)**31**	(51)**49**	(132)**134**	(222)**222**	(141)**150**	(829)**829**	(4,803)**4,932**	**16.8**

Source: CSO, Census of Industrial Production, 1998.
Note: These data are based on the number of Industrial Local Units with 3 or more persons engaged.

Compared to the national average, some industry sectors are over-represented in the Western Region. These include the manufacturing sectors of textiles & textile products, wood and wood products, electrical & optical equipment and transport equipment. There are also particular concentrations within the Western Region. Donegal has a high concentration of units within the food and textiles sectors. On the other hand counties Galway and Clare have higher concentrations of units in the electrical and optical sector. Roscommon is very dependent on the food sector with nearly a quarter of all industrial units engaged in this sector

5.5 Current Sectoral Distribution and Future Occupational Forecasts.
National occupational forecasts from the FÁS/ESRI series[24] indicate that despite continuing employment growth there are some occupational groups that are forecasted to decline in the period 1997 and 2005. Out of a total of 45 different occupational categories only five categories are forecasted to decline both numerically and proportionately over the period. These are religious workers, other transport workers, agricultural personnel (including agricultural labourers) and clothing and textile workers and operatives.

The most severe decreases are for agricultural labourers who are forecasted to decrease by nearly 25 per cent over the period and clothing/textile operatives who are forecasted to decline by 20 per cent. This compares with an overall predicted employment increase of over 28 per cent across all the occupations between 1997 and 2005.

These employment forecasts, taken together with the current sectoral distribution of economic activity in the Western Region, point to a real need to diversify and develop employment opportunities in the industries and occupations which are forecasted to grow.

[24] See FÁS/ESRI Manpower Forecasting Studies, Occupational Employment Forecasts 2005,(2000).

Key Points

5.6 Industrial Performance in the Western Region

- Industrial activity in the Western Region is smaller in scale than that in the Eastern and Southern region as measured by the value of output per local unit and per person.

- Nationally, net industrial output grew by 14.6 per cent per annum between 1991 and 1998; the equivalent figure for the Western Region was just 4.5 per cent.

- In 1991, the Western Region accounted for 14.6 per cent of all industrial output in the state. This proportion declined to 9.6 per cent in 1996 and 7.6 per cent in 1998. All counties in the Western Region experienced a decline in their share of net national output between 1991 and 1998. The Eastern and Southern region increased its share of national net output from 69 per cent in 1991 to nearly 81.9 per cent in 1998.

- In the Western Region, wages and salaries are considerably lower than average. In 1998, annual wages and salaries per employee in the seven Western counties averaged £15,357, compared to a national average of £18,106.

- In the seven Western Counties net output per local unit is lower than the average, reflecting the higher concentrations of traditional labour intensive industries located there.

- Net output per worker in the Western Region was less than half the national average in 1998. In the period 1996 to 1998, net output per worker increased by just 5.6 per cent in the Western Region compared to an increase of one third nationally.

- Some counties have particularly high sectoral concentrations; notably food and textiles in Donegal and food in Roscommon. Employment forecasts suggest that textiles and agricultural occupations will be most prone to employment losses in the future. These employment forecasts taken together with the current sectoral distribution of economic activity in the Western Region point to a real need to diversify and develop employment opportunities there.

6. STATE SUPPORTED EMPLOYMENT CREATION IN MANUFACTURING AND SERVICES

6.1 Introduction

In this chapter we examine agency-assisted employment in the last decade and the relative performance of different counties and regions. There are two data sources used. The first is the Forfás dataset, which includes data from the IDA, Enterprise Ireland, Shannon Development and Údarás na Gaeltachta. The second data source is the County Enterprise Boards (CEBs).

The first series of tables are based on the Forfás data set (which excludes CEB assisted enterprises). Permanent full-time employment is first examined. Following this we look at gross gains and losses over the last few years. We then analyse net change in agency-assisted employment in the latter half of the 1990s.
These data are then analysed by ownership - examining the relative performance of indigenous and foreign-owned assisted employment including County Enterprise Board assisted employment. Finally, agency-assisted employment by industrial sector is analysed.

6.2 Agency Assisted Employment

Much of the job creation over the past decade has been driven by the support and incentives offered by state agencies with responsibility for employment creation. The numbers of permanent jobs assisted by all agencies for each year 1995-2000 are set out in Table 6.1, based on the most recent employment data available from Forfás. These data are classified by county giving a detailed picture of job creation at this level.
Nationally, the numbers of agency assisted jobs[25] rose by 80,784 to 315,959 between 1995 and 2000, an increase of 34 per cent. In 2000, there were 55,290 persons employed in agency-assisted jobs in the Western Region. This represents an increase of 21 per cent (9,649) jobs in the region between 1995 and 2000.

Table 6.1 Employment in Agency Assisted Companies by County and Region 1995-2000

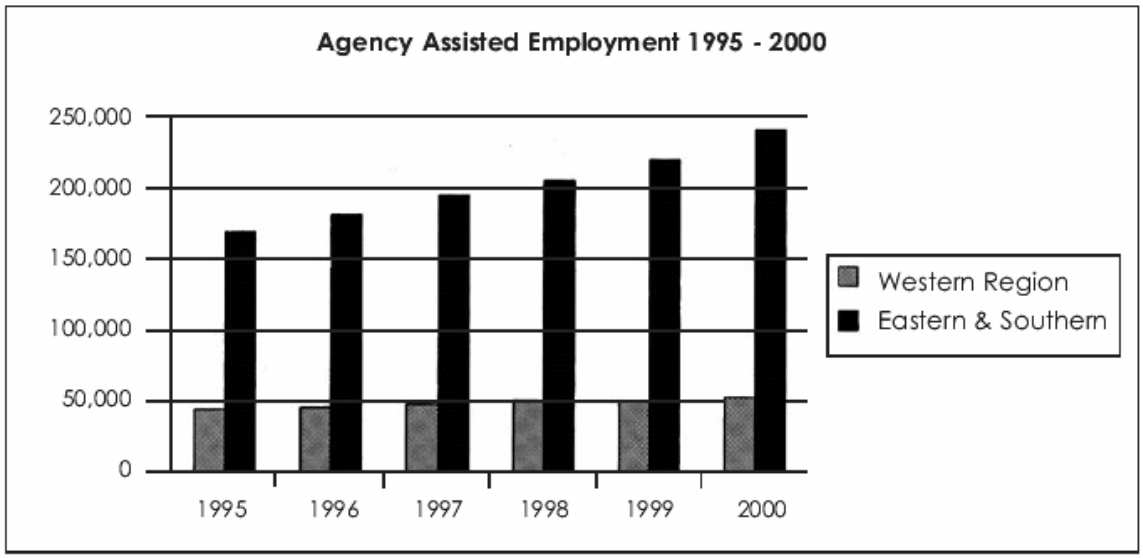
County/Region	1995	1996	1997	1998	1999	2000
Donegal	10,835	10,578	10,560	10,520	9,380	9,166
Sligo	3,771	3,929	4,108	4,236	4,417	4,475
Leitrim	1,165	1,199	1,350	1,316	1,339	1,308
Roscommon	2,492	2,785	2,858	3,083	3,174	3,102
Mayo	6,568	6,416	6,425	6,907	6,759	7,219
Galway	11,977	13,311	14,984	16,207	16,676	18,854
Clare	8,833	9,062	9,506	10,215	10,738	11,166
Western Region	**45,641**	**47,280**	**49,791**	**52,484**	**52,483**	**55,290**
Eastern & Southern	169,114	180,185	193,182	204,635	219,831	240,308
BMW	66,061	67,416	70,360	73,602	73,220	75,651
State	235,175	247,601	263,542	278,237	293,051	315,959

Source: Forfás 2001.

[25] The data presented and analysed here refer to permanent full-time employment only. This is defined as 'Employees who will have been employed full-time for 9 months or longer or who will be on contracts of 9 months or longer when the questionnaire was completed (31 October each year)'. *Source: (Forfás Annual Employment Survey 1999).*

Within the Western Region, more than a third of jobs (18,854) were in Galway (city and county) and a further 20 per cent (11,166) were in Clare. Thus, in 2000, 54 per cent of all state assisted jobs in the seven counties were in Galway or Clare, compared to 45 per cent in 1995. These data are illustrated graphically in Figure 6.1.

Figure 6.1 Employment in Agency Assisted Companies by Region 1995-2000



Note: This figure only illustrates the Western Region and the Eastern and Southern Region. The BMW Region is not represented. As noted in the introduction there is some overlap in regional classifications as Clare is part of the Western Region and the NUTS2 Eastern and Southern Region

6.3 Agency Assisted Employment - The Western Region's Share

Between 1995 and 2000, the share of employment going to the Western Region actually decreased while that accruing to the Eastern and Southern region increased (Table 6.2)

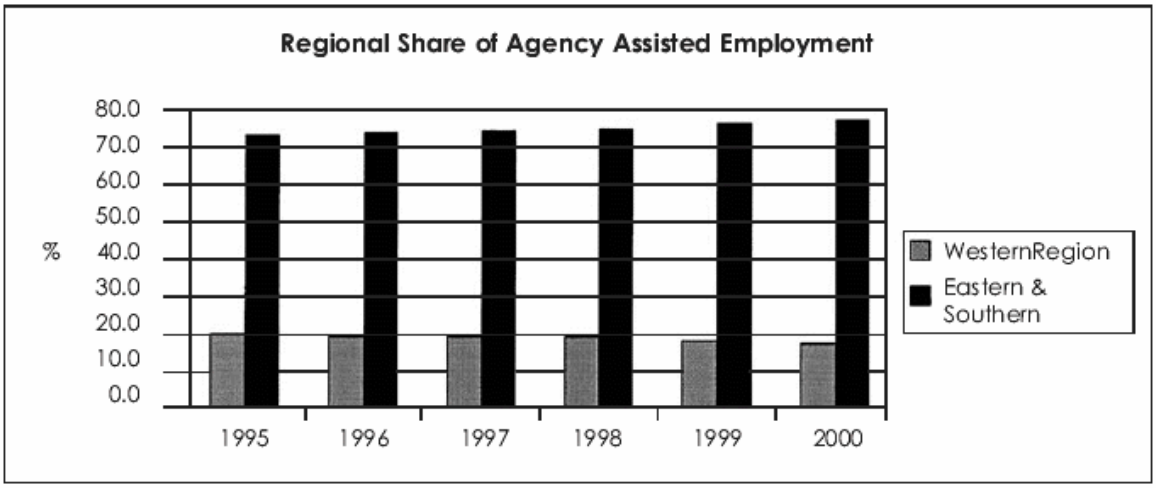
Table 6.2 Agency Assisted Employment Share by County and Region 1995-2000

County/Region	1995	1996	1997	1998	1999	2000
Donegal	4.6	4.3	4.0	3.8	3.2	2.9
Sligo	1.6	1.6	1.6	1.5	1.5	1.4
Leitrim	0.5	0.5	0.5	0.5	0.5	0.4
Roscommon	1.1	1.1	1.1	1.1	1.1	1.0
Mayo	2.8	2.6	2.4	2.5	2.3	2.3
Galway	5.1	5.4	5.7	5.8	5.7	6.0
Clare	3.8	3.7	3.6	3.7	3.7	3.5
Western Region	**19.4**	**19.1**	**18.9**	**18.9**	**17.9**	**17.5**
Eastern & Southern	71.9	72.8	73.3	73.5	75.0	76.1
BMW	28.1	27.2	26.7	26.5	25.0	23.9
State	100.0	100.0	100.0	100.0	100.0	100.0

Source: Forfás 2001.
Note: Refers to permanent full-time employment only.

The share of agency-assisted employment located in the Western Region has declined from 19.4 per cent in 1995 to 17.5 per cent in 2000 while the Eastern and Southern has increased its share. Of the Western counties, only Galway has increased its share of employment over this period, accounting for six per cent of all agency-assisted employment in 2000. All other counties in the Western Region had a decline in share. These trends are represented graphically in Figure 6.2.

Figure 6.2 Regional Share of Employment in Agency Assisted Companies 1995-2000



Note: This figure compares the Western Region and the Eastern and Southern Region. As noted in the introduction there is some overlap in regional classifications as Clare is part of the Western Region and the NUTS2 Eastern and Southern Region. As the BMW region is excluded the total does not sum to 100.

6.4 Gross Gains and Gross Losses

Job gains during the period 1995-2000 were often offset by losses so it is important to examine these components of net job creation, i.e. gross gains and gross losses. Over the period 1995 through to 1999 the Western Region accounted for 16.7 per cent of all agency-assisted gross gains, but accounted for a higher proportion of gross losses (19.2 per cent). On the other hand, 78 per cent of gross gains in employment over the period occurred in the Eastern & Southern region, and this region accounted for 71.6 per cent of gross losses.

Table 6.3 Gross Gains in Employment in Agency Assisted Companies by County and Region 1995-2000

County/Region	1995	1996	1997	1998	1999	Gross Gains 1995-99	Percentage of Gross Gains 1995-99
Donegal	1,113	787	640	932	772	4,244	2.8
Sligo	305	325	299	350	215	1,494	0.9
Leitrim	115	192	322	94	148	871	0.5
Roscommon	157	378	206	306	211	1,258	0.8
Mayo	507	449	537	858	566	2,917	1.9
Galway	1,523	1,993	2,469	1,911	1,538	9,434	6.2
Clare	767	768	962	1,232	1,285	5,014	3.3
Western Region	**4,487**	**4,892**	**5,435**	**5,683**	**4,735**	**25,232**	**16.7**
Eastern & Southern	20,001	21,862	23,034	24,874	27,958	117,729	78.0
BMW	6,078	6,253	7,227	7,272	6,398	33,228	22.0
State	26,079	28,115	30,261	32,146	34,356	150,957	100.0

Source: Forfás 2001.

Note: Refers to permanent full-time employment only.

Counties Donegal, Leitrim and Mayo had a higher share of gross losses in the 1995–1999 period than gross gains. Galway accounted for 6.2 per cent of gross gains and 4.6 per cent of gross losses over the period indicating a net increase in percentage share over the period. Clare, on the other hand, accounted for 3.3 per cent of gross gains and 3.1 per cent of gross losses between 1995 and 1999.

Table 6.4 Gross Losses in Employment in Agency Assisted Companies by County and Region 1995-2000

County/Region	1995	1996	1997	1998	1999	Gross Losses 1995-99	Percentage of Gross Losses 1995-99
Donegal	-684	-1,044	-658	-972	-1,907	-5,265	6.1
Sligo	-100	-167	-120	-222	-90	-699	0.8
Leitrim	-71	-158	-171	-128	-125	-653	0.7
Roscommon	-97	-86	-132	-81	-121	-517	0.6
Mayo	-288	-601	-528	-376	-798	-2,591	3.0
Galway	-726	-660	-796	-689	-1,083	-3,954	4.6
Clare	-390	-519	-493	-490	-762	-2,654	3.1
Western Region	**-2,356**	**-3,235**	**-2,898**	**-2,958**	**-4,886**	**-16,333**	**19.1**
Eastern & Southern	-11,693	-10,821	-10,203	-13,697	-14,673	-61,087	71.6
BMW	-3,880	-4,939	-4,326	-4,084	-6,959	-24,188	28.3
State	-15,573	-15,760	-14,529	-17,781	-21,632	-85,275	100.0

Source: Forfás 2001.

Note: Refers to permanent full-time employment only.

6.5 Net Job Creation

The net change in all agency employment creation over the period 1995 to 2000 for each county is set out in Table 6.5. This is the net effect of both losses and gains over the period[26].

Table 6.5 Net Job Change in Agency Assisted Companies by County and Region 1995-2000

County/Region	95/96	96/97	97/98	98/99	99/00	Net Cumulative Job Creation 95/96-00	Percentage of net cumulative Change 95/96-00
Donegal	-257	-18	-40	-1,140	-214	-1,669	-2.0
Sligo	158	179	128	181	58	704	+0.8
Leitrim	34	151	-34	23	-31	143	+0.1
Roscommon	293	73	225	91	-72	610	+0.7
Mayo	-152	9	482	-148	460	651	+0.8
Galway	1,334	1,673	1,223	469	2,178	6,877	+8.5
Clare	229	444	709	523	428	2,333	+2.8
Western Region	**1,639**	**2,511**	**2,693**	**-1**	**2,807**	**9,649**	**+11.9**
Eastern & Southern	11,071	12,997	11,453	15,196	20,477	71,194	+88.1
BMW	1,355	2,944	3,242	-382	2,431	9,590	+11.8
State	12,426	15,941	14,695	14,814	22,908	80,784	100.0

Source: Forfás 2001.
Note: Refers to permanent full-time employment only.

Although job numbers in the Western Region increased during 1995-98, in 1998/99 the region registered no net gain in permanent full-time jobs for the first time since 1993. This compares to a net gain nationally of 14,814 jobs. Between 1999-2000 there was a net increase in assisted employment nationally of 22,908. The Western Region had a net increase of 2,807 (12.2 per cent of the total). Galway accounted for 78 per cent of this increase with Clare accounting for a further 15 per cent. The remaining five western counties had a net gain of just 201 jobs. Counties Donegal, Leitrim and Roscommon actually had a net decline in agency assisted employment.

Over the second half of the 1990s (1995-2000), the number of assisted jobs grew nationally by 80,784. For the Western Region, the equivalent figure is 9,649 net new jobs, which is 11.9 per cent of the total. But 6,877 of these (71 per cent) went to Galway and a further 2,333 to Clare (24 per cent), leaving a net gain for the other five counties of just 439 jobs or less than five percent of the total to the region**.** The Western Region accounted for just 11.9 per cent of the national total, while the Eastern and Southern region accounted for 88.1 per cent and the BMW region accounted for 11.8 per cent.

[26] These data may not be exactly the same as a simple addition of Tables 6.3 and 6.4, as Table 6.5 is from a later data source and the data are revised each year.

6.6 County Enterprise Board Assisted Employment

The role of County Enterprise Boards (CEBs), established in 1993, is to facilitate local development and promote micro-enterprises (those with 10 employees or less). There are 35 city or county-enterprise boards throughout the country. As well as providing financial assistance in the form of capital or employment grants, equity and refundable aid, they develop enterprise plans for their respective counties/administrative areas and provide business information and advice.

The numbers of jobs created with the assistance of the county enterprise boards since 1994 are shown in Table 6.6. Of a total of 18,179 full-time jobs created, 4,087 or 22.4 per cent were located in the Western Region. Once more, most of the jobs were created in counties Galway and Clare, which between them account for 47 per cent of total jobs created within the Western Region.

Table 6.6 Employment in CEB Assisted Companies by County and Region 1994-1999

County/Region	1994	1995	1996	1997	1998	1999	Total 1994-1999	Percentage of Total 1994-1999
Donegal	35	49	67	103	64	56	374	2.0
Sligo	53	65	68	74	107	40	407	2.2
Leitrim	53	43	55	58	54	65	328	1.8
Roscommon	80	117	67	51	60	88	463	2.5
Mayo	69	128	80	68	112	127	584	3.2
Galway	319	139	201	184	239	200	1,282	7.0
Clare	67	105	101	62	106	208	649	3.5
Western Region	**676**	**646**	**639**	**600**	**742**	**784**	**4,087**	**22.4**
State	1,817	2,785	3,315	2,988	3,157	4,117	18,179	100.0

Source: Department of Enterprise, Trade and Employment 2001.
Note: Refers to full-time employment only.

6.7 Employment by Ownership

6.7.1 Employment in Irish Owned Assisted Companies

Tables 6.7 and 6.8 display Irish-owned agency assisted[27] employment and the share of Irish-owned assisted employment over the period 1995 to 2000. In 2000, there were over 152,000 agency-assisted jobs in Irish-owned companies. This has risen steadily since 1995 (122,864 permanent full-time jobs). All regions have shown year on year increases in Irish-owned assisted employment, however within the seven Western counties the performance is more erratic. For example, Leitrim has had a net decline over the entire period, while Donegal had a net decrease between 1998 and 2000.

Table 6.7 Employment in Agency Assisted Irish-Owned Companies by County and Region 1995-2000

County/Region	1995	1996	1997	1998	1999	2000
Donegal	5,499	5,495	5,528	5,884	5,833	5,706
Sligo	1,539	1,588	1,639	1,605	1,757	1,785
Leitrim	773	747	748	773	713	714
Roscommon	1,637	1,675	1,660	1,838	1,906	1,788
Mayo	3,203	3,283	3,507	3,553	3,443	3,454
Galway	5,746	6,221	6,675	7,252	7,707	8,510
Clare	2,569	2,653	2,708	2,779	2,838	2,751
Western Region	**20,966**	**21,662**	**22,465**	**23,684**	**24,197**	**24,708**
Eastern & Southern	87,521	91,312	95,853	99,332	104,560	110,953
BMW	35,343	36,483	37,957	40,037	41,033	41,348
State	122,864	127,795	133,810	139,369	145,593	152,301

Source: Forfás 2001. Note: Refers to permanent full-time employment only.

The Western Region's share of Irish-owned assisted employment declined from 17.1 per cent in 1995 to 16.2 per cent in 2000 (Table 6.8). Likewise the BMW share has also decreased (from 28.8 per cent in 1995 to 27.1 per cent in 2000) while the Eastern and Southern region increased its share. Within the Western Region, all counties except Galway had a decline in share of Irish owned assisted employment between 1995 and 2000.

Table 6.8 Employment in Irish-Owned Agency Assisted Companies – Distribution by County and Region 1995-2000

County/Region	1995	1996	1997	1998	1999	2000
Donegal	4.5	4.3	4.1	4.2	4.0	3.7
Sligo	1.3	1.2	1.2	1.2	1.2	1.2
Leitrim	0.6	0.6	0.6	0.6	0.6	0.5
Roscommon	1.3	1.3	1.2	1.3	1.3	1.2
Mayo	2.6	2.6	2.6	2.5	2.4	2.3
Galway	4.7	4.9	5.0	5.2	5.3	5.6
Clare	2.1	2.1	2.0	2.0	1.9	1.8
Western Region	**17.1**	**17.0**	**16.8**	**17.0**	**16.6**	**16.2**
Eastern & Southern	71.2	71.5	71.6	71.3	71.8	72.9
BMW	28.8	28.5	28.4	28.7	28.2	27.1
State	100.0	100.0	100.0	100.0	100.0	100.0

Source: Forfás 2001. Note: Refers to permanent full-time employment only.

[27] This refers to Irish-owned employment assisted by the following state agencies: IDA, Enterprise Ireland, Shannon Development (Shannon Free Airport Development Company) and Údarás na Gaeltachta. It excludes jobs assisted by County Enterprise Boards and LEADER Companies.

6.7.2 Assisted Employment in Foreign Owned Companies

The data in Table 6.7 and Table 6.9 indicate that nationally, since 1998, foreign-owned assisted employment has become more significant in terms of numbers employed than Irish-owned assisted employment. The pattern is somewhat different in the Western Region where foreign-owned assisted employment outnumbers Irish-owned assisted employment throughout the 1990s. However, counties Donegal, Leitrim and Roscommon have a higher number engaged in Irish-owned assisted employment than foreign-owned employment.

Overall, the number of foreign-owned assisted jobs has risen in the Western Region, BMW and Eastern and Southern regions between 1995 and 2000. Within the Western Region there are considerable disparities. Donegal has had a decrease each year since 1995 (from 5,336 in 1995 to 3,460 in 2000). Counties Galway and Clare account for the bulk of foreign-owned assisted employment in the Western Region (18,759 jobs) or 61 per cent of the Western Region total in 2000.

Table 6.9 Employment in Foreign-Owned Agency Assisted Companies by County and Region 1995-2000

County/Region	1995	1996	1997	1998	1999	2000
Donegal	5,336	5,083	5,032	4,636	3,547	3,460
Sligo	2,232	2,341	2,469	2,631	2,660	2,690
Leitrim	392	452	602	543	626	594
Roscommon	855	1,110	1,198	1,245	1,268	1,314
Mayo	3,365	3,133	2,918	3,354	3,316	3,765
Galway	6,231	7,090	8,309	8,955	8,969	10,344
Clare	6,264	6,409	6,798	7,436	7,900	8,415
Western Region	**24,675**	**25,618**	**27,326**	**28,800**	**28,286**	**30,582**
Eastern & Southern	81,593	88,873	97,329	105,303	115,271	129,355
BMW	30,718	30,933	32,403	33,565	32,187	34,303
State	112,311	119,806	129,732	138,868	147,458	163,658

Source: Forfás 2001. Note: Refers to permanent full-time employment only.

Table 6.10 illustrates the share of all foreign-owned assisted employment by region. The share in the Western Region has declined steadily from 22 per cent in 1995 to 18.7 per cent in 2000. Only Galway has increased its share appreciably between 1995 and 2000.

Table 6.10 Employment in Foreign-Owned Agency Assisted Companies - Distribution by County and Region 1995-2000

County/Region	1995	1996	1997	1998	1999	2000
Donegal	4.8	4.2	3.9	3.3	2.4	2.1
Sligo	2.0	2.0	1.9	1.9	1.8	1.6
Leitrim	0.3	0.4	0.5	0.4	0.4	0.4
Roscommon	0.8	0.9	0.9	0.9	0.9	0.8
Mayo	3.0	2.6	2.2	2.4	2.2	2.3
Galway	5.5	5.9	6.4	6.4	6.1	6.3
Clare	5.6	5.3	5.2	5.4	5.4	5.1
Western Region	**22.0**	**21.4**	**21.1**	**20.7**	**19.2**	**18.7**
Eastern & Southern	72.6	74.2	75.0	75.8	78.2	79.0
BMW	27.4	25.8	25.0	24.2	21.8	21.0
State	100.0	100.0	100.0	100.0	100.0	100.0

Source: Forfás 2001. Note: Refers to permanent full-time employment only.

6.7.3 Net Change in Employment in Agency Assisted Companies

Table 6.11 illustrates the net change in employment in Irish owned assisted companies in the latter half of the 1990s. There was a cumulative net increase of just 3,742 jobs in these companies in the Western Region, accounting for 12.7 per cent of the total. Galway and Clare contributed 79 per cent of this, leaving a net cumulative increase for the other six counties of just 796 jobs over the five-year period.

Table 6.11 Net Annual Change in Employment in Irish-Owned Agency Assisted Companies by County and Region 1995-2000

County/Region	95/96	96/97	97/98	98/99	99/00	Net Cumulative Job Creation 95/96-00	Percentage of net cumulative Change 95/96-00
Donegal	-4	33	356	-51	-127	207	0.7
Sligo	49	51	-34	152	28	246	0.8
Leitrim	-26	1	25	-60	1	-59	-0.2
Roscommon	38	-15	178	68	-118	151	0.5
Mayo	80	224	46	-110	11	251	0.8
Galway	475	454	577	455	803	2,764	9.3
Clare	84	55	71	59	-87	182	0.6
Western Region	**696**	**803**	**1,219**	**513**	**511**	**3,742**	**12.7**
Eastern & Southern	3,791	4,541	3,479	5,228	6,393	23,432	79.6
BMW	1,140	1,474	2,080	996	315	6,005	20.3
State	4,931	6,015	5,559	6,224	6,708	29,437	100.0

Source: Forfás 2001. Note: Refers to permanent full-time employment only.

From Table 6.12 it is evident that the Western Region had an even smaller share of jobs created within the foreign owned sector, attracting just 11.5 per cent of the total between 1995 and 2000. However this does amount to more jobs than were created in the Irish owned sector during the same period. Foreign companies yielded a net 5,907 jobs whereas Irish owned companies created a net 3,742 jobs.

Table 6.12 Net Annual Change in Employment in Foreign-Owned Agency Assisted Companies by County and Region 1995-2000

County/Region	95/96	96/97	97/98	98/99	99/00	Net Cumulative Job Creation 95/96-00	Percentage of net cumulative Change 95/96-00
Donegal	-253	-51	-396	-1,089	-87	-1,876	-3.6
Sligo	109	128	162	29	30	458	0.8
Leitrim	60	150	-59	83	-32	202	0.3
Roscommon	255	88	47	23	46	459	0.8
Mayo	-232	-215	436	-38	449	400	0.7
Galway	859	1,219	646	14	1,375	4,113	8.0
Clare	145	389	638	464	515	2,151	4.1
Western Region	**943**	**1,708**	**1,474**	**-514**	**2,296**	**5,907**	**11.5**
Eastern & Southern	7,280	8,456	7,974	9,968	14,084	47,762	93.0
BMW	215	1,470	1,162	-1,378	2,116	3,585	6.9
State	7,495	9,926	9,136	8,590	16,200	51,347	100.0

Source: Forfás 2001. Note: Refers to permanent full-time employment only.

Once more Galway accounts for a considerable proportion – nearly 70 per cent of net cumulative job creation for the Western Region. Indeed, the job gains in Galway and Clare together exceed the total for the Region, which is offset by the consistent losses in Donegal throughout the period. The remaining four counties had cumulative job gains totalling 1,519 in the second half of the 1990s.

6.8 Sectoral Analysis - Employment in Agency Assisted Companies, 2000

Sectoral employment in agency assisted companies in 2000 is set out in Table 6.13. Although 17.5 per cent of all assisted employment is in the Western Region, there is considerable variation in representation across sectors.

For example, of all employment in the financial services sector, only 5.5 per cent is located in the seven Western counties. International services employment is also underrepresented in the Western Region at 9.3 per cent. At the other end of the spectrum those sectors, which are over-represented in the Western Region, are clothing, footwear and textiles - sectors that are becoming increasingly difficult to sustain in the global market economy. Arguably it is also these sectors which have higher concentrations of low skilled labour.

Table 6.13 Sectoral Profile of Employment in Agency Assisted Companies in the Western Region 2000

Sector	Number	Western Region Share of National Total
Total Assisted Employment	**55,290**	**17.5**
Manufacturing (Total)	**47,180**	**18.9**
Food Products & Beverages	6,708	13.5
Textiles	2,167	33.8
Clothing & Footwear	1,246	24.3
Wood & Wood Products	1,594	24.2
Pulp & Paper Products	1,198	8.2
Chemicals	4,239	17.9
Rubber & Plastics	1,682	16.5
Non Metallic Minerals	2,051	17.2
Basic & Fabricated Metals	4,424	21.7
Machinery & Equipment n.e.c.	2,690	20.8
Electrical & Optical Equipment	14,925	22.9
Transport Equipment	2,397	18.8
Other Manufacturing n.e.c.	1,859	18.1
Financial Services	**465**	**5.5**
International Services	**5,032**	**9.3**
Other	2,613	65.7

Source: Forfás 2001.

Note: Refers to permanent full-time employment only.

6.9 Sectoral Analysis of Net Change

Net change in employment in agency-assisted companies in the Western Region, Galway and the remaining six counties, for period 1999-2000, is set out by sector in Table 6.14. As shown earlier in Table 6.5 , there was a net increase of 2,807 jobs in the Western Region. Most of these (2,178 jobs) were in Galway leaving an overall net increase of just 629 jobs in the other six counties.

There was a net increase of 1,408 manufacturing jobs in the seven Western counties. However Galway had a net increase of 1,708 jobs indicating a net loss of 300 manufacturing jobs in the other counties. The greatest losses occurred in the 'traditional' industries of food, clothing and textiles. The greatest gains were in electrical and optical equipment and 93 per cent of these went to Galway. There was an increase of 1,128 jobs in international services between 1999 and 2000, and over 40 per cent of these went to Galway.

Table 6.14 Net Change in Agency Assisted Employment 1999-2000

Sector	Galway	Other Six Counties	Western Region
Total Assisted Employment	**2,178**	**629**	**2,807**
Manufacturing (Total)	**1,708**	**-300**	**1,408**
Food Products & Beverages	-52	-174	-226
Textiles	1	-325	-324
Clothing & Footwear	-76	-443	-519
Wood & Wood Products	16	-19	-3
Pulp & Paper Products	63	53	116
Chemicals	36	233	269
Rubber & Plastics	-6	-51	-57
Non Metallic Minerals	35	135	170
Basic & Fabricated Metals	416	141	557
Machinery & Equipment n.e.c.	-46	140	94
Electrical & Optical Equipment	1,329	105	1,434
Transport Equipment	-13	-118	-131
Other Manufacturing n.e.c.	5	23	28
Financial Services	**-1**	**190**	**189**
International Services	**466**	**662**	**1,128**
Other	**5**	**77**	**82**

Source: Forfás 2001.
Note: Refers to permanent full-time employment only.

Key Points

6.10 State Supported Employment Creation in Manufacturing and Services

- In 2000, there were 55,290 persons employed in agency assisted jobs in the Western Region, but more than a third of these (18,854) were in Galway (city and county) and a further 20 per cent (11,166) were in Clare. Thus, more than half of all state-assisted jobs in the seven counties were in Galway or Clare.

- The share of agency-assisted employment located in the Western Region has declined from 19.4 per cent in 1995 to 17.5 per cent in 2000. At the same time, the Eastern and Southern Region had an increased share (from 71.9 per cent to 76.1 per cent). Of the Western counties, only Galway increased its share of employment over this period, accounting for six per cent of assisted employment nationally in 2000. All other counties in the Western Region had a decline in share.

- Over the second half of the 1990s (1995-2000) the number of assisted jobs in the Western Region increased by 9,649. But 6,877 of these (71.3 per cent) went to Galway and a further 2,333 to Clare (24.2 per cent), leaving a net gain for the other five counties of just 439 jobs or less than five percent of the total to the region. The Western Region accounted for just 11.9 per cent of the national total, while the Eastern and Southern region accounted for 88.1 per cent.

- In 1999-2000, the Western Region got 2,807 (11.9 per cent) of the national increase of 22,908 assisted jobs. Of these jobs Galway accounted for 78.0 per cent of the increase and Clare a further 15 per cent. The remaining five western counties had a net gain of just 201 jobs. Counties Donegal, Leitrim and Roscommon actually had a net decline in agency assisted employment.

- Since 1994, 4,087 full-time jobs were created in the Western Region with the assistance of County Enterprise Boards (22.4 per cent of the total).

- Employment in Irish-owned agency assisted companies has been increasing each year since 1995, both nationally and in the Western Region. Over the period 1995-2000, within the Western Region, all counties except Galway had a decline in share of employment in Irish owned assisted companies.

- Since 1999, employment in foreign-owned assisted companies has exceeded employment in Irish-owned assisted companies nationally. However, the Western Region's share of employment in foreign companies has declined consistently, from 22.0 per cent in 1995 to 18.7 per cent in 2000. Correspondingly, the share going to the Eastern and Southern region has increased consistently, from 72.6 per cent in 1995 to 79.0 per cent in 2000.

- Jobs in foreign-owned assisted companies are concentrated in Galway and Clare. Between them, these two counties account for 61 per cent of all such employment in the Western Region.

- The Western Region has a disproportionate share of assisted employment in industrial sectors vulnerable to job losses and attracts a smaller share of growing, high value added sectors such as financial and international services. The region accounts for 18.9 per cent of assisted employment in manufacturing, but a quarter of all clothing and footwear employment and one third of textiles employment.

- There was actually a net loss of 300 assisted jobs in manufacturing in six of the seven Western counties between 1999 and 2000. The greatest losses occurred in the 'traditional' industries of food, clothing and textiles. The greatest gains were in electrical and optical equipment, with an increase of 1,434 jobs in the Western Region of which 93 per cent were located in Galway. There was an increase of 1,128 jobs in international services between 1999 and 2000, of which over 40 per cent were located in Galway.

- Only 5.5 per cent of all employment in financial services is in the Western Region and 9.3 per cent of international services. These are the high value-added growth sectors and the Western Region is not attracting its share of these industries. Indeed, Enterprise Ireland have recently pointed out that, among their client firms in the BMW region, international traded services is the smallest sector and that more than half of the 150 firms they support in this region are trading out of Galway.

7. AGRICULTURE, FORESTRY AND THE MARINE SECTORS

7.1 Agriculture

7.1.1 Introduction

The importance of the agriculture sector to the Western Region has already been noted. The Western Region's share of employment in Agriculture, Forestry and Fishing is almost twice the national average but employment in the sector is declining steadily. According to estimates for 1996, the share of output (as measured by Gross Value Added) from agriculture, forestry and fishing[28] in the Western Region was twice the national average, with Leitrim and Roscommon having particularly high dependency on these sectors.

The Agri-Food 2010 Report, published in 2000, identified the various external and internal challenges facing the sector over the next decade. The forthcoming round of WTO negotiations is likely to put pressure on the continuation of present levels of market support to farmers, as well as raising environmental and other issues. EU enlargement is predicted to bring about very significant changes in the EU policy environment on which we are so dependent and to increase the competitive pressures on Irish agricultural produce. Other external forces include the need for environmental regulation arising from Agenda 21, the Kyoto Protocol and the Convention on Climate Change.

Within Ireland, the numbers of farmers will continue to decline – estimates in the Agri-Food 2010 Report indicate that there will be only about 20,000 full-time, commercial farms in the state by the end of the decade, and that these will be mainly engaged in dairy farming and concentrated in 'core areas' south of a line from Limerick to Dundalk. The remaining 80,000 farms will be part-time, with their operators depending on off-farm income, retired or engaged in 'hobby framing' and these are the farms that will predominate in the Western Region. Parallel to these trends, changes in the food industry at the production, distribution and retail levels will have implications for both farmers and the food sector, inevitably giving rise to significant rationalisation. Given that farming and the food industry are such significant sectors of the economy in the Western Region, such restructuring will have a particular impact in the region.

7.1.2 Regional Differences in Farm Structure, Income and Performance

Data from the 1999 National Farm Survey conducted by Teagasc illustrate some of the characteristics of farming in the Western Region (Table 7.1.1). Comparisons with the Border, Midland and Western Region and the more developed Eastern and Southern Region are also included to illustrate the regional differences.

[28] See *Blueprint for Success* (1999).

Table 7.1.1 Selected Characteristics of Farms in the National Farm Survey 1999

All Farms	Western Region	BMW	E&S	Ireland
% of Population	37.2	49.6	50.4	100.0
Av. Area Owned (ha)	24.4	25.1	38.1	31.3
Economic Size[29] (ESU)	10.7	13.0	27.0	19.8
Gross Output (£)	15,288	19,275	38,742	28,634
Family Farm Income (FFI £)	4,985	6,030	12,220	9,061
Age of Holder	54.1	53.8	51.0	52.3
Off-farm job H/S [30]	51.0	48.2	42.3	45.0

Source: Teagasc, National Farm Survey, 1999.
Note: The Western Region overlaps with both the BMW and Eastern & Southern Regions, as Clare is part of the Eastern & Southern Region.

More than a third of all farms in the survey are located in the Western Region and holdings are, on average, considerably smaller at 24 hectares than those in the East and South averaging 38 hectares. The contrast is even more stark when we look at the size of the farm business; farm businesses in the East and South are more than double the size of those in the Western Region, and this is reflected in the comparable average gross output and family farm income per farm. Average Family Farm Income was less than half that in the East and South in 1999. Farmers in the Western Region are also older than average and a higher proportion of them or their partners have off farm work.

The regional contrasts and the differences in intensity are evident when the data for full-time and part-time farms are compared[31] (Table 7.1.2).

Table 7.1.2 Selected Characteristics of Full & Part-time Farms, National Farm Survey 1999

	Western Region		Ireland	
Farm Characteristics	**Full–time farms**	**Part-time farms**	**Full–time farms**	**Part-time farms**
% all farms in sample	7.1	30.1	40.0	60.0
% of sample in Dairying	54.4	7.1	67.3	9.0
Av. Gross Output £	38,659	9,735	54,248	11,538
% FFI > £10,000	51.2	2.3	62.1	6.6
Economic Size	28.2	6.5	38.4	7.4
Age of holder	49.3	55.2	48.2	55.0
% H/H Demographically Viable[32]	96.9	71.8	92.7	73.6
Off-farm Job H/S	41.0	53.4	35.5	51.3
Off-farm job Holder	21.4	46.5	15.3	43.2
% HH with pensions	4.9	20.4	4.1	22.3

Source: Teagasc, National Farm Survey, 1999

The most striking feature of these data is the relatively small proportion of full-time farms in the Western Region – less than ten percent of the sample. A majority of these farms were in dairying and had an average gross output four times that of part-

[29] Measure of the size of the farm business rather than the land area farmed.
[30] Holder or spouse
[31] Farm which requires at least 0.75 standard labour units to operate.
[32] Percentage of households that have at least one member under forty-five years old.

time farms in the region. However, Western full-time farms lagged considerably behind the national average – by £15,589 in 1999. Only a tiny proportion of part-time farms in the Western Region generated Family Farm Incomes in excess of £10,000 and even on full time farms, almost half yielded less than this. Farmers on part-time farms are older, and more than a quarter of the households on such farms had no member younger than forty-five years. Such households also have the heaviest reliance on off-farm employment and on pensions.

7.1.3 Organic Agri-Food Production in the West

Organic farming has been identified as a potential growth area in which demand for produce greatly exceeds supply at present. The Western Development Commission recently launched a comprehensive study and strategic plan entitled *Blueprint for Organic Agri-Food Production in the West* that sets out the WDC's perspective on how the organic sector should be developed in the Western Region. Specific actions and costings for the development of the organic sector are recommended and how these should be implemented to ensure the success of the organic industry in the Western Region. The background research containing the more detailed findings of the consultants is available separately in *Background document to the preparation of Blueprint for Organic Agri-Food Production in the West*. The following is a brief summary of the key points in the Blueprint.

7.1.4 Organic Farming and Food Production in Ireland

Approximately 0.7 per cent of total agricultural area (29,000 hectares) is farmed by organic methods in Ireland. This involves almost 1,000 organic producers. The market for organic food in Ireland is valued at approximately £18 million which represents market penetration of just 0.4 per cent. This is well below that of other European countries and suggests that the market in Ireland is in its early stages and further growth of the industry is a reasonable expectation. The current breakdown of organic production in Ireland is as follows:

- Fruit and vegetables are the largest sector with a 45 per cent share of the domestic organic food market, estimated to be worth approximately IR£8 million.
- Organic beef follows this with a 20 per cent share of the organic food market.
- Lamb is considerably lower at 4 per cent share of the organic food market.
- Sales of pork and poultry are negligible, at approximately 1 per cent of organic market share.
- Other organic grocery products, which are mostly comprised of branded and processed organic food products, account for 22 per cent of the market.

While most sales are through retail channels, a vibrant direct sales market also exists across the country. It is expected that this channel will grow further and will particularly benefit those involved in horticultural production.

7.1.5 New Entrants Needed

While the market prospects for organic farming are favourable the research revealed that organic producers plan only limited expansion. A concern is that without a concerted effort to promote and support organic production, the current market opportunities may be lost, as the shortfall in organic food supplies is filled by imports. The key to expanding organic production lies in encouraging new entrants to organic farming and providing technical support for existing and new organic producers. New entrants with good management skills and farming experience are needed. Otherwise the Western Region could fail to capitalise on a potential growth sector.

7.1.6 Supports Required to Develop the Supply Base of Organic Produce

Blueprint for Organic Agri-Food Production in the West identifies supports required to develop the supply base of organic produce. These include:

- An increase in research funding, particularly in light of anticipated changes to organic regulations, as well as funding for market research.
- Co-ordination of training and education services to the organic sector.
- Improved advisory support to producers. The establishment of an Organic Information and Advisory Centre in the Western Region led by a public/private sector partnership was identified as the most important vehicle through which advice and information could be dispersed in an organised and planned way to organic producers.

7.1.7 Recommendations for Organic Agri-Food Production

The key recommendations in *Blueprint for Organic Agri-Food Production in the West* are set out below.

- Establishment of an Information and Advisory Centre in the Western Region.
- Training and appointment of qualified personnel to provide information, training, education and advice to existing and potential organic farmers.
- Establishment/designation of two demonstration farms to facilitate the delivery of training in organic farming methods in the Western Region.
- Establishment of two experimental farms and two monitoring farms for research activities in the Western Region.
- Development of a national marketing strategy for organic food with a special remit for the Western Region. This will provide marketing supports to producers, market information to retailers and processors, and consumer education. It will also ensure that all marketing activities promote one national single organic certified symbol.
- Initiation of a feasibility study into the development of a new distribution channel for small and medium organic food enterprises in the Western Region.
- Provision of appropriate resources and commitment by the public, private and voluntary sectors to support and implement the action plan for the Western Region.

Key Points

7.1.8 Agriculture

- Only a minority of farmers in the Western Region are at present generating an adequate income from farming, and income on these farms lags considerably behind the national average.

- There is a high dependence on off-farm income among farm families in the Western Region. Pressures on farming over the coming years are likely to increase the need for additional off-farm income.

- Given the income prospects, and the alternative opportunities available, fewer farm children will opt for a career in full-time farming.

- At best, by the end of the decade, a small minority of farm families in the Western Region will generate an adequate income from full-time farming and the remainder will be heavily reliant on off-farm income.

- The future viability of family farming and of rural areas is therefore heavily dependent on the availability of off-farm employment.

- Diversification within farming can provide a viable income on some farms and an important income supplement for those with off-farm jobs. Organic production, horticultural crops, farm forestry and on-farm enterprises are among the options that should be encouraged and facilitated.

- The WDC's *Blueprint for Organic Agri-Food Production in the West* argues that the Western Region is at a critical juncture in terms of the development of the organic sector. The indications are that affirmative action can lead to a vibrant industry that contributes positively to rural communities in the Western Region – both in terms of economic and environmental benefits.

- Detailed recommendations on the development of organic production, domestic and overseas market development, expansion of added value processing and development of distribution channels, research and development, education and training and information technology and the development of organic production are all set out in the Blueprint report.

7.2 Forestry

7.2.1 Introduction

Forestry accounts for one of the major recent shifts in land use and this is very much evident in the Western counties. The Western Region has 40 per cent of the afforested land in the state. Table 7.2.1 illustrates the proportion of land area in each county under plantation in 1997 and 2000. The area of forested land increased in all counties. It is anticipated that by 2030 the forest cover in Ireland will have reached 17 per cent, nearly double the present level[33].

Table 7.2.1 Percentage of Land Area Afforested by County and Region 1997, 2000

County/Region	1997	2000
Donegal	10.6	11.4
Sligo	10.2	10.9
Leitrim	13.3	14.5
Roscommon	6.4	6.9
Mayo	9.2	9.7
Galway	8.6	8.97
Clare	12.7	13.7
Western Region	**9.8**	**10.5**
State Average	**8.8**	**9.4**
Percentage in Western Region	40.6	40.5

Source: Forestry Service Statistics.

In 1996 it was estimated that directly and indirectly some 16,000 persons were employed in the industry nationally[34]. Direct employment is anticipated to increase from 7,000 to almost 11,000 persons despite the increasing mechanisation of planting and harvesting.[35] The most recent regional statistics[36] show that in 1996, 2,259 persons were employed nationally in forestry, 682 of these were in the Western Region accounting for 30 per cent of the national total. This reflects the significance of the sector in the Western Region.

Afforestation trends between 1997 and 2000 are set out in Table 7.2.2. All counties have had an increase in afforested area over the period. Between 1997 and 2000 there was a 6.4 per cent increase in the area forested in the Western Region while the forested area nationally increased by 6.5 per cent over the same period.

In all Western counties, there was an increase in the proportion of forests managed privately (compared to publicly-managed by Coillte). This also reflects a national trend and one that has been apparent since the late 1980s. It has been facilitated by the availability to farmers of afforestation grants for plantation along with annual premium payments.

[33] See Commins (2000).
[34] *Growing for the Future*, Department of Agriculture, Food and Forestry, 1996.
[35] See Commins, (2000).
[36] CSO, Census of Population 1996. One of the reasons for the apparent discrepancy in the figures is that the CSO figures relate to the respondent's main occupation. As is apparent from Table 7.2.3 farmers are increasingly engaged in this sector.

Table 7.2.2 Total Forest Area by Ownership and County and Region 1997, 2000

County/Region	Total Forested (Hectares)		Private Ownership		Public Ownership	
	1997	**2000**	**1997**	**2000**	**1997**	**2000**
Donegal	51,492	54,986	33.4	36.4	66.6	63.6
Sligo	18,280	19,552	38.1	41.3	61.9	58.7
Leitrim	20,257	22,152	39.2	43.4	60.8	56.6
Roscommon	15,839	17,236	52.2	54.5	47.8	45.5
Mayo	49,607	52,409	31.7	34.8	68.3	65.2
Galway	51,367	53,303	26.6	28.2	73.4	71.8
Clare	40,648	43,759	44.9	47.9	55.1	52.1
Western Region	**247,490**	**263,399**	**35.6**	**38.5**	**64.4**	**61.5**
State	609,745	649,812	36.4	39.5	63.6	60.5
Percentage in Western Region	40.6	40.5	39.7	39.5	41.1	41.2

Source: Forestry Service Statistics 2001.

7.2.2 Private Forestry Plantation

Recent data from the forest service (Table 7.2.3) illustrate the number of new applications[37] for afforestation payments in 1998 and 2000. Applications increased among all categories in 2000. The number of farmer applicants indicates the increasing importance of farm forestry in supplementing farm incomes through the annual forest premium scheme.

Table 7.2.3 Number and Type of New Applications for Premium Payments in the Forestry Sector by County and Region 1998, 2000

County/Region	Full-Time Farmers		Part-Time Farmers		Non-Farmers	
	1998	**2000**	**1998**	**2000**	**1998**	**2000**
Donegal	42	32	13	15	7	14
Sligo	30	30	4	4	2	10
Leitrim	22	22	12	14	10	24
Roscommon	21	29	5	5	8	10
Mayo	80	60	23	19	12	8
Galway	28	39	8	9	4	2
Clare	43	92	9	12	8	18
Western Region	**266**	**304**	**74**	**78**	**51**	**86**
State	704	938	167	206	114	152
Percentage in Western Region	37.8	32.4	44.3	37.9	44.7	56.6

Source: Forestry Service Statistics.

[37] This does not measure total employment nor the number of persons engaged in plantation. It just measures new applications in each year.

Key Points

7.2.3 Forestry

- Forestry is an important sector in the Western Region; the region accounts for 40 per cent of all afforested land in the state.
- An estimated thirty per cent of those engaged in the forestry sector are in the Western Region.
- The area of afforested land is increasing in all the Western counties.
- Farm forestry is increasing as afforestation grants and premia make forestry an attractive land use option for farmers.

7.3 The Marine Sector

7.3.1 Introduction

The marine sector incorporates fleet, aquaculture, processing and ancillary services. According to Bord Iascaigh Mhara (BIM), the entire sector employs about 16,000 persons nationally, of which approximately 40 per cent is part-time employment. Table 7.3.1 shows the breakdown of full-time equivalent employment in each of the sectors for the 'West' and the 'East'.

Table 7.3.1 Full-Time Equivalent Employment in the Marine Sector 1997

Region	Fleet	Aquaculture	Processing	Ancillary	Total
'East'	2,269	686	1,219	na	4,174
'West'	3,263	1,169	1,828	na	6,260
State	5,532	1,855	3,047	1,700	12,134
Percentage in 'West'	58.9	63.0	59.9	na	51.6

Source:Bord Iascaigh Mhara, BIM Seafood Industry Agenda 2000-2006, 1999 p.21.
Note: The 'West' here comprises the current BMW region plus counties Clare and Kerry.

According to these data, the 'West' accounts for over 50 per cent of employment in the sector nationally. However, the latest CSO figures for the Western Region indicate that there were 1,294 persons engaged in fisheries in the seven Western counties in 1996[38]. This represents about 42 per cent of the national total. The industry is vitally important to the survival of rural, coastal and Gaeltacht communities.

[38] CSO, Census of Population 1996. This refers to the seven Western counties; Donegal, Sligo, Leitrim, Mayo, Roscommon, Galway and Clare under the remit of the WDC.

7.3.2 The Fleet Sector

Table 7.3.2 shows the annual Irish sea fish landings by port for the years 1996 and 1999.

In 1996, ports in the Western Region[39] accounted for 57 per cent of all Irish sea fish landings. By 1999 this proportion had fallen to 44.5 per cent. Most of the ports in the Western Region contributed to this decline. Total fish landings in Irish ports were down 9.5 per cent between 1996 and 1999. Foreign ports increased their share of total fish landings over this period by the same amount, 9.4 per cent. Between 1996 and 1999 an increase in landings of pelagic fish from Irish vessels at Norwegian, rather than Irish, ports accounted for much of this change.

Table 7.3.2 Irish Sea Fish Landings by Port, Tonnes Live Weight 1996, 1999

Port	1996	1996 % of Total	1999	1999 % of Total	Difference in total share 1996-1999
Main Regional Ports in the Western Region					
Killybegs	144,322	43.4	100,151	34.8	-8.6
Rossaveal	7,046	2.1	6,412	2.2	0.1
Rathmullen	27,882	8.4	13,276	4.6	-3.8
Greencastle	4,222	1.3	3,646	1.2	-0.1
Other Regional Ports in the Western Region					
Burtonport	3,056	0.9	1,050	0.3	-0.6
Achill	1,321	0.4	1,276	0.4	-
Downings	584	0.2	1,232	0.4	0.2
Galway	375	0.1	260	0.1	-
Cleggan/Clifden	252	0.1	371	0.1	-
Aran Islands	150	0.0	213	0.1	0.1
Lettermore/Lettermullen	216	0.1	197	0.1	-
Ballyglass	334	0.1	0	0.0	-0.1
All Western Region Ports	**189,760**	**57.1**	**128,084**	**44.5**	**-12.6**
All Irish Ports	279,803	84.2	214,740	74.7	-9.5
Foreign Ports	52,589	15.8	72,550	25.2	9.4
Total	**332,392**	**100.0**	**287,290**	**100.0**	**-**

Source: CSO, Fishery Statistics, December 1999.

[39] These data refer to ports in the seven Western counties as above.

The value of sea fish landings in the Western Region by port in 1996 and 1999 is shown in Table 7.3.3. Ports in the Western Region accounted for 44.5 per cent of all landings by weight. This represented 28.3 per cent of the value of all Irish sea fish landings in the state. This was down on the 1996 share of value attributed to the ports in the Western Region. Within the Western Region, only Rossaveal port recorded an increase in the value of landings between 1996 and 1999.

Table 7.3.3 Value of Sea Fish Landings by Port 1996, 1999

Port	1996 (£000s)	1996 % of Total	1999 (£000s)	1999 % of Total	% Change 1996-1999
Main Regional Ports in the Western Region					
Killybegs	30,744	23.1	22,232	14.7	-8.4
Rossaveal	4,607	3.5	7,241	4.7	+1.2
Rathmullen	3,542	2.7	4,184	2.7	-
Greencastle	4,652	3.5	3,870	2.5	-1.0
Other Regional Ports in the Western Region					
Burtonport	1,372	1.0	1,490	0.9	-0.1
Achill	681	0.5	601	0.3	-0.2
Downings	1,392	1.0	1,609	1.0	-
Galway	650	0.5	363	0.2	-0.3
Cleggan/Clifden	384	0.3	516	0.3	-
Aran islands	313	0.2	326	0.2	-
Lettermore/Lettermullen	410	0.3	389	0.2	-
Ballyglass	397	0.3	0	0.0	-0.3
All Western Region Ports	**49,144**	**37.0**	**42,821**	**28.3**	**-8.7**
All Irish Ports	112,335	84.5	128,646	85.2	0.7
Foreign Ports	20,604	15.5	22,309	14.7	-0.8
Total	**132,939**	**100.0**	**150,955**	**100.0**	**-**

Source: CSO, Fishery Statistics, December 1999.

The Irish fisheries sector is obliged to operate within the confines of the EU Common Fisheries Policy (which is currently under review). As a consequence of quotas managing fish stocks, industry growth in the future will predominantly come from the development of non quota fisheries and aquaculture.

7.3.3 Aquaculture

The aquaculture sector is now a major component of the fishing industry. The output of the sector totals 39,000 tones[40]. This output has a value of £59 million at point of sale, which represents 30 per cent of the total value of seafood output. Aquaculture production is concentrated along the Western seaboard. Of the total number of producers in the country, 43 per cent are located in the Western Region as illustrated in Table 7.3.4.

Table 7.3.4 Location of Aquaculture Producers by County and Region 1997

County/Region	**1997**
Donegal	40
Sligo	5
Leitrim	0
Roscommon	0
Mayo	26
Galway	26
Clare	5
Western Region	**102**
Other Regions	132
Percentage in Western Region	43.5
State	**234**

Source: Indecon, Price Waterhouse Coopers *The Way Forward for Irish Seafood, Strategy for the Development of the Irish Seafood Processing Sector, 2001*. Taken from BIM 1997 estimates.

Aquaculture output is composed of both finfish and shellfish production. Both sectors have grown dramatically in the last few years. Finfish output, mainly comprising of salmon (89 per cent of the total) and trout is estimated to have increased by over 40 per cent between 1994 and 1999. Similarly, shellfish production (including mussels and oysters) has grown by nearly 50 per cent between 1994 and 1999.

The aquaculture sector is anticipated to grow further but business development and marketing is required for the industry to sustain high value-added markets.

[40] Source: Bord Iascaigh Mhara, *BIM Seafood Industry Agenda 2000-2006*, (1999).

7.3.4 Seafood Processing

Table 7.3.5 shows the distribution of seafood processing plants in 2000. Nearly 40 per cent of the seafood processing plants are located in the Western Region; thirty of these are in Donegal.

Table 7.3.5 Geographical Distribution of Seafood Processing Plants 2000

County/Region	Number of Plants	% of Total
Donegal	30	22.1
Sligo	1	0.7
Leitrim	0	0
Roscommon	1	0.7
Mayo	8	5.9
Galway	13	9.6
Clare	1	0.7
Western Region	**54**	**39.7**
Cork	24	17.6
Dublin	20	14.7
Kerry	13	9.6
Louth	5	3.7
Limerick	3	2.2
Waterford	5	3.7
Wexford	12	8.8
State	**136**	**100**

Source: Indecon/ Price Waterhouse Coopers. *The Way Forward for Irish Seafood, Strategy for the Development of the Irish Seafood Processing Sector, 2001.*

Table 7.3.6 illustrates the geographic employment distribution of those engaged in the seafood processing sector in 1997 and 1999. In 1997, the Western Region accounted for 47.3 per cent of all employment in seafood processing plants with 39.7 per cent of the total number of seafood processing plants located in the region. By 1999 over 50 per cent of all employment in the seafood processing industry was located in the Western Region.

Table 7.3.6 BIM Survey of Employment in Seafood Processing 1997, 1999

County/Region	1997	1999	Change 1997-1999	Percentage Change 1997-1999
Donegal	1,696	1,537	-159	-9.4
Sligo	62	60	-2	-3.2
Leitrim	-	-	-	-
Roscommon	100	105	5	5.0
Mayo	126	268	142	112.7
Galway	324	292	-32	-9.9
Clare	22	24	2	9.1
Western Region	**2,330**	**2,286**	**-44**	**-1.8**
Other Regions	2,590	2,244	-346	-13.3
Percentage in Western Region	47.3	50.4	11.2	-
State	**4,920**	**4,530**	**-390**	**-7.9**

Source: Indecon/ Price Waterhouse Coopers. *The Way Forward for Irish Seafood, Strategy for the Development of the Irish Seafood Processing Sector, 2001*. Taken from BIM Survey of Employment in Seafood Processing, 1997 and 1999.

Between 1997 and 1999 there were employment gains in three of the seven Western counties. The numbers engaged in seafood processing in Mayo more than doubled, from 126 persons in 1997 to 268 persons in 1999. On the other hand three counties suffered employment decline over the period which can partly be attributed to diversification from primary to value-added processing.

7.3.5 NDP Investment

The National Development Plan provides for an investment of £183 million for fisheries development. The BMW region is expected to receive £83 million for investment in Fishery Harbours, Aquaculture Development and Gaeltacht/Islands. This is designed to allow for fleet modernisation, aquaculture and harbour development.

Both Rossaveal and Killybegs harbours are to benefit from significant investment plans announced at the end of 2000. This investment in infrastructure and facilities will allow for an expansion in the capacity of the fishing industry at these ports. It is anticipated that this will help increase employment opportunities in the sector.

Key Points

7.3.6 The Marine Sector

- The fishing industry is concentrated along the Western seaboard with approximately 40 per cent of employment located in the Western Region.

- While the tonnage decreased, the value of Irish sea fish landings have increased over the last three years. During the same period there has been an increase in Irish landings at foreign ports.

- The EU Common Fisheries Policy and quota restrictions limit the possibilities for expansion of the fisheries sector.

- The aquaculture sector has grown significantly in the last decade due to market demand. Production is concentrated along the Western seaboard. Forty three per cent of producers are located in the Western Region. There are further opportunities for expansion of this sector but marketing and business development is urgently needed in the sector.

- More than half of employment in the seafood-processing industry is located in the Western Region, primarily in Donegal.

- The WDC in the report *Adding Value to Seafood,* compiled in 2000, identified the issues facing the seafood sector in the Western Region and made a total of 49 key recommendations for the development of the sector. This report was submitted to the Department of the Marine and natural Resources and many of the recommendations were included in the national seafood strategy – *The way Forward for Irish Seafood – Strategy for the Development of the Irish Seafood Processing Sector.*

8. TOURISM

8.1 Introduction

During the 1990s tourism growth in Ireland was very strong. Between 1993 and 1999, the total number of overseas tourists visiting Ireland grew by 77 per cent. However some regions have recorded more growth than others, notably Dublin and the South West.

Table 8.1 illustrates the numbers of overseas visitors to each of the western counties between 1997 and 1999. The Western Region's share of overseas tourists declined between 1997 and 1998, from 28.2 per cent of all overseas visitors to Ireland in 1997 to 27.0 per cent in 1998. Moreover, only three of the seven counties had an increase in overseas visitor numbers during 1997-99, viz., Donegal, Leitrim and Clare.

Table 8.1 Overseas Tourism Visitors by County and Region 1997-1999

County/Region	1997 (000s)	1998 (000s)	1999 (000s)	Change 1997-1999	Percentage Change 1997-1999
Donegal	243	261	267	+24,000	+9.8
Sligo	220	226	214	-6,000	-2.7
Leitrim	49	50	51	+2,000	+4.0
Roscommon	56	52	52	-4,000	-7.1
Mayo	298	288	288	-10,000	-3.3
Galway	939	877	877	-62,000	-6.6
Clare	540	570	597	+57,000	+10.5
Western Region	**1,414***	**1,495***	**na**	**na**	**na**
State	5,007	5,534	5,943	+936,000	+18.6
Percentage in Western Region	28.2	27.0	**na**	**na**	**-**

Source: Bord Fáilte as cited in Blueprint for Tourism Development in the West. * The total for the Western Region is less than the sum of its constituent parts as visitors visit more than one county.

Revenue generation in each of the counties does not necessarily correlate with visitor numbers. Tourists may stay longer and spend more in one county over another. Revenue generation from overseas visitors to each of the Western Counties between 1997 and 1999 is shown in Table 8.2. (Caution is necessary in interpreting these data as they are based on survey material with small sample size at county level).

All counties except Donegal and Clare had an increase in revenue generated from overseas visitors. For the region as a whole, revenue increased by £13m (3.4 per cent) between 1997 and 1999. Revenue increased nationally by £256m, or 16.1 per cent, over the same period. The increase in revenue in the Western Region between 1997 and 1999 represents just 5 per cent of the national increase. The share of revenue going to the Western Region declined from 23.9 per cent in 1997 to 20.9 per cent in 1999.

Table 8.2 Overseas Tourism Revenues by County and Region 1997-1999

County/Region	1997 £M	1998 £M	1999 £M	Change 1997-1999 £M	Percentage Change 1997-1999
Donegal	39	42	35	-4	-10.2
Sligo	36	37	37	+1	+2.7
Leitrim	10	9	11	+1	+10.0
Roscommon	11	15	15	+4	+36.3
Mayo	45	50	57	+12	+26.6
Galway	165	172	169	+4	+2.4
Clare	69	52	63	-6	-8.6
Western Region	**375**	**377**	**387**	**+12**	**+3.2**
State	1,589	1,712	1,845	+256	+16.1
Percentage Western Region	23.5	22.0	20.9	5	-

Source: Bord Fáilte

8.2 Employment in Tourism

Tourism is a diverse sector and the data below include employment in eight different parts of the sector, namely, hotels, guesthouses, self-catering accommodation, restaurants, licensed premises, fast food outlets, health services, industrial and carrier catering and tourism services and attractions.

Table 8.3 presents a profile of tourism and total employment in the Border, Midlands and West regions and the state in 1999. Tourism employment nationally accounted for 15 per cent of all those in employment[41] in 1999. The proportion was higher in the BMW region at 17 per cent. Within the BMW region, the West region (Galway, Mayo, Roscommon) has a particularly high rate of employment within the tourism sector (nearly 21 per cent).

Table 8.3 Employment in Tourism and Total Employment by Region 1999

Region	Tourism Employment	Total Employment	% Share Employed in Tourism
Border	24,800	156,400	15.8
Midlands	9,571	80,800	11.8
West	31,991	152,900	20.9
BMW Total	66,362	390,100	17.0
State Total	241,423	1,591,100	15.1

Source:*1999 Employment Survey of the Tourism Industry in Ireland*, CERT, 2000.

Composition of employment in the tourism industry is shown in Table 8.4. The BMW region accounts for 27.5 per cent of all employment in tourism. However, two thirds of employment is permanent in the BMW region, compared to a national average of more than three-quarters. The proportion of seasonal or occasional employment in the BMW region is correspondingly higher. Employment in the industry is therefore more insecure and fragmented in the BMW region.

[41] The base here is the number employed in the 2nd Quarter of the QNHS in 1999 (1,591,100 persons).

Table 8.4 Composition of Employment in the Tourism Sector, 1999

Region	Permanent	Seasonal	Occasional	Total	Percentage by Region
Border	15,484	7,059	2,257	24,800	10.3
Midlands	8,028	1,140	403	9,571	4.0
West	20,696	7,645	3,650	31,991	13.3
BMW Total	44,208	15,844	6,310	66,362	27.5
State Total	186,686	38,991	15,746	241,423	100.0

Source: *1999 Employment Survey of the Tourism Industry in Ireland*, CERT, 2000.

8.3 WDC Blueprint for Tourism Development in the West

The Western Development Commission has identified tourism as an area of considerable growth potential for the Western Region. An action plan *Blueprint for Tourism Development in the West was published* by the WDC in November 2000. The plan contains forty-eight detailed recommendations for achieving a spread of tourism growth in the Western Region beyond the established resorts and larger towns to the rural areas.

Rural areas comprise over 80 per cent of both landmass and population of the Western Region. The revenue generated by tourism to rural areas is currently estimated to contribute £205m to the West. This is less than one-third of total tourism revenues to Dublin.

The research work undertaken for the report[42]revealed key imbalances in tourism product across the region. Based on Bord Fáilte approved facilities, Cos. Galway, Clare, Mayo, and Donegal have substantial accommodation banks, whereas Sligo, Roscommon, and Leitrim are much weaker. There are virtually no 250+ room concentrations of accommodation away from the coast.

Almost two-thirds of visits to fee-paying attractions occur in Cos. Clare and Galway, and these two counties account for five of the six fee-paying tourist attractions that draw over 100,000 visitors annually.

Most overseas visitors to the Western Region enter Ireland via the east coast, so that access to the region by air, road and rail emerged as critical problems for tourism in the region, particularly given the growing trend to short-break holidays.

Major marketing weaknesses were identified in a travel trade survey indicating the need for a well-financed and co-ordinated marketing strategy.
The research also found that the Western Region has a number of vital tourism assets, which appeal to today's sophisticated holidaymaker, and has enormous potential to increase tourism revenues. These include the unspoilt landscape, lack of over-commercialisation, the genuine welcome of the people, and a sense of remoteness and peace. While inland rural areas have difficulty in competing with the spectacular Atlantic coastline they could exploit their relative lack of congestion, develop special interest holidays, and aim to provide excellent service standards.

[42]This research was carried out by Tourism Development International. See Blueprint for Tourism Development in the West.

However, the tourism sector is not well organised to respond to the challenges of spreading growth into the rural areas. A key finding was that there is far too much fragmentation, and too many under-resourced tourism bodies. If dispersal to rural regions such as the seven western counties is to be achieved, co-ordinated intervention is necessary. It must be strategically driven, well funded and sustained over time and all of the relevant agencies of government must be involved.

8.4 Key Strategic Priorities for Tourism Development in the Western Region

Attracting more tourists to the Western Region and achieving a more even distribution of tourism across the region involves a major shift in the approach to tourism development. This necessitates the adoption of distinct strategies, which can respond to the different needs of the three types of zones identified in the Blueprint.

There are seven elements of such an approach:

1. The creation of a driving force for change which can give a clear strategic direction and deliver integration of support;

2. The branding and implementation of well financed, co-ordinated marketing of the West of Ireland as a rural destination and the development of creative product packaging to meet customer needs;

3. The maximisation of the product strengths of each rural tourism area;

4. A concerted effort to improve access to the Western Region;

5. Filling accommodation and other tourism infrastructure gaps so that visitors can experience a genuine quality product;

6. A commitment to destination management and sustainability;

7. Creation of capacity to co-ordinate and deliver a quality product and excellent customer care through appropriate support and the fostering of partnership between the various tourism interests.

If dispersal to rural regions such as the seven western counties is to be achieved, co-ordinated intervention is necessary. It must be strategically driven, well funded and sustained over time and all of the relevant agencies of government must be involved.

8.5 Blueprint Recommendations

The key recommendations in *Blueprint for Tourism Development in the West* are summarised below:

- Establishment of a High Level Steering Group made up of the Department of Tourism Sport and Recreation, DAFRD, WDC, Bord Fáilte, Regional Tourism Authorities, Local Authorities and other departments and government agencies with responsibility for aspects of tourism and the environment. The Steering Group should be chaired by a senior manager in Bord Fáilte.

- Implementation of the new strategic approach would require the appointment of an Action Team consisting of
  - A Co-ordinator of Tourism Dispersal -West who would work for Bord Fáilte and liase closely with the Western Development Commission.
  - A Team of Tourism Development Officers funded through a partnership of tourism interests and public funding or redeployed from existing organisations.

- Additional funding to assist Regional Tourism Authorities (in conjunction with the co-ordinator) to develop and disseminate best practice guidelines. This would ensure that all bodies working at local, county and regional level could follow a common strategic direction in relation to product development and promotion and the funding of such activities. The various sources of tourism funding coming into the region should be channelled in one clear strategic direction by agreement on guidelines between all the agencies.

- Facilitate the zoning strategy by encouraging the establishment of working private sector rural tourism partnerships in each of the zones, under the Regional Tourism Authorities, which should include major community-based initiatives and tourism entrepreneurs. Such partnerships would focus on delivering 'area-based tourism packages' in conjunction with the Tourism Development Officers and the Regional Tourism Authorities, as well as establishing strong links with the travel trade.

- A unit in the Department of Tourism Sport and Recreation should be given overall responsibility for the delivery of the strategy in keeping with its overall objective of achieving dispersal of tourism to the regions.

8.6 Implementation

At the launch of the WDC's Blueprint last November, the Minister for Tourism, Sport and Recreation, endorsed the WDC's proposal for a Steering Group and announced that he had already asked Bord Fáilte to nominate a senior person to chair the Group. Bord Fáilte has nominated Mr. Ciarán Tuite, Head of Product Development, as chair and have set aside a budget of £250,000 in 2001 to bring forward marketing and other proposals initiated by the Group. The first meeting of the Steering Group, set up in response to the recommendations in *Blueprint for Tourism Development in the West* took place in April 2001.

The Steering Group, in conjunction with the Regional Tourism Authorities, has recruited a Tourism Programme Co-ordinator, as recommended in the Blueprint report. The person appointed will work to the Steering Group to implement the recommendations of the Blueprint.

Key Points

8.7 Tourism

- Ireland has experienced rapid tourism growth. Growth has been uneven, with Dublin experiencing the fastest rate of growth.

- Within the Western Region, growth rates, both in terms of volume and value, have also varied considerably.

- County Galway is the region's tourism capital, capturing almost half the bed nights for the entire region. Accommodation clusters hug the coast. There are no major (250+ rooms) concentrations of accommodation away from the coast. Almost two thirds of visits to fee paying attractions occur in counties Galway and Clare.

- The vast majority of visitors to Ireland enter on the east coast. Improving speedy access to the Western Region is critical to developing the sector.

- The revenue generated by tourism to rural areas is currently estimated to contribute £205m to the Western Region. This is less than one-third of total revenues to Dublin.

- There are both benefits and costs associated with rural tourism development and developing a sustainable approach is critical.

- There is potential for tourism to make an increased economic contribution to the West's rural areas but this requires the creation of a driving force for change which can give a clear strategic direction and deliver integration of support to deliver it.

- Infrastructure development must underpin tourism development in the regions and deliver improved access to the region.

- Implementation of well financed, co-ordinated marketing strategy for the West of Ireland as a rural destination and the development of creative product packaging to meet customer needs is required.

- There is a need to create capacity to co-ordinate and deliver a quality product and excellent customer care through appropriate support and the fostering of partnership between the various tourism interests.

- Implementation of the recommendations in *Blueprint for Tourism Development in the West* has already commenced.

Part II

Transport,
Energy and
Telecommunications Infrastructure

Introduction to Part II

Both the ESRI report *National Investment Priorities for the Period 2000-2006*, and subsequently the National Development Plan, identified public infrastructure as a major determinant of competitiveness. The priority given to public infrastructure in the National Development Plan recognised that upgrading the level and quality of provision is also one of the keys to tackling regional disparities. The relatively poor performance of the Western Region over the past two years, and the implications of deregulation of the telecommunications and utility markets, underlines the need to bring infrastructure provision into even sharper focus.

In Part II we analyse the current situation in the key areas of road infrastructure, public transport, energy and telecommunications. Other key areas of infrastructure which need to be addressed but are beyond the scope of this report are waste and water services as well as social infrastructure such as housing, health and educational services.

9. TRANSPORT IN THE WESTERN REGION – ROADS

9.1 Introduction

Access of people and goods to and from the Western Region is vitally important for development as road transport is the predominant means of travel in the region. The quality of road transport linkages is of crucial importance to trade, investment, tourism and quality of life. Poor quality road infrastructure is consistently mentioned by development agencies and business interests as a major barrier to investment in the region. Poor roads increase companies' operating costs by increasing travel time and transport costs to and from markets. Long travel times can also deter potential investors, senior executives or tourists from travelling to the region and increase the peripherality of many parts of the Western Region. Moreover, people in predominantly rural regions such as the seven western counties are more dependent on car transport and travel longer distances to work.

It has become increasingly evident that there are significant deficiencies in road infrastructure in the seven western counties.

9.2 The State of the Roads

The state of road infrastructure provision was reviewed in detail in *Blueprint for Success* and revealed that

- Local or regional roads comprise the majority of the road network in the region; only 5.8 per cent of the roads are national routes.
- Key national routes for the region were identified as N4, N5, N6, N13, N14, N15, N16, N17, N18, N19, N26, N56, N58, N59, N60, N61, N63, N66, N67, N68, N83, N84, N85.
- A very high proportion of roads in the Western Region require major reconstruction.

A detailed list of recommended road projects for both national and local roads in each county was presented, together with their estimated costs. Improvement of national primary routes and secondary routes was considered very urgent and detailed priorities were based on potential traffic along each route, the linkage between investment and the integrated development of the region and the impact of the investment in assisting the dispersal of economic activity across Ireland and within the region.

9.3 Investment in Roads under the National Development Plan

The NDP contained a significant commitment to expenditure on road infrastructure. Nationally, £3.4 billion of state and EU funding is to be provided for national roads, together with a further £1 billion of private sector investment, and £300m for maintenance of the road network. **None of the major routes to the Region are to be part of the core national network to be developed to high quality motorway/dual carriageway standard.** However, major improvements are indicated for the N4 in Roscommon; N5 in Roscommon; N13 in Donegal, N16 in Leitrim; N17 in Galway/Mayo; N18 in Clare; and N26 in Mayo. National Secondary Roads earmarked for improvement include the N56 in Donegal, N59 in Mayo and N85 in Clare.

Grant payments to local authorities by the NRA in respect of improvements and maintenance of national roads are outlined in Table 9.1 with the allocations for 2001 in Table 9.2. In 2000 £517m was paid to the National Road Authority for expenditure on improvements and maintenance of national roads, with £82m of this allocated to the Western Region. Payments for 2000 and Allocations for 2001 are set out in Tables 9.1 and 9.2. The NRA has announced a 28 per cent increase in total funding to national roads for 2001. The Western Region's allocation is up £30m on 2000 expenditure, but the proportion of total expenditure allocated to the seven western counties has been relatively stable over the two years.

Major projects on National Primary Roads impacting on the region in 2000/2001 include the N4 Boyle-Carrick on Shannon; and the N6 Aughrim-Cappataggle; the N15 Clar Barnesmore stretch in Donegal; the N18 Newmarket on Fergus Bypass (6 km) in Clare, the N17 Knock/Claremorris in Mayo and the N56 Mountcharles Bypass in Donegal. Substantial funding to secondary roads in 2000 included the N59 Galway/Moycullen and N61 Roscommon/Cooltigue projects.

Major projects which commence in 2001 include the N4 Sligo relief road, N5 Strokestown/Scramogue and the N18 Ennis Bypass.

Table 9.1 NRA Road Grant Payments to Local Authorities 2000

Local Authority	Improvements £000s	Maintenance £000s	Total £000s	WDC National Road Improvement Recommendations 2000-2006 £000s
Donegal	15,654	1,455	17,109	111,000
Sligo	4,760	738	5,498	64,700
Leitrim	2,985	277	3,262	37,000
Roscommon	11,875	1,169	13,044	191,100
Mayo	13,210	1,663	14,873	190,200
Galway Co Co	8,547	1,918	10,465	-
Galway Corp.	1,159	174	1,333	104,800
Clare	15,141	1,022	16,163	189,600
Western Region	**73,331**	**8,416**	**81,747**	**888,400**
Ireland	490,000	27,100	517,100	na

Source: NRA 2001, Unpublished payments data.
Note: The figures for Galway Corporation and Galway County are combined in the WDC recommendations.

Proportion of Improvement expenditure to Western Region	15%
Proportion of Maintenance expenditure to Western Region	31%
Proportion of Total expenditure to Western Region	16%

Table 9.2 NRA Road Grant Allocations to Local Authorities 2001

Local Authority	Improvements £000s	Maintenance £000s	Total £000s	WDC National Road Improvement Recommendations 2000-2006 £000s
Donegal	11,571	1,887	13,458	111,000
Sligo	4,389	1,030	5,419	64,700
Leitrim	6,057	365	6,422	37,000
Roscommon	14,215	1,500	15,715	191,100
Mayo	20,605	2,362	22,967	190,200
Galway Co Co	14,191	2,558	16,749	-
Galway Corp.	1,820	210	2,030	104,800
Clare	25,895	1,490	27,385	189,600
Western Region	**98,743**	**11,402**	**110,145**	**888,400**
Ireland	620,000	40,000	660,000	na

Source: NRA 2001, Review 2000 and Programmes for 2001.
Note: The figures for Galway Corporation and Galway County are combined in the WDC recommendations.

Proportion of Improvement expenditure to Western Region	16%
Proportion of Maintenance expenditure to Western Region	29%
Proportion of Total expenditure to Western Region	17%

As is evident from these two tables, the proportion of total funding allocated to the Western Region for 2001 has remained relatively stable, but falls considerably short of the WDC recommendations in *Blueprint for Success*. Averaging out the WDC total for road improvements over seven years would mean an average yearly spend of £126.9m per annum. The 2000 Improvements payments for the Western Region were £53.6m less than this, with the 2001 allocations falling short by £28.2m.

A detailed breakdown of allocations[43] in each of the counties for 2000 and 2001 is set out in Appendix Table 9.1A.

Another way of looking at these data is to examine expenditure on each of the national routes in the Western Region. These data are included in Table 9.2A and summarised in Table 9.3 below.

[43] Local authorities vary in the extent to which they had spent their 2000 allocations by the end of the year, so we have used the allocation data in all of the remaining tables i.e. final allocations for 2000 and start of year allocations for 2001.

Table 9.3 WDC Recommendations for Road Improvement Expenditure 2000-2006 and Spending Allocations on National Roads in the Western Region 2000, 2001

National Road	WDC Recommended Expenditure 2000-2006 £m.	2000 Allocation £M.	2001 Allocation £M.
N3	na	0.02	0.10
N4	29.6	12.49	9.99
N5	160.4	2.84	8.02
N6	69.5	6.07	8.65
N13	na	2.21	2.25
N14	27.0	0.37	0.51
N15	54.2	10.00	6.92
N16	45.5	1.28	1.61
N17	87.6	13.98	15.45
N18	102.7	15.52	16.46
N19	na	0.02	0.0
N26	41.0	0.45	1.35
N56	34.3	3.69	4.61
N58	7.0	0.00	0.09
N59	9.8	3.21	2.60
N60	52.0	0.00	1.20
N61	58.1	2.72	2.04
N63	19.0	0.12	0.56
N65	na	0.26	0.75
N66	na	0.08	0.25
N67/68/85	86.9	1.55	2.09
N83	na	0.10	0.69
N84	3.8	2.05	1.70
Total	**888.4**	**79.03**	**87.89**

Note: 'na' refers to not available. The totals may not sum to earlier figures due to rounding.

In line with the accelerated road investment programme the NRA has significantly increased allocations to local authorities for the planning and design of major projects. A total of £11.8m was allocated to this purpose in the Western Region during 2000 and £14.3m has been allocated in 2001. Details are set out in Table 9.3A.

9.4 Non-National Roads

The National Development Plan contained a commitment to invest significantly in the non-national road network. The 2001 allocation provides for an expenditure of £319 million for non-national roads throughout the state. This represents an increase of 21 per cent on the amount allocated in 2000. Of this the Western Region has an allocation of over £85 million, representing 26 per cent of the total 2001 allocation for non-national roads. Grant allocations for 2001 for non-national roads are outlined in Table 9.4.

Table 9.4 Grant Allocations for Improvements and Maintenance of Non National Roads in the Western Region 2001

	2001 Total Non-National Road Grants[44]
County Councils[45]	**IR £000**
Donegal	18,096
Sligo	6,475
Leitrim	6,663
Roscommon	9,204
Mayo	14,240
Galway	18,800
Clare	11,604
Total Western Region	**85,082**
State Total Non-National Road Grants	319,037
Western Share of Total	26.6%

Source: Department of the Environment, 2001.

9.5 Road Infrastructure Priorities

The key road routes to the region are shown on Figure 9.1.
These are

- East West access routes N2, N3, N4, N5, N6, N7, N26 and N60
- North South corridors N13, N15, N17/18, N19 and N61 which include access to Knock, Shannon and Derry airports
- The coastal/tourist route from Clare to Inishowen
- Key regional link roads N16, N56, N58, N59, N63, N83, N84 and N85.

While the N4, N6, N7, N15, and N17/18 are designated as major inter-urban routes and earmarked for significant investment in the NDP, other major **primary road routes** into and through the region, notably the N2 and N5, are in need of major upgrading. Businesses in the region are constantly pointing out to the WDC the cost to them of the inadequate road quality, especially the N5 that is the main primary route to the east coast for counties Mayo and Roscommon. There is ample evidence from them and from the development agencies that poor road quality is a major deterrent to investment in the region.

Given the importance of the N60 as an **access road** to and through Roscommon and Mayo and the function of the N61 as a **link** between Sligo and Athlone, there is a case for investing in significant improvements to bring them up to a standard comparable to primary routes.

The **coastal roads** are vitally important for tourism in the region and for local access for coastal communities. The coastal route should be maintained to a standard to ensure safe and adequate levels of service for probable increasing volumes of tourism and local traffic.

Regional link roads are important arteries between primary routes and in providing access to smaller towns in the region and facilitating local linkages. They are also

[44] This data excludes allocations under the Local Improvement Scheme.
[45] This includes data for the respective Corporations and Urban District Councils.

important in helping economic hubs to develop within the region and must be upgraded and maintained to an adequate standard.

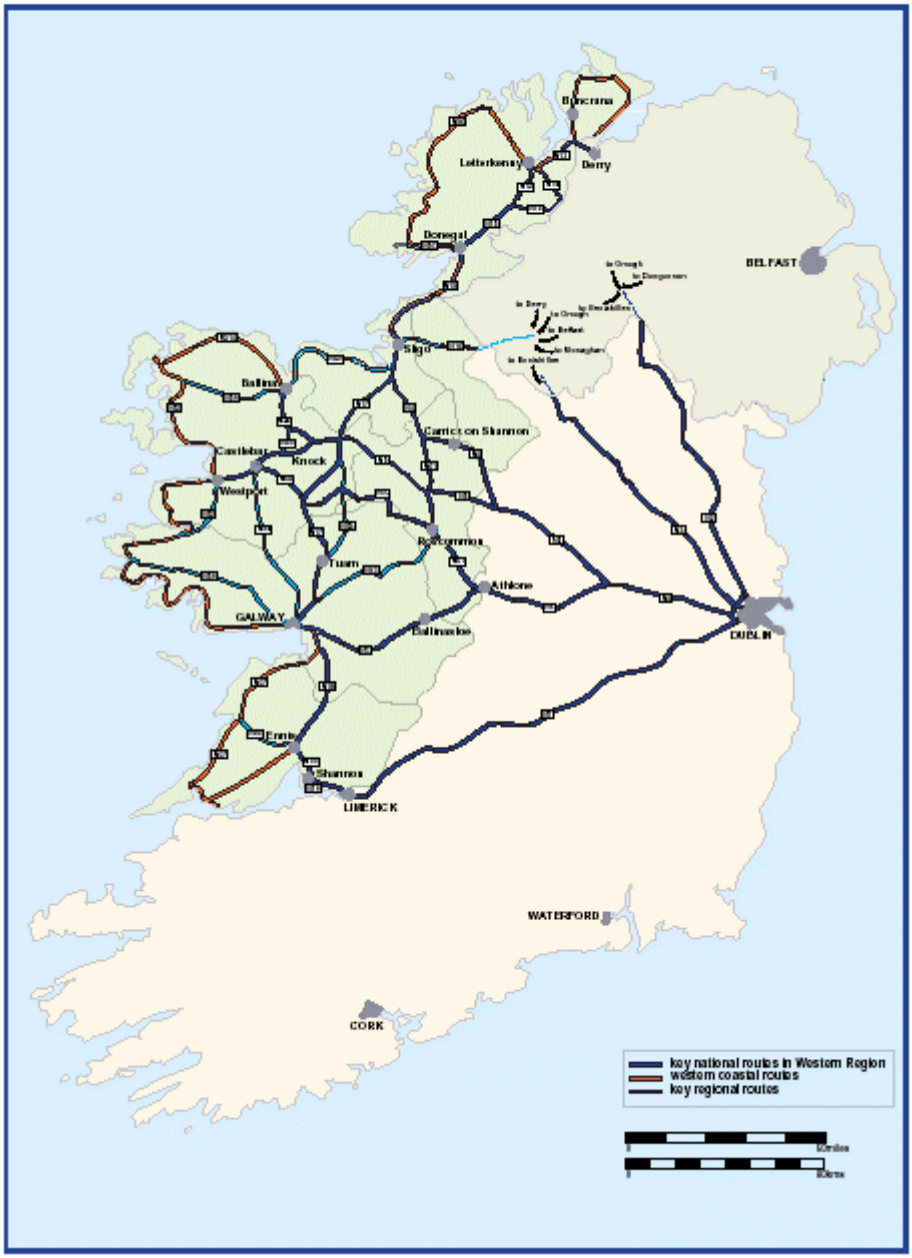
In Chapter 13 of this report the WDC's recommendations for a strong strategic response to the provision of road infrastructure are outlined. It is estimated that in excess of 90 per cent of all internal passenger and freight traffic in Ireland is by road, and the WDC believes that such a response is needed, in view of the fundamental importance of adequate road provision for the development of the region.

Given the peripherality of the Region, it is essential to develop a strategy for road infrastructure which is based on the development needs of the region rather than on existing traffic flows (which are often influenced by the condition of roads, in any case). Such a strategy should aim to:

- Substantially improve the links between the Western Region and the rest of Ireland, the UK and Europe.
- Facilitate existing and future economic activity.
- Ensure speedy and efficient access to the airports.
- Improve access to and between towns in the region.
- Upgrade the coastal routes to support tourism and marine development.

The WDC's priorities in relation to road infrastructure are based on these principles.

Figure 9.1 Road Network in the Western Region 2001



10. TRANSPORT IN THE WESTERN REGION - AIR, RAIL AND REGIONAL PUBLIC TRANSPORT

10.1 Air Access

10.1.1 Introduction

Improving air access is essential for the development of business and tourism in the Western Region. The seven western counties are served by the national airports at Dublin, Belfast, and Cork as well as Shannon. In the Western Region, both Shannon and Knock have runway capacity and other facilities suitable for large jet aircraft and freight carriers, while the smaller airports at Donegal, Galway and Sligo are capable of handling smaller aircraft.

Passenger numbers at each of the airports are listed in Table 10.1.1. For those years for which data is available, there has been an increase in passenger numbers at all airports except Knock and Donegal. Dublin is by far the busiest airport and passenger numbers in Dublin, Belfast, Cork and Shannon rose by more than one fifth from 1997-99.

The decrease in passenger numbers at Knock airport over the period 1999-2000 can be explained by a reduction in Ryanair flights from two flights daily to one in November 1999 on the Stansted route. In addition, Aer Lingus ceased its once weekly Birmingham route. However, passenger numbers for Knock in 2001 are forecasted at approximately 230,000 due to the resumption of twice daily flights to Dublin via Ryanair and the introduction of a daily service to Dublin with Aer Arann. In the case of Donegal Airport the drop in passenger numbers is due to the non-operation of the Scottish service due to carrier difficulties. It is hoped that the Scottish route will be re-established for future peak summer seasons.

Table 10.1.1 Passenger Movements through Airports serving the Western Region 1997-2000

Airport	Passenger Numbers 1997	Passenger Numbers 1999	Passenger Numbers 2000
Dublin	10,333,202	12,802,031	-
Belfast International	2,459,344	3,010,000	-
Belfast City	1,280,000	1,300,000	-
Shannon	1,822,064	2,190,522	-
Cork	1,196,261	1,501,848	-
Regional Airports	352,351	439,010	-
Knock	-	207,994	171,313*
City of Derry	61,461	106,602	172,501
Donegal	-	23,143	20,653
Sligo	-	24,171	24,395
Galway*	-	77,102	82,452

Source: Aer Rianta and the Regional Airports. * The data for Galway Airport reflects scheduled flights only. The data for Knock Airport in 2000 includes scheduled and non-scheduled flights.

10.1.2 Air Services from Airports in the Western Region

The regional airports are important in providing an alternative to road transport both in terms of accessing international connections at Dublin, but also to allow business users easy access to Dublin and London. Table 10.1.2 shows the number of flights per week to Dublin, both in 1998 and 2001. All airports apart from Donegal[46] had an increase in the number of services to Dublin over the three-year period. The total number of flights from the Western Region to Dublin (including Derry airport) increased by 57.8 per cent or an additional 44 flights per week.

Table 10.1.2 National Scheduled Services Operating from Airports in the Western Region 1998, 2001

Airport	Domestic	Flights per Week	
		1998	**2001**
Shannon	Dublin	36	43
	Belfast	4	5
Knock International	Dublin	1	7
Sligo (Strandhill)	Dublin	7	14
Galway (Carnmore)	Dublin	21	30
Donegal (Carrickfinn)	Dublin	7	7
Derry*	Dublin	0	12
Total		**76**	**120**

Source: Aer Rianta and the Regional Airports. * Refers to summer schedule, 2001.

The National Development Plan allocated £8 million to the four regional airports within the BMW region as part of the Essential Air Service Programme. More recently the Department of Public Enterprise announced that the government would be spending £30 million on the regional air programme from 2000 to 2003[47]. This Public Service Obligation (PSO) funding applies to daily return flights between Dublin and Kerry, Galway, Knock, Sligo, Donegal and Derry. The Galway service is being supported by £2.5 million per year, which is the largest amount granted of all the six routes.

[46] Donegal Airport was the only airport not to have received the additional flight to Dublin under the Department of Public Enterprise approved New Programme of Essential Air Services. Demand is growing for an early morning service to Dublin and management are hopeful of achieving additional capacity when the route is re-examined in the near future.

[47] Department of Public Enterprise, Press Release dated 25th January 2000.

10.1.3 Market Demand for a Knock-London Air Service

A recent study conducted by the Chambers of Commerce in the Western Region[48] examined demand for additional air services to the Western Region from Knock Airport. The report is based on a survey of commercial and domestic travellers that involved 600 interviews. In addition, in-depth interviews were conducted with seven of the largest employers in the catchment area and thirty key tour operators from Ireland, UK, other EU countries, USA, and Canada.

The research revealed an opportunity for the development of an additional year-round direct Knock/London route. London is a well-established business and leisure destination for the West but there are high levels of dissatisfaction with the current flight provision. The following are some of the report's key findings.

- A general low satisfaction with the current air travel infrastructure in the West – 53 per cent of businesses and 51 per cent of domestic travellers are dissatisfied with the current provision of flights. This is mainly because of the need to travel to Dublin. But low frequency of flights and limited destinations are also factors.

- Knock is the first preference airport for just 11 per cent of commercial and 14 per cent of domestic air travellers.

- However, it is the 'preferred' departure airport for 42 per cent of commercial and 35 per cent of domestic air travellers; this indicates a latent demand and likely take-up, were the right services available.

The study, focused primarily on demand for an additional service from Knock to London, revealed that

- Of those surveyed, business travellers go to London an average of 12 times per year and domestic travellers 2.5 times per year.

- Interest in a direct Knock/London service is very high – 86 per cent of commercial and 77 per cent of domestic travellers.

- Eight out of ten travellers (both domestic and business) travel to London and seven out of ten have visitors from London.

- Overall 86 per cent of business travellers and 77 per cent of domestic travellers are interested in a London service and interest decreases as stopovers or alternative destinations are introduced.

The views of two key sectors were particularly sought – major employers and tours operators. Seven major employers in the West were interviewed. They all have more than 1,000 employees and represent the largest employers/inward investors in the region.

- These employers believe that the absence of a London service has impeded the growth and competitiveness of their businesses on a European and global scale. It

[48] Chambers of Commerce Ireland, Western Region, Knock Airport appraisal, September 2000.

has caused them to miss business opportunities and investment and has restricted employment expansion and individual corporate development.

- They consider that a new Knock/London service would bring them closer to international markets by making the region more attractive to visit for buyers and customers. It would give an opportunity to offer same day services and send out the right signals for business in the region. It would no longer be seen as such a remote location and foreign companies located there could be more active players in the global markets of their parent companies.

- In short, an additional year-round Knock/London service would make 'doing business' in the west of Ireland an attractive proposition for non-Irish companies. It would lead to employment creation and stimulate much needed local infrastructure improvement.

These findings reinforce the large-scale survey findings. The need for the service is real and measurable. Businesses believe that they are disadvantaged by their location in the West.

Interviews with key tour operators revealed that

- Tour operators perceived Knock as a high cost airport with poor frequency of flights and connections. Consequently, they showed only a guarded interest in a Knock/London route.

- They see the opportunity for Knock as a gateway to open up the West as a destination, only if it proves to be a more attractive alternative to Dublin in terms of financial return, access, timings and frequencies of services.

- The travel trade felt that the West needs aggressive marketing in order to build demand for Knock as a tourism gateway.

- Immediate tourism traffic increases are unlikely, but tourism business could increase if investment in airport infrastructure and improved service offered a viable alternative to Dublin.

These findings from the tourism sector reinforce the findings and conclusions of the WDC's *Blueprint for Tourism Development in the West* which are detailed in Chapter 8. The issue of access to the region is crucial and the region must be able to compete with the more established tourism destinations.

10.1.4 International Services

International services (including to the UK) from each of the airports in 1998 and 2001 are listed in Table 10.1.3. There has been a 40 per cent increase in the number of flights per week from Shannon (an additional 49 flights) with most of this increase accounted for by transatlantic flights. It is more difficult to ascertain trends for the regional airports, as their services and function are primarily domestic.

Table 10.1.3 International Scheduled Services Operating from Airports in the Western Region 1998, 2001

Airport	International	Flights per Week	
		1998	2001
Shannon	Amman	0	3
	Atlanta	4	7
	Baltimore	0	7
	Birmingham	7	7
	Boston	7	7
	Brussels	0	7
	Chicago	6	10
	Frankfurt	0	7
	Havana	0	2
	London Gatwick	19	7
	London Stansted	19	21
	London Heathrow	21	27
	Los Angeles	0	7
	Manchester	12	12
	Mexico	1	0
	Miami	2	0
	Minsk	1	2
	Moscow	2	3
	New York JFK	7	14
	New York Newark	12	12
	Paris	0	7
Total (Shannon)		120	169
Knock International*	London Stansted	11	7/14
	Manchester	4	5
	Birmingham	1	0
Galway (Carnmore)	Manchester	5	0
Galway Summer Schedule	Zurich	0	1
Sligo		-	-
Donegal[49] (Carrickfinn)	Glasgow	0	0
Derry	Various*	14	34
Total		**155**	**216/223**

Source: Aer Rianta and the Regional Airports. *Ryanair operate two flights daily to London Stansted during the summer season. Destinations from Derry Airport include Manchester, Glasgow, London and Belfast. Knock airport operates charter flights from Frankfurt, Hannover, Hamburg, Dusseldorf, Amsterdam and Zurich.

[49] A direct service had operated to Glasgow. The service had been erratic and inconsistent with various carriers operating at different periods. There is a market however and it is hoped to re-instate a service for the peak summer months.

10.1.5 Recent Developments

A new 60-acre Business Park at Knock has been developed on a site adjacent to the airport cargo area. The £50 million Business Park is expected to create up to 2,000 jobs and enhance the attractiveness of the region for new investments. A high-technology company, Xenon Technologies is already committed there and expects to employ 69 people over the next two years in the production of glass-mastering technology for the compact and digital video-disc manufacturing industry.

10.1.6 Air Access – Key Points

- Air access is extremely important for both tourism and business interests in the Western Region.

- There is strong evidence of additional unserviced demand for a Knock/London service, particularly among the business community who believe they are disadvantaged by their location in the region.

- There is a need to prioritise Shannon and Knock airports for international access as they are spatially well located with international runway facilities. This means that they must be enabled to compete for commercial and tourism business.

- Additional demand can only be fully capitalised on when the access to airports is improved through upgrading the road network, particularly the N17/N18 to Shannon and Knock.

- The regional airports are at a disadvantage compared to the Aer Rianta managed airports (Dublin, Cork and Shannon), where landing fees and rates are much lower.

10.2 Rail Access

10.2.1 Rail Services to/from the Western Region

Railways together with road infrastructure can significantly reduce the geographic peripherality of the Western Region. The National Development Plan notes that: *Increasingly, the transport of goods and people by rail is viewed as an environmentally and safer alternative to road transport.*[50] The NDP also recognises the lack of investment in rail infrastructure up to the 1990s, which significantly eroded its competitive position as a mode of transport in comparison to the road network.

Four rail lines serve the seven Western counties, as listed in Table 10.2.1. The Dublin-Ennis route is essentially the Dublin-Limerick route with an onward connection to Ennis from Limerick. The Galway-Dublin service is the most frequent reflecting the higher population base. Apart from an additional Sunday service between Dublin and Westport/Ballina, there has been no change in the number of services on these routes since 1998.

Table 10.2.1 Iarnród Éireann Rail Services to the Western Region 2001

Route	Services per Day	Stations Served	Typical Journey Times
Dublin-Sligo	Monday-Thursday, Saturdays - 3 Fridays - 4 Sundays - 3	Sligo-Collooney- Ballymote-Boyle- Carrick-on-Shannon- Dromod-Longford- Edgeworthstown- Mullingar	3 hr 10min
Dublin-Westport/Ballina	Monday-Thursdays, Saturdays - 3 Fridays - 4 Sundays - 3 Sundays (in Winter Season) - 4	Westport-Ballina Foxford-Castlebar Claremorris- Ballyhaunis-Castlerea Roscommon-Athlone Clara-Tullamore	4 hours
Dublin-Galway	Monday- Friday - 5 Saturday - 4 Saturday (Summer) - 5 Sundays - 4	Galway-Athenry Attymon-Woodlawn Ballinasloe-Athlone Clara-Tullamore	2 hrs 30 min
Dublin-Ennis (via Limerick	Weekdays - 2 Sundays - 1	Ennis via Limerick	3 hrs 15 min

Source: Iarnród Éireann 2001.

[50] The National Development Plan 2000 – 2006. p58.

10.2.2 Iarnród Éireann's Investment Programme *OnTrack 2000*

Since the beginning of the 1990s there has been significant investment in the rail network nationally, as a result of both EU and Exchequer support. The National Development Plan provides for a £500 million investment in the rail network comprising two key elements;

1. Completion of the implementation of the Railway Safety Programme 1999 - 2003
2. Renewal/Upgrading programme.

OnTrack 2000 is Iarnród Éireann's investment programme supported by the National Development Plan. This comprises track renewal, signalling, new carriages, new services, station up-grades, safety-related investment and investment in mobility-impaired facilities. The *OnTrack 2000* programme of investment is due to be completed by 2003. Table 10.2.2 provides details on track type, passenger numbers and committed investment for those rail lines serving the Western Region.

Table 10.2.2 Iarnród Éireann Details of Investment 2001

Rail Line	Track type % Continuously Welded, End 2001	Passenger Numbers (per year)	Current Investment £Million	Completion Date
Dublin-Galway	100%	1,000,000		1999
Dublin-Sligo	86%	600,000	£31.5	2002
Athlone-Westport-Manulla-Ballina	54%	450,000	£43.0	2002/2003
Dublin- Limerick	100%	650,000	-	1999
Limerick-Ennis	27%	65,000	£7.0	2003
Total		**2,765,000**	**81.5**	**-**

Source: Iarnród Éireann 2001.

Track Renewal between 1999 and 2003 is expected to cost £187 million. The investment programme has enabled an increase in the proportion of each track that is continuously welded, which provides for greater train speeds. All routes are due to be fully upgraded to continuous welded rail (CWR) by end 2003. In 2001, 87 miles of track nationally are to be relaid. Within the Western Region the details of the track improvement programme are;

- The Galway - Dublin route has now been fully upgraded to100 per cent CWR. In 1998 the Dublin – Galway route had a CWR rate of 77 per cent.
- Forty-five miles of track will be relaid between Athlone and Westport in 2001 and 2002. In 1998 the CWR rate was 10 per cent and is now 54 per cent.
- In 1998, the Dublin- Sligo route had a CWR rate of 48 per cent. This now stands at 86 per cent. In 2000 the track between Mullingar and Carrick-on-Shannon was completed. Track renewal between Carrick-on-Shannon and Sligo is not expected to be completed until 2002.

10.2.3 Station Upgrading

Galway's Ceannt Station is being up-graded. Investment in a new station roof and renewal work on the station's permanent way is being undertaken. Upgrading work is being undertaken at both Heuston and Connolly stations. Part of the development at Heuston is the creation of two new platforms. The development of new radial routes

from the Western Region to Dublin requires this investment at Heuston as there is no capacity for new services entering into Dublin. There is a business case for an additional daily service between Galway and Dublin, however until new rolling stock is available and additional capacity is available at Heuston then consideration of additional routes cannot proceed.

10.2.4 Freight Traffic

Ballina serves as a freight terminal for the Castlebar and Ballina region. There are two freight trains per night from Ballina to Dublin. Iarnród Éireann is currently in negotiation with Norfolk Shipping and the management of Coca Cola in Ballina to examine the possibilities of extending freight services to their factory in Wexford. There is freight traffic travelling between Athenry and Ennis on a seasonal basis averaging three trains per week.

10.2.5 Western Rail Corridor

The term Western Rail Corridor refers to the possible rail passenger and freight route from Sligo or Ballina through to Limerick with onward connections to the South-west and the port of Rosslare. In the context of a National Spatial Strategy this route could prove very valuable in (1) linking the towns of the Western Region and thereby enhancing the development of 'critical mass' (2) allow the possibilities for tourism to develop on the railway route and thereby diversifying tourism growth to more inland regions[51].

For the Western Rail Corridor to carry both freight and passenger traffic, several sections of track need to be up-graded significantly. These sections include;

- Collooney - Claremorris
- Claremorris - Athenry
- Athenry - Ennis

The Collooney to Claremorris track is disused and has been closed to all traffic since 1974. It is in a state of disrepair but is still owned by CIÉ. The Claremorris to Athenry track is closed to all passenger and freight traffic, however it is used by Iarnróid Éireann for engineering purposes. The Athenry to Ennis track is open for freight traffic only. It is used to transport cement and fertilizer. Traffic is seasonal and averages three trains per week.

It is estimated that to open and up-grade the Western Rail Corridor from Collooney to Ennis, which would allow passenger traffic at speeds of 60-70mph would cost in the region of £100 million. This includes the cost of ancillary works. This corresponds to less than 1 per cent (0.7 per cent) of the transport initiative for Dublin, *A Platform for Change* which has been costed at £14 billion[52].

The rail network in the Western Region is illustrated in figure 10.1

[51] For example towns such as Kiltimagh and Athenry have untapped tourism potential.
[52] *A Platform for Change; Outline of an Integrated Transportation Strategy for the Greater Dublin Area 2000-2016, p.18.* The £14 billion is at 2000 prices.

Figure 10.1 Rail Network in the Western Region 2001

10.2.6 Rail Transport – Key Points

- Rail transport can be a serious alternative to the road network but only if it is a quality service which is safe, reliable and efficient.

- The quality of the rolling stock is a serious issue for the Western routes. However, new carriages for routes into the Western Region will not be available until the rolling stock on the Dublin/Cork/Belfast routes has been upgraded.

- Until the *OnTrack 2000* investment programme is completed, capacity constraints in terms of rolling stock and access to stations in Dublin are impeding the upgrading of existing services and the introduction of additional quality services.

- There should be consideration of new timetabling, particularly in relation to early and late express services between major centres.

- The development of a Western Rail Corridor (Sligo-Limerick) has the potential to provide significant freight and passenger transport and facilitate tourism in the region. Serious investigation of the feasibility of a Western Rail Corridor should be undertaken.

- The Western Rail Corridor could also be linked to the development of commuter routes between centres in the region.

10.3 Regional PublicTransport

Regional public transport is predominantly road-based. It involves much shorter journeys to inter-city travel (e.g. Sligo to Ennis), usually between towns, or from villages into towns. In rural areas, public transport is a prerequisite for access to essential services and leisure activities. Those without private cars are particularly affected, for example, the elderly, young people, people on low incomes, the disabled and mobility impaired and the unemployed.

Much of the investment provided for in the National Development Plan concentrates on the improvement and provision of radial routes (both road and rail) from the regions to Dublin. While this investment is obviously required it reinforces the existing primacy of the Greater Dublin region and thereby limits the possibilities of other regions developing as a counterbalance.

Preliminary analysis of current rural transportation suggests that coverage and frequency, particularly in more rural areas is patchy. There is little evidence of integration between different modes of transport. For, example, there is little co-ordination of service provision between Bus Éireann, Iarnród Éireann, Private Bus Operators, the School Bus system, health transport and rural pilot schemes. In addition, there are few linkages between the different modes of public transport in terms of timetabling, thereby proving an additional dis-incentive.

Just as the primary road and rail networks have lacked investment up to the 1990s, the rural transport network has not been assessed or re-examined for decades. Consideration of this is now being examined and two initiatives are under way.

1. The first, the Rural Transport Initiative (RTI) was launched at the start of 2001. A total of £3.5 million is being made available for pilot transport projects in rural areas. It is aimed at community-based groups and the consultation process is currently underway.
2. An inter-departmental Working Group on Rural Transport has been established and has commissioned consultants to carry out a rural transport audit service and needs assessment in four counties. These will work in co-operation with City/County Development Boards.

It is hoped that the Working Group on Rural Transport will provide a thorough and comprehensive analysis of the needs of rural commuters, which will allow for the development of an integrated efficient and inexpensive service. It will examine current provision, types of provisions and future demand for services. It is anticipated that the consultants following their examination of services in the four pilot counties will develop a template which will be used by each County Development Board in carrying out a county-wide audit of rural transport services.

In addition to these initiatives the Department of Public Enterprise is to consider proposals for a new regulatory framework for the bus market outside of Dublin later this year.

11. ENERGY

11.1 Introduction

Before turning to consideration of electricity and gas infrastructure in detail, it is important to recognise that two key issues now dominate the energy sector, viz., deregulation of the energy market, and increased energy demand and associated weak infrastructure.

- Competition, associated with deregulation in the energy market, means that commercial criteria will increasingly come to determine provision.
- Increased energy demand has a spatial element in that the bulk of demand is concentrated in the more developed regions.

11.2 Deregulation in the Energy Market

Deregulation of the energy market is driven by EU directives but is, as yet, not fully completed. A major target yet to be achieved is the break up of the state monopolies of ESB and Bord Gáis Eireann (BGE) into supply/generation, distribution and sales organisations to permit the sale of gas or electricity into the market by independent producers and suppliers. Although internal divisions have been made and some, apparently unsuccessful, attempts have been made at establishing tariffs, this has not yet been achieved. Both companies remain under the management of single boards.

Third Party Access (TPA) to the electricity wires and gas pipelines is essential to the development of competition in the gas and electricity markets. This requires the publication of non-discriminatory rules governing the use of these systems and, most importantly, the publication of tariffs or Use of System (UoS) charges.

Private producers are now permitted to supply electricity and gas to large industrial users. It is not clear whether this situation has led to lower energy costs and indications are that, for example, gas prices are rising significantly (although this can be accounted for in part by large increases in the UK spot market price for gas).

Competition may arrive earlier to the electricity market than the gas market. For a number of years small private power plants have been installed at a number of large industrial facilities (e.g. Guinness, Galtee Foods) and green generation programmes such as wind farm stations are becoming common. Excess power from these plants is currently being sold into the national grid, but not yet directly to consumers.

Commercially, therefore, the Irish energy market is regarded as relatively immature. Long established monopolies remain to be broken up and market access to new entrants is still limited. The deregulation process is in progress.

11.3 Electricity Infrastructure – Generation and Transmission

At present electricity is the main source of power to industrial and domestic users in the Western Region. Nationally, unprecedented economic growth in recent years has led to an equivalent rise in demand for electricity. Average annual growth in demand was around six per cent per annum during the second half of the 1990s, reflecting increased industrial and domestic demand.

11.3.1 Electricity Generation

Significant power is generated within the Western Region (Moneypoint is Ireland's largest power station and there are other stations at Ballyshannon, Árdnacrusha and Bellacorrick) and is distributed via an ageing distribution system which currently requires major investment (throughout the country). The national situation with power generation is that there is very little spare capacity and additional generation capacity is urgently required. Four independent power stations are currently at various stages of planning and development.

Growth in electricity consumption has outstripped investment in generation and transmission, so that the electricity supply system now has significant weaknesses. These may be summarised as follows:

- Generation capacity is inadequate and there is a significant risk of unplanned interruptions in supply as demand outstrips generation capacity.

- Loss of a major generator during the winter peak would give rise to severe difficulty in maintaining voltage levels, notably in parts of the Western Region (i.e. the West and North West).

- The system is dependent on relatively few very large generating stations and routinely needs to use older, inefficient generators to support the network.

- Gas from the Corrib field (see following section) will be available from 2003 onwards so that the commissioning of additional gas fired power-generating stations will be feasible from that date.

- The construction of smaller power stations in the regions is one way of relieving the scarcity of supply, and the Western Region is an ideal location for one or more such plants given the proximity of the Corrib gas field. However, as the developers of new power stations are permitted to sell only to large users and will only build new stations if the power is pre-sold, it is unlikely that there are sufficient large users in the West to justify the construction of a significant private power station. Such regulatory thresholds restrict access to the electricity generation market for smaller-scale providers.

- Combined Heat and Power (CHP) plants are considerably more energy efficient and economically viable than stand alone generating plants, since both the heat and electricity that they generate can be utilised. At present, there are provisions in the Electricity Regulation Act 1999 which restrict investment in CHP plants.

- The lead-in time for the construction of new generation facilities can be up to five years due to regulatory and planning processes.

- Companies in the ICT[53] sector (such as Internet Data Centres, which provide Internet services to facilitate global e-commerce) require high quality, secure, reliable and continuous energy supplies (an estimated 8MW per centre). Given that there is virtually no spare capacity in the Western Region and that there is a long lead-in time for additional provision, the prospect of such a facility locating anywhere in the region outside of Galway would appear to be limited. Of the 21 data centres currently planned or in place in Ireland, 19 are located in the Dublin region[54]. Galway has capacity for up to three such centres provided there are some modifications to the transmission system and these are currently being addressed – see below.

11.3.2 Electricity Transmission and Distribution

An effective electricity transmission system (i.e. an interconnected group of lines for the transfer of bulk electrical energy from generators to the bulk supply points) should be

- designed for high reliability
- meshed for robustness
- high voltage and high capacity.

The reliability of the power system depends on grid capacity and security in terms of its ability to withstand sudden disturbances such as loss of major lines. It is now accepted that large areas of the west and north-west are below international standards in terms of reliability and that this is a major consideration in the location decisions of investors.

While there is a relatively sparse 220kV network in the south and east of the island, there is no 220kV transmission at all west or north of a line from Galway to Carrick on Shannon. The Western Region is served only by long 110kV lines which in the case of a number of western 110kV stations are not meshed. This means that even one line outage can have a severe impact on system performance (see Figures 11.1, 11.2).

Key transmission network problems are:

- As a small island system, the transmission network is more vulnerable than in the case of a larger interconnected system.
- Problems with the reliability of the high voltage transmission system due essentially to overload i.e. the system being used in a way for which it was not designed (see Figure 11.2).
- Considerable time lags in the provision of new infrastructure. The National Grid, who manage the power system, now face lead times of up to seven years on major projects – five for planning and legal processes and two for construction.
- Inability, even with all the available generators running, to keep the 110kV voltage much above the lower limit of 105kV.
- Overloading and the associated difficulty of maintaining a system which is routinely working at full capacity.
- The risk to town supplies when they are supplied by only one line, due to maintenance.

[53] Information and Communications Technology.
[54] Irish Times, 2nd March 2001.

The electricity transmission system in the Western Region is therefore neither reliable nor robust and there are large parts of the region experiencing low voltage, low capacity and the threat of voltage collapse. There is considerable risk of unplanned outages due to the weaknesses in the transmission system. This has immense implications for investment in the region and effectively precludes much of the region from attracting industries that are particularly reliant on quality power supply.

11.3.3 Current Investment in the Western Region

Tables 11.1 and 11.2, below, contain details of the current investment in the transmission network in the Western Region. This will improve both the quantity and quality of electricity to the relevant parts of the region. This is illustrated in Figure 11.1.

Table 11.1 Current Investment in the Transmission Network in the Western Region

Location	Project	Status March 2001
Binbane-Darragh-Letterkenny	Erection of 110kV line	Planning appeal. Decision from An Bord Pleanala awaited.
Flagford-Shrananagh	Erection of 220kV station and associated 110kV line loops	Planning decision awaited from Leitrim/Roscommon/Sligo County Councils.
Cloon-Castlebar	110kV line	Positive decision from An Bord Pleanala. Survey and detailed design underway.
Tynagh–Cashla	220kV line	FPP received in March. Survey and detailed design underway.
Cashla	New 220kV Transformer	Work in progress. Completion 2001.
Shannonbridge	New 220kV Transformer	Work in progress. Completion 2002.

The total cost of these projects is expected to be in the region of £50 million.

Voltage support projects are designed to improve the quality of electricity but do not increase the supply.

Table 11.2 Voltage Support Projects in the Western Region 2001

Location	Project	Status March 2001
Ballina (Moy)	110kV Station	PP submitted
Castlebar	110kV Station	PP submitted
Cashla	220kV Station	PP submitted
Claremorris (Dalton)	110kV Station	New 110kV station (Dalton) under construction. Voltage Support PP Submitted.

Total cost of voltage support projects is approximately £9 million.

11.3.4 Distribution Network

The distribution network takes power from the high voltage transmission system and distributes it to homes and businesses on lines that operate at 38kV, 20kV, 10kV and low voltage (400V three-phase). The distribution network in rural regions, such as the Western Region, that have scattered settlement patterns, is characterised by long lines which feed a dispersed population. Load on 10Kv networks has more than doubled over the past 15 years so that performance in many rural areas is not efficient. ESB are at present engaged in a national programme of network renewal which involves conversion of 10kV networks to 20kV.

Figure 11.1 Electricity Transmission Network and Reinforcement Projects in Progress - Western Region 2001

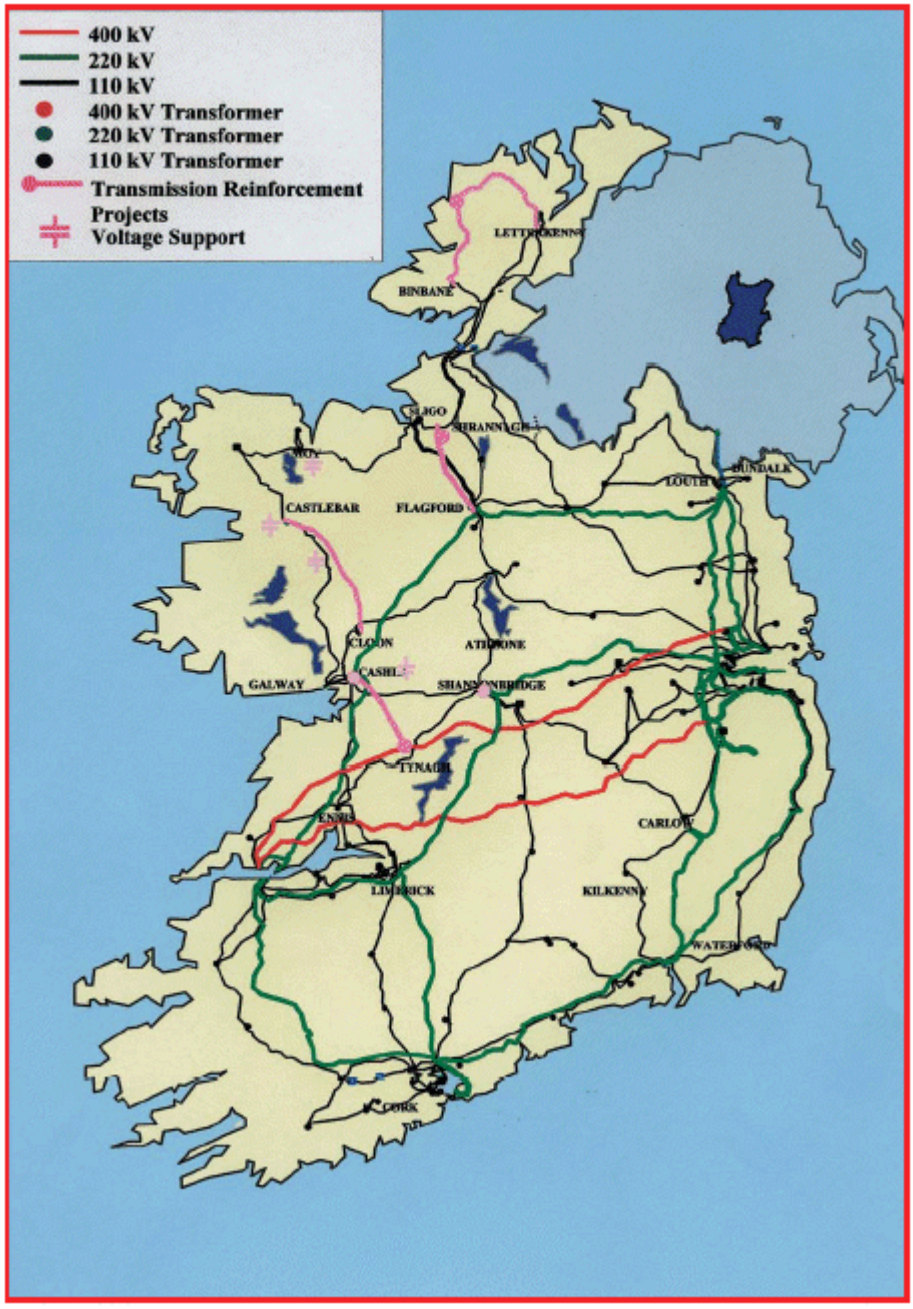
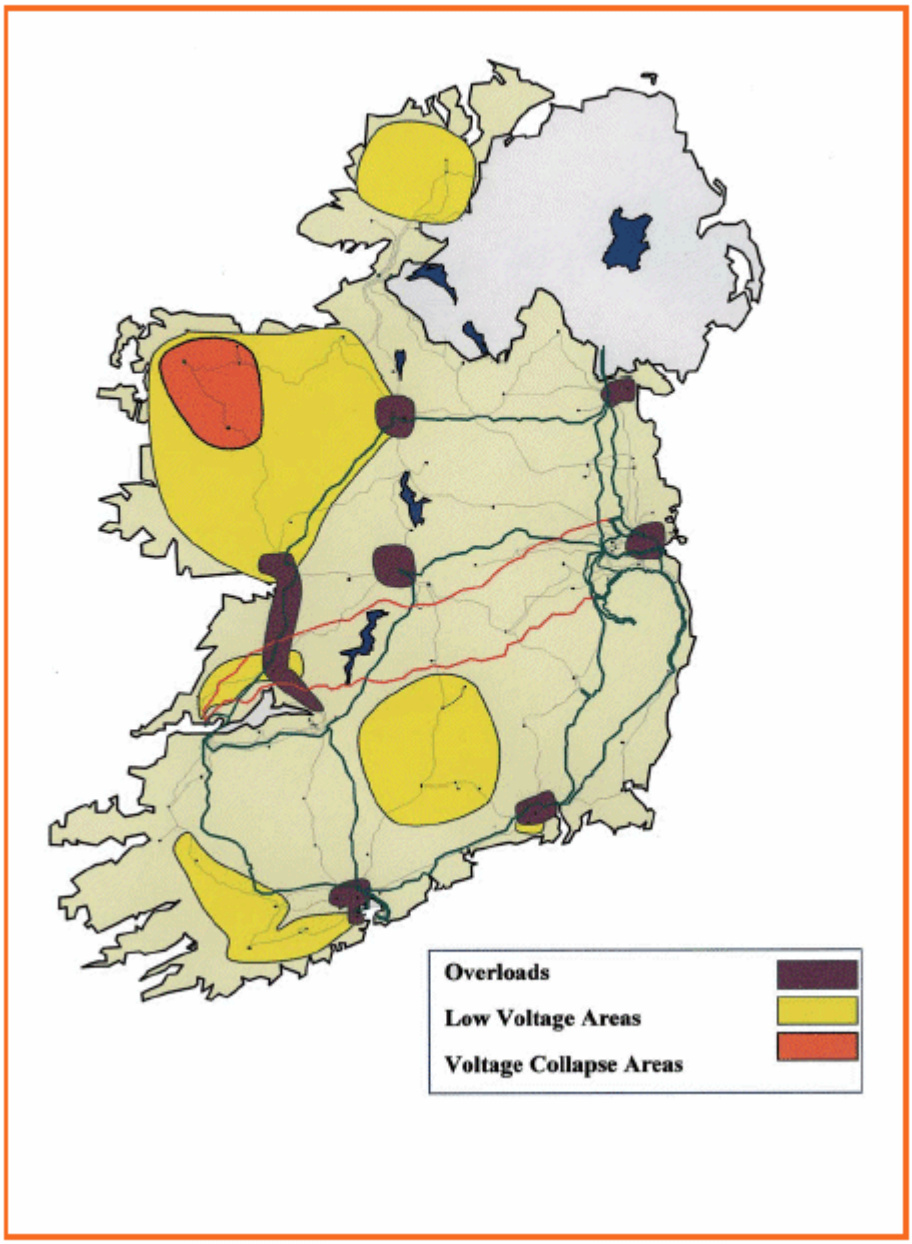


Figure 11.2 Electricity Network Problems Winter Peak 2001/2002



11.4 Gas Infrastructure and the Corrib Field

Natural gas (methane) is recognised as the cleanest fossil fuel – combustion by-products are water and carbon dioxide only (although carbon dioxide is a greenhouse gas). Gas power stations are generally designed as either combined cycle gas turbine (CCGT), or combined heat and power (CHP) facilities, as these are the most thermally efficient plants.

11.4.1 Gas in Ireland

The Kinsale Head gas field was discovered in the early 1970s. The Gas Act, which was passed to regulate the fledgling industry, gave BGE a monopoly in the purchasing, distribution and resale of natural gas in the Irish market. As a consequence, BGE currently owns and operates all onshore gas pipelines in Ireland and has the monopolistic right to sell gas to all buyers – except those large users using in excess of 9 million therms per annum. These users are free to purchase gas from other suppliers who in turn pay BGE a transportation tariff for the use of the BGE pipeline system.

Gas is increasingly being used for electricity generation and almost two thirds of natural gas used in Ireland in 1999 was imported. This figure is estimated to rise as demand increases due to the commissioning of the new Poolbeg power station and the Kinsale field gas reserves decline. The major importers of gas into the Irish market (apart from BGE) are the ESB and the Irish Fertiliser Industries plant in Cork.

The structure of the gas industry in Ireland is currently undergoing major revision and deregulation. In the case of BGE these changes will mean the break-up of the monopoly into a number of distinct businesses: possibly purchasing/supply; sales; distribution and new ventures (e.g. BGE has entered the CHP power business by becoming a major partner in the development of a power plant at Aughinish Alumina).

The Corrib field, located about 60km west of Belmullet was discovered in 1996 and was declared commercial in 2001. The field is held under licence, from the Irish Government, by a consortium of three oil companies – Enterprise Energy Ireland with a 45 per cent shareholding; Statoil Exploration (Ireland) Ltd. with a 36.5 per cent shareholding and Marathon International Hibernia. Enterprise is the designated operator for the Corrib field.

11.4.2 Development of Gas Infrastructure from the Corrib Field

In order to connect the Corrib field to the national gas grid, a major pipeline will be constructed from Dublin to Galway and extended south to Limerick to provide a closed loop in the grid. The Galway node in this pipeline will be connected to the Corrib field onshore terminal (see Figure 11.3)[55].

Currently all of the potential customers for Corrib gas are located in the east and south regions. The Western Region has no existing natural gas infrastructure and, until the discovery of the Corrib field, had no real prospect of a generally available gas supply to population centres in the region.

[55] Source: Bord Gáis. Note: The route shown on this map is preliminary and may be subject to change and refinement.

Current proposals for gas network extension into the Western Region include the following:

- Establishment of domestic and commercial supplies to the nearest population centre (Galway 2001). On completion of this pipeline, Galway, Ennis and other major population centres are likely to get industrial and domestic supplies. These connections will be developed purely on a commercial basis with the larger population centres first to be developed.
- Construction of a pipeline to Dublin (2001).
- Extension of the grid to population centres along the major pipeline routes.
- Construction of specific spur pipelines e.g. to Ballina, Sligo.

Investments currently planned by BGE total approximately £500 million, to include a new interconnector to the UK, the Galway/Dublin/Limerick pipeline and the Pollatomish/Galway pipeline. There is also ongoing investment in extension of the network in Leinster and Munster. Based on this level of investment it is difficult to see BGE having either the commercial interest or financial or management resources to manage a parallel investment in the design and construction of network expansion in the Western region.

The planned main pipelines would only provide potential for gas supplies to a small number of population centres in the Western Region (Galway, Ballinasloe, Athlone, Castlebar, Tuam and possibly Ballina). There are, as yet, no published plans for this investment. The current gas grid is the outcome of twenty-five years of continuous investment, so it is reasonable to assume that BGE alone would only complete this coverage over a very long period of time and probably based on internal rate of return criteria. Only Government intervention can accelerate the extension of the grid to major centres in the Western Region.

Figure 11.3 Bord Gáis Proposed Mayo-Galway Pipeline

Route shown is a preliminary route and may be subject to change and refinement.

11.4.3 The Development of the Corrib Field

There will be three major construction activities under the control of the Corrib partners: these are well completion (offshore); subsea construction and pipelines (offshore); and the onshore terminal. There will also be two major additional contracts associated with the development. These are an onshore pipeline from the terminal to the vicinity of Galway and the BGE ring main pipeline connecting Galway to Dublin and Galway to Limerick.

The onshore terminal will be a highly automated facility and will employ approximately 40 personnel. Total investment in the Corrib field, including the offshore works, the terminal construction, pipeline to Galway and Galway/Dublin/Limerick pipeline will be approximately £800 million. The work will take approximately 2½ to 3 years to complete. However the approval process may extend this overall duration.

During its life the Corrib field will require support and maintenance. Servicing the offshore elements of the work will be executed by specialist vessels and equipment. Servicing the onshore terminal will involve mechanical and electrical engineering design and construction services. The multi-discipline firms and organisations that would provide these services on a large scale do not exist in the Western Region. It is probable that for a single development such as this, these services would be procured from outside the region.

The offshore portion of the Corrib field development will be completed sub-sea and a requirement for shore based emergency services (such as helicopters etc.) is not anticipated during the operations phase of the development. It is expected that the Local Authority and the operator will provide emergency services to the onshore terminal.

There may be an opportunity to support ongoing exploration operations with an air base and a port base. The market is currently handling these on an ad hoc, well by well basis. However any co-ordinated approach would need to be based on a detailed study of requirements. Locations that might benefit from a co-ordinated support structure are Knock, Galway or Donegal airports and Galway or Killybegs ports; the latter is already in use as a service centre.

11.5 Wind Energy

In recent years, Ireland, following global trends, has begun to acknowledge the possibility of investing in and developing renewable energy sources. Wind is just one example of such a source. In 1999 the Department of Public Enterprise published a Green Paper on Sustainable Energy and established a Renewable Energy Steering Group which produced the *Strategy for Intensifying Wind Energy Deployment* in 2000.

The main aim of this strategy is a support hierarchy to deliver the target of 500 MW of renewable energy as installed electricity generating capacity, as outlined in the Green Paper. Into the medium term the national electricity system has the capacity to absorb a wind energy penetration level of 5-7 per cent, provided the necessary infrastructure is available. The contributions of wind generated electricity is estimated to be approximately 7 per cent nationally by 2005 if the Green Paper targets are met.

The *Strategy for Intensifying Wind Energy Deployment* specifically alludes to regional dispersion of wind farm sites, and the Western Region is seen as a strategic location for wind farm development as wind yield is high. The West's natural comparative advantage makes it an ideal location for the establishment of wind farms. At present (mid-2001), there are fifteen wind farms located in the Western Region.

Two large projects are in the pipeline subject to planning permission.

1. A wind farm is planned for a site in the Ox Mountains in south county Sligo, which would be the largest in Ireland at a cost of £100million. Eirtricity Ltd. has lodged an application for planning permission for sixty-seven wind turbines reaching to more than 100 metres in height. The wind farm would stretch over an area of 3,000 acres. The wind farm is projected to produce more than 550 million units of electricity, enough to supply nearly 90,000 homes.
2. The ESB have applied for planning permission to build a £15m wind farm on the grounds of its existing power station at Moneypoint in Co. Clare. The project comprises ten 100 metre wind turbines that would add up to 20 MW of electricity to Moneypoint's 900MW facility. It would serve 15,000 homes in the county.

According to the Green Paper, a number of factors will influence the development of wind energy generation in Ireland. These include

- Technical constraints
- Local involvement in provision to meet the provider's own needs and sell the remainder to the electricity network
- Fiscal measures i.e. tax relief to encourage corporate equity investment
- Research and development.

The Renewable Energy Strategy Group in *Strategy for Intensifying Wind Energy Development* identified the three principal elements that require integration in a strategy for wind energy deployment. These are

1. Appropriate location
2. Adequate availability of the wind resource
3. Appropriate electricity network infrastructure.

At present however, the state's electricity transmission network is operating to capacity. The transmission infrastructure is in urgent need of investment to allow

wind power to be harnessed and supplied to consumers. At present the network is a deployment constraint, given that the windiest locations are located on the western seaboard and the networks are weakest in those areas. This situation will impede development of wind farms and thus the supply of electricity to many small and medium sized businesses in the West. As pointed out above, the supply of electricity is a key driver in sustaining industry and fostering development in the West and is an issue that needs urgent attention.

11.6 Energy Infrastructure – Key Points

- The primary focus of both gas and electricity infrastructure development in Ireland is to serve the majority of the population as quickly as possible i.e. the Dublin region and other major centres of population. Expansion of the infrastructure to the rest of the population takes place at a pace controlled by the utility not by Government policy or infrastructure requirements. A free market situation associated with deregulation will exacerbate the Western Region's weak position, as profit-driven investors concentrate on areas of greatest demand.

- The perception of the relative remoteness of the Western Region has delayed investment in electricity infrastructure. This is best understood by the lack of urgency in providing an electricity infrastructure that is robust and has sufficient spare capacity to allow the West to compete with, for example, urban centres in the east of the country for ICT/e-commerce investments. Without adequate infrastructure, the Western Region cannot compete for mobile investment and the growth potential of existing businesses may be hampered.

11.7 Actions Necessary to Address the Power Deficit in the Western Region

- The provision of adequate energy infrastructure to drive development in the region requires government action and commitment. Only Government intervention can accelerate the extension of the grid to major centres in the Western Region. In this context, the announcement that the pipeline will be extended to the North West is significant and an acknowledgement of 'market failure' in the region. However, more active government involvement is essential and the WDC's views on this are set out in Chapter 13.

- To increase the electricity generation capacity in the region, the construction of one or more smaller power plants in the Western Region, by the private sector, using Corrib gas is recommended. The use of 'smaller' output stations (100MW) will put less strain on the distribution system. The impact of the outage of such a station would be less damaging than the loss of an 'optimal' 400MW station. These power stations could be located at any location where the pipeline offtakes are adjacent to the national power grid.

- There may be a case for a partnership-type arrangement between the ESB/Eirgrid and a gas producer (such as a Corrib partner) to build such a power station in the Western Region. This would also provide a balance between grid/infrastructure investment and power station investment. At least two locations should be studied – Galway and Bellacorrick. Galway because it is a population centre and Bellacorrick because there is an old power station there and an overhead cable infrastructure which could minimise planning disruption.

- It is necessary to actively promote the construction of CHP plants particularly, as regardless of the fuel they burn, they are more efficient and environmentally friendly. This should include the lifting of regulatory restrictions which currently impede development of CHP.

- In situations of 'market failure', ways of encouraging private sector investment in energy infrastructure through state support (as in the case of telecommunications) or by fiscal measures should be instituted.

- The routing and construction of the Ballina/Sligo gas pipeline should be linked to facilitate future links to Donegal and Northern Ireland.

- The routes of the Galway and Sligo gas pipelines should allow maximum feasible access to gas by towns in the region and by Knock airport in particular.

12. TELECOMMUNICATIONS

12.1 Introduction[56]

Access to advanced information and communications infrastructure is considered essential to economic development. Government policy has been to position Ireland as an e-Commerce hub with the telecommunications infrastructure and capacity to compete for foreign direct investment and to allow the development of both foreign and indigenous ICT (information and communications technology) industries.

E-commerce (electronic commerce) is the buying and selling of goods and services on the Internet. The huge growth in the use of the Internet and World Wide Web requires infrastructural investment to accommodate this massive growth in traffic. Broadband connectivity is the tool that delivers fast Internet access, as well as video on demand, video conferencing and web hosting. This is in contrast to narrowband which typically supports traditional telephone lines and much slower internet access.

12.2 Deregulation in the Telecommunications Market

As with the energy market, deregulation of the telecommunications market is required by EU directives and is driven by the idea that competition in the sector will increase and improve supply, while at the same time reducing costs. The Office of the Director of Telecommunications Regulation (ODTR) was established in 1997 to oversee the liberalisation of the market. A key part of this process is allowing other competitors to enter the liberalised market while the incumbent (Eircom) continues to operate. This essentially means permitting competitors access to Eircom's entire telephony network which extends to every home and business in Ireland.[57]

12.3 Convergence

An important facet of the telecommunications sector that has contributed to its rapid growth, is convergence[58]. There are two aspects to this:

1. Network Convergence, where traditionally different networks (for example television and telephone) are now technically able to carry the same or similar services. Telecoms operators (e.g Eircom) and broadcast network operators e.g. BSkyB can provide internet services;
2. Consumer Product Convergence, where it is now technically possible to access the internet using a telephone, television or personal computer.

12.4 Growing Demand for Broadband Services

ICT requires the transmission of digital information at high speed. As mentioned above, broadband connections allow for high-speed telecommunication. Broadband capacity is measured by the rate of transmission or bandwidth in bits per second. The minimum capacity for a broadband connection is 2 Mbit/s (which is essentially that provided by traditional telephone copper lines). However, increasingly, customers are requiring bandwidths of 34 Mbit/s and 155 Mbit/s. High technology companies such as Internet data centres (IDCs) frequently require in excess of this.

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[56] Given the technical nature of this subject, there is a glossary at the end of this chapter explaining the terminology.

[57] This is also referred to as 'Unbundling of the Local Loop' and 'the Last Mile'.

[58] See the Green Paper on the Convergence of the Telecommunications, Media and Information Technology Sectors and the implications for Regulation European Commission, December 1997.

12.5 How Broadband is Provided

There are four main components in the provision of an advanced telecommunication network.

1. International Links – direct international links.
2. Backbone Network – high capacity fibre networks for information transfer between large towns and cities.
3. Local Trunk Network – connection between the backbone and local telephone exchanges.
4. Local Access Network – access from businesses and homes to the backbone via the trunk network.

These are discussed in detail in Section 12.7 below.

There are several different media for broadband connectivity some of which are still being developed.

1. Optical fibre networks where light is used to transmit signals. These are commonly SDH and PDH fibre systems. This is what constitutes the fibre backbone throughout the country. (See Figures 12.2 and 12.3).
2. Satellite and high speed radio technology (wireless broadband).
3. Cable systems using TV cable modem connectors.
4. Traditional copper telephone line, combined with more advanced technologies such as the DSL suite of technologies.
5. It is anticipated that transmission may be possible through electricity cables, utilising the existing infrastructure to carry various broadband services.

Table 12.1 illustrates the end user services, broadband services, access speeds and broadband provision currently available or in the process of being rolled out in Ireland. The method of provision can vary depending upon the infrastructure that is currently in place, the planned rollout of infrastructure etc. These broadband services allow for the delivery of different end-user services to both business and home users.

Table 12.1 End User Services, Broadband Services, Access Speeds, Current Provision and Physical Media

End User Services	Broadband Service	Speed	Current Provision	Physical Media
Fixed line phone	*Leased Line Access	2 Mbit/s	Available throughout the networks.	Fibre/Microwave
Data transfer	*Frame Relay	2 Mbit/s	Available throughout the networks.	Fibre
Phone & Internet	*ISDN Primary Rate	2 Mbit/s	ISDN is available. Need connection to digital exchange	Copper pair
TV, Internet Access	Interactive TV, TV, Internet	E.g.Cable Modem; Shared bandwidth up to 1 Mbit/s downstream, 256 kbit/s upstream.	MMDS available, currently approx. 110,000 subscribers. Digital MMDS in the next few years. Digital Satellite TV (BSkyB) available.	Digital TV Networks. MMDS/DVB
Mobile phone & internet access	Mobile Data Services (planned)	Up to 2 Mbit/s (planned)	WAP services and HSCSD available across Éire. GPRS due to be available in 2001. Significant rollout unlikely before 2002.	GSM/UMTS Mobile Radio
High-speed internet & multi-media services	DSL (Digital Subscriber Line)	ADSL (Up to 8 Mbit/s downstream & 640 Kbit/s upstream	HDSL at 2Mbit/s deployed where appropriate in the networks. Service offerings based on ADSL are being launched during 2000 and 2001. VDSL could offer downstream speeds of up to 50Mbit/s.	Copper pair + DSL Modem + DSLAM modem
High-speed internet	Broadband Wireless Local Loop	2 Mbit/s & 34 Mbit/s	Wireless Local Loop licences have been awarded however service rollout has been delayed.	Radio
Voice, data, audio & video transfer	ATM	34Mbit/s-155 Mbit/s	Customised access service available at nodes served by 2.5 Gbit/s links. ATM circuits available from 2 Mbit/s to 155 Mbit/s.	Fibre/Microwave
Internet access, TV	Satellite Services	Up to 155 Mbit/s	VSAT can be provided in all areas for specialised solutions up to 155 Mbit/s. Satellite systems providing general solutions are being developed to offer data rates comparable to DSL.	Satellite
'Always on' Internet & e-mail	IP (Internet Protocol)	Up to 155 Mbit/s	IP services are supported on ATM networks. Some operators are rolling out dedicated IP networks.	Fibre
Voice, data	Leased Line Access	STM-4 (622Mbit/s) STM-16 (2.4 Gbit/s)	Customised access available at some of the major nodes.	Fibre/Microwave

Source: Compiled from Telecommunications for e-Business, A User's Guide. 2000. * Technically ISDN is not a broadband technology. It provides two telephone channels to the user who may use them as data channels transmitting at speeds up to 128 Kbit/s.

12.6 Users of Broadband Networks

In the broadband market there are essentially four different types of users.

1. Internet Data Centres. Internet expansion and the development of e-commerce have given rise to a new industry response to manage and process transactions. These are called Internet Data Centres (IDCs). In effect, IDCs supply and manage the Internet and connectivity needs of companies as 'hosts'. In order to offer a secure, reliable and relatively inexpensive service, IDCs require top quality broadband connectivity on a continuous and uninterruptable basis. They are large users of both bandwidth and electrical power.

   A significant data centre requires a minimum of 12 to 24 STM1 connections. Each STM1 has a speed of 155 Mbit/s. Ideally, all data centres should be directly connected to the US and Europe via the termination points located within Ireland. At present, all these points are located on the eastern seaboard (see Figure 12.1). IDCs located further west need to secure broadband connectivity of adequate capacity to the international network from a carrier such as Eircom or Esat. The extra cost of engaging this carrier, along with the possibilities for service interruption may act as a deterrent to investment.

   While Internet Data Centres are not necessarily significant in terms of numbers employed, their location is important in the sense that such areas are likely to be given preferential access to the power and bandwidth capacity necessary for IDC operation. IDCs are currently concentrated in urban areas (of the twenty-one currently located or in the process of locating in the Republic nineteen are in Dublin, with one in Cork and one in Sligo).

2. Large Commercial/Educational Users that have direct access to the backbone network, e.g. companies such as Intel and educational institutions such as universities. Broadband services are generally adequate for these users at the moment. However most of them are located in the East of the country thereby helping to ensure that priority is given to development of these networks in this region.

3. Industrial/Business Parks with direct links from the backbone network serving several users. Where designated business parks exist (for example IDA business parks), service is usually adequate. However new business parks in locations outside of the major centres would require extension of the existing network to allow broadband connectivity.

4. SMEs and residential users that are linked to the backbone network via the local access and trunk networks. For these, the quality of both the local and trunk networks is crucial. Upgrading of these networks is required in many rural areas to support broadband connectivity. Access for these users, (SME and residential) is believed to be about two years behind best practice in the US and EU.

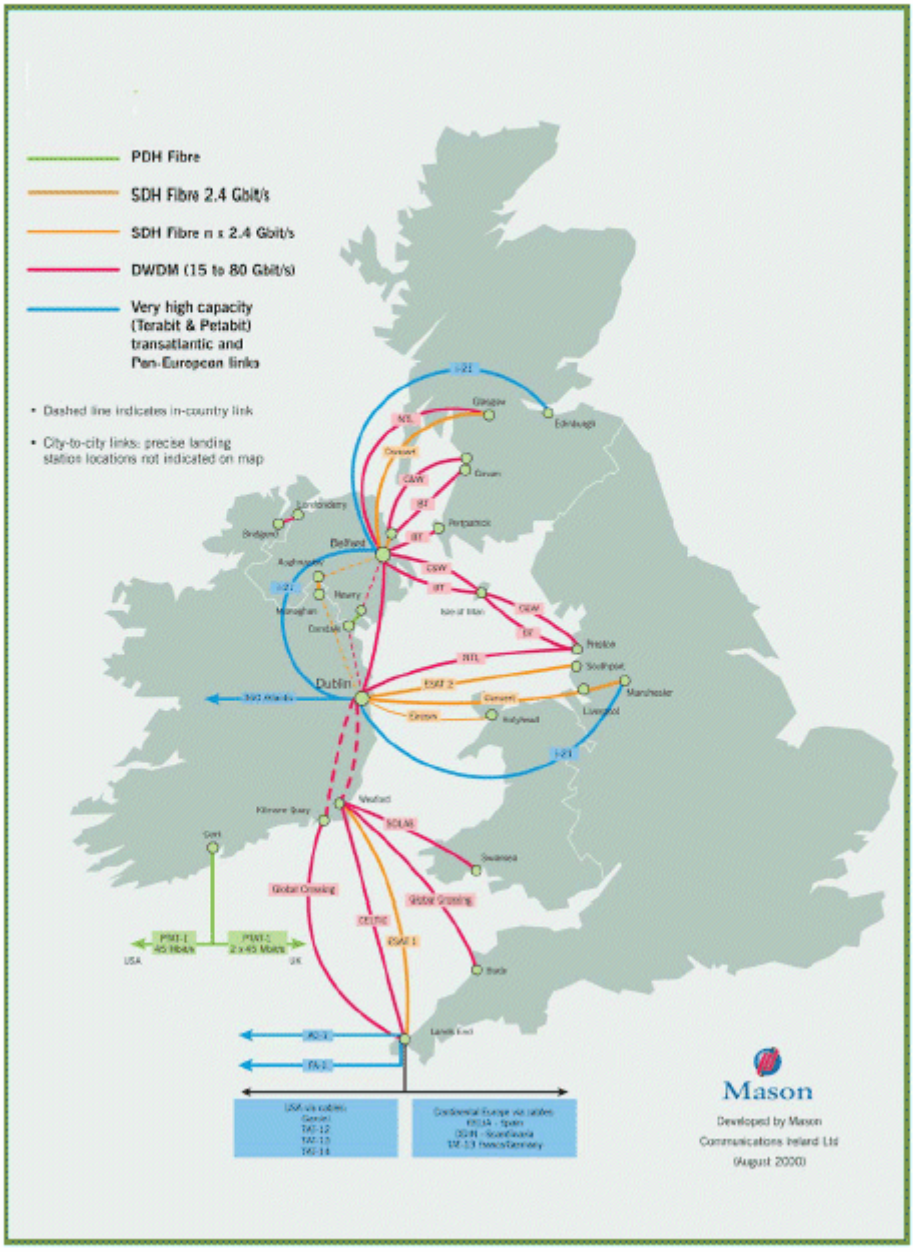
12.7 Current Access to Broadband

12.7.1 International Links

The completion of two recent transatlantic cable projects (Global Crossing and 360 Networks) means that the Republic has what is regarded as world-class international connectivity at a competitive price. The Government, under a public private partnership, part financed the Global Crossing project [59]Both of these international links are connected to Ireland via Dublin. The weakness in telecommunications infrastructure is not therefore at the international level but at a domestic level in terms of connectivity to the international links. This is particularly true of the links to and from the Western Region. The international links are illustrated in Figure 12.1.

[59] The Irish Government then sold a percentage of the total connectivity to Eircom at a lower price. Since then Eircom cut by one-fifth the amount of connectivity it would buy from the government due to perceived lack of market demand.

Figure 12.1 International Telecommunications Links August 2001



12.7.2 Broadband Backbone Network

The backbone network allows for the transmission of information between major population centres. A universally accessible broadband network is a basic requirement for data and telecommunications transfer. It consists of fibre optic and digital radio links which support transmission systems such as SDH and ATM. This can be boosted by the application of DWDM[60].

The backbone network provides links of 2.5Gbit/s or more. A 15-80 Gbit/s capacity link was completed in 2000, linking Dublin, Galway, Limerick, Cork and Waterford. This is illustrated in Figure 12.2. The majority of the Backbone Network throughout the Western Region is connected using a broadband optical fibre network with a capacity of only 2.5 Gbit/s. Capacity available in Athlone and parts of Galway is on a par with best practice. However, significant parts of the Western Region are lacking in high capacity backbone infrastructure.

Apart from counties Galway and Clare, none of the other five counties in the Western Region is currently served by a 15-80 Gbit/s link (DWDM). However it is anticipated that by August 2002 there will be DWDM capacity linking Galway, Tuam, Westport, Castlebar, Foxford, Ballina, Sligo, Donegal, Letterkenny, Derry, Athlone, Roscommon, Castlerea, Claremorris, Mullingar, Longford, Carrick-on-Shannon, Boyle and Ballymote. This is illustrated in Figure 12.3.

Capacity can be increased in three ways; (1) Technological developments allowing higher capacity on each cable, (2) Several cables on each route, (3) Multiple carrier networks, with different operators rolling out their own networks.

There is no ‘dark fibre’ available anywhere in the Western Region. Dark fibre is designed to be managed by a purchaser rather than the carrier/owner. The availability of dark fibre would allow other carriers to enter the market more easily and offer additional services, as well as stimulating competition.

Until recently the advanced telecommunications capacity has been concentrated in the major population centres of Dublin, Cork, Limerick, Waterford and Galway, with some more rural areas in the East and South of the country having a more advanced network and capacity. This has led to concerns that the weakness of the broadband network (primarily insufficient bandwidth but also lack of competition and higher cost) in the West and Northwest is limiting the possibilities for investment.

[60] See the glossary at the end of this chapter.

Figure 12.2 Broadband Backbone Network August 2000

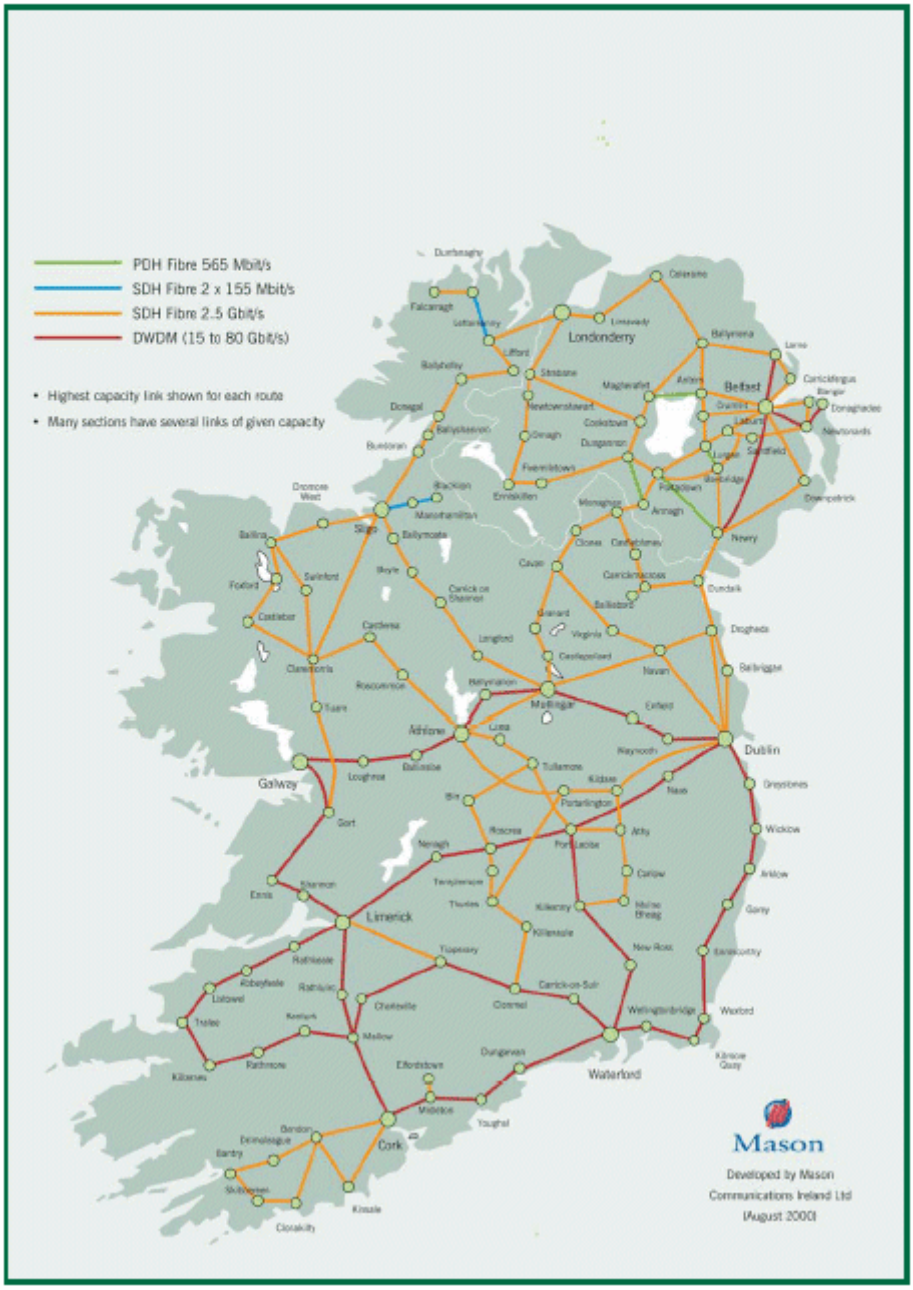
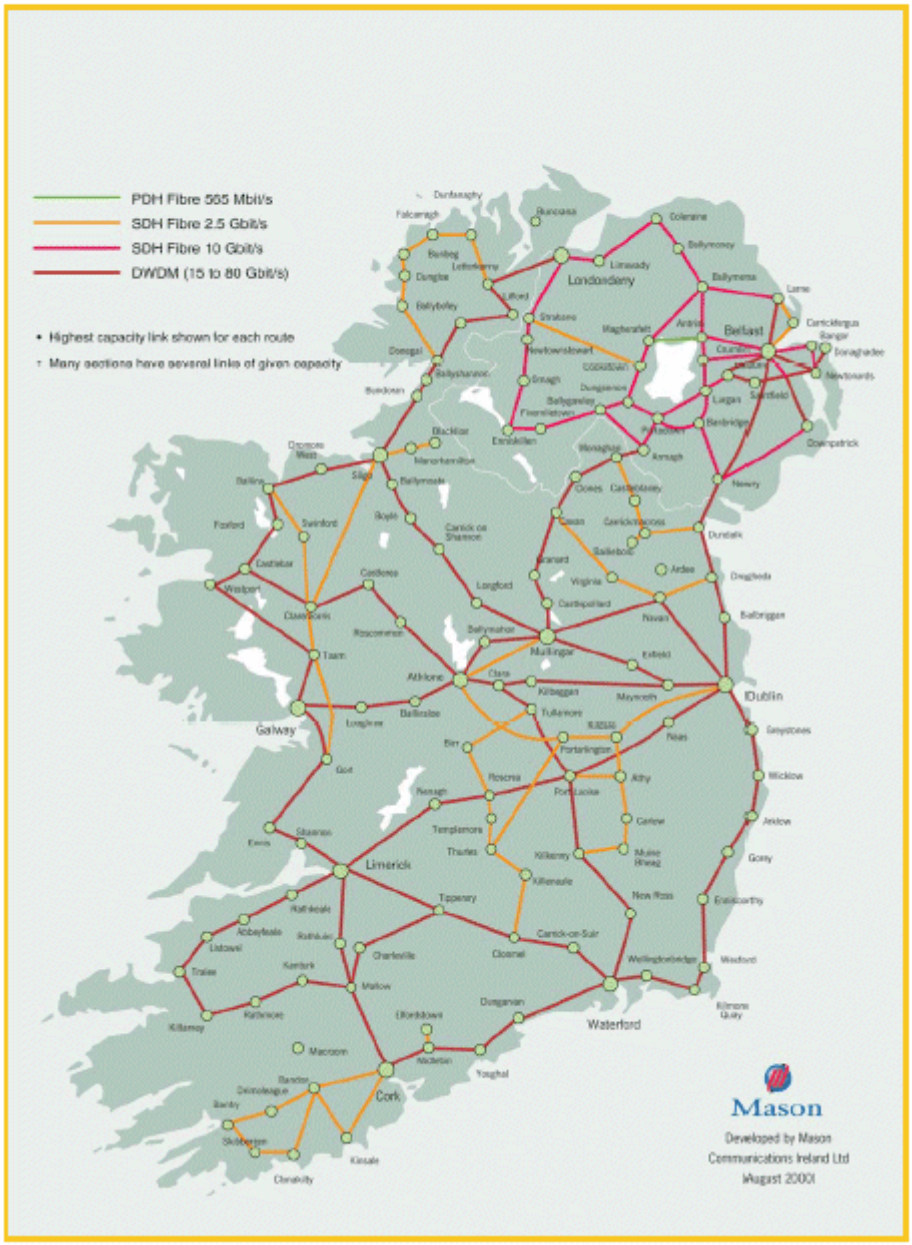


Figure 12.3 Broadband Backbone Network August 2002



12.7.3 Local Trunk Network

This is the layer of transmission needed between the national backbone and local access networks. It allows connection between approximately 1,200 local telephone exchanges to the national backbone. The quality of the trunk network helps determine broadband access to SME and residential users. The trunk network is important as

- The type of exchange (with fibre or copper) will help determine the possibility of delivering new technologies.
- Approximately 25 per cent of the trunk network in Ireland is based on copper networks (as opposed to fibre) which will not support DSL technologies.
- DSL services will be delivered from local telephone exchanges.

12.7.4 Local Access Network

This allows access from homes, enterprises and business parks to the trunk, national and international networks.

Up until now this has been the weakest link in the infrastructure within the Western Region because it consists mainly of traditional copper cables, the capacity of which is restricted to 2 Mbit/s. Higher capacity such as ISDN and HDSL are technically available from every digital local exchange, however the line from the business/home user is still restricted to 2 Mbit/s. This can significantly inhibit the development of new businesses that are increasingly demanding greater bandwidth access.

Local access of up to 155 Mbit/s was available in only eleven towns in counties Galway, Mayo and Roscommon in March 2000. Donegal, Leitrim and Sligo had even less capacity.

According to the latest information, there are only four locations within the Western Region with ATM nodes: Letterkenny, Sligo, Galway and Ennis. Conversely, Northern Ireland, with a much smaller geographical area has thirteen different locations with ATM nodes.

Access nodes are illustrated in Figure 12.4. The table is not exhaustive in that it does not include every optical fibre node in the region. There may be more than one specific node in each location. In addition to this, over 25 more ATM nodes are planned for 2001 however the locations of these nodes have not yet been released.

Table 12.2 illustrates the current and anticipated broadband access for towns in the Western Region.

Figure 12.4 Broadband Access Network August 2000

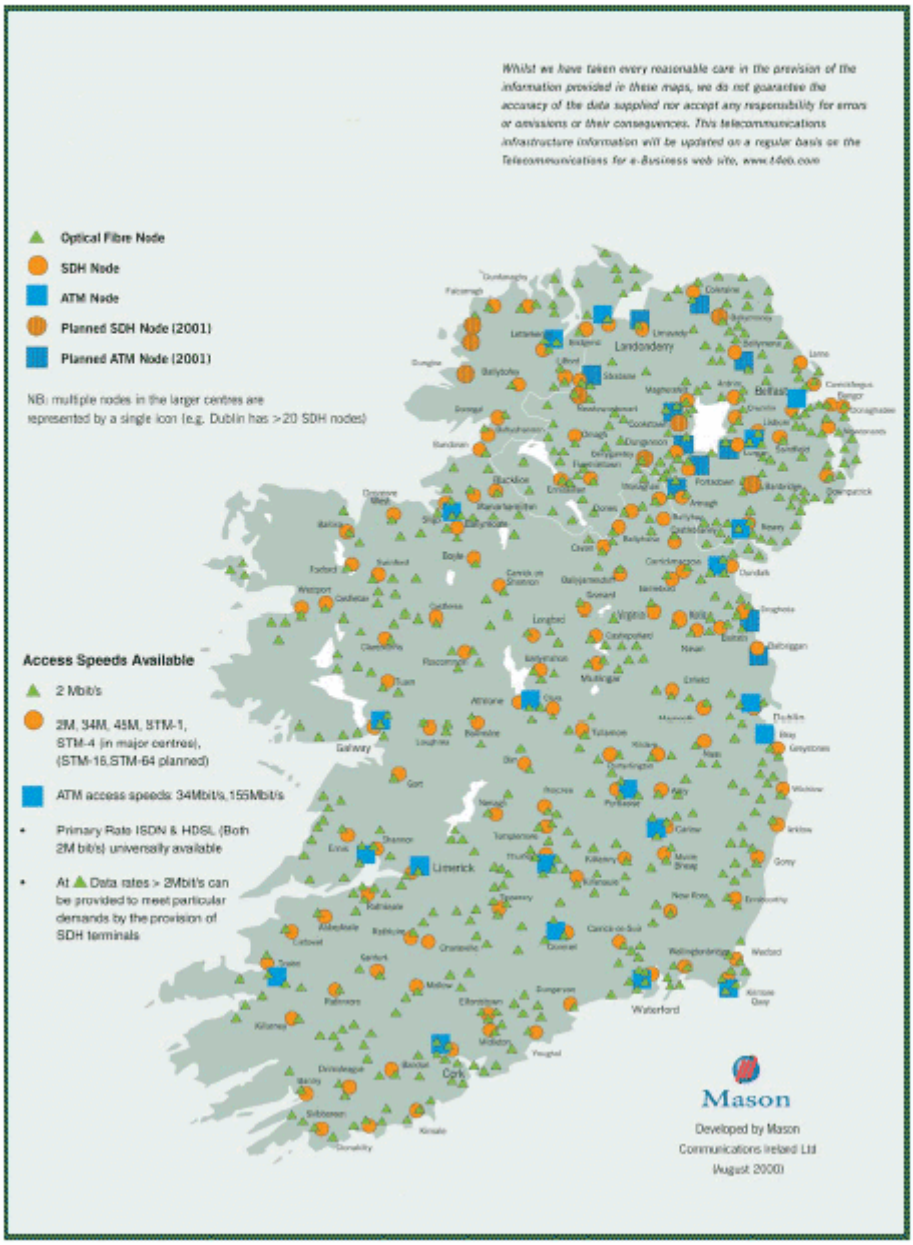


Table 12.2 Broadband Access for Towns in the Western Region 2001

Town	Optical Fibre Node	SDH Node	ATM Node	SDH in 2001	ATM in 2001
Athlone	√	√	√		
Ballaghadereen	√				
Ballina	√	√			
Ballinasloe	√	√			
Ballybofey	√	√			
Ballymote	√				
Ballyshannon	√	√			
Boyle	√				
Bunbeg	√			√	√
Bundoran	√	√			
Carndonagh	√				
Carrick-on-Shannon	√	√			
Castlebar	√	√			
Castlerea	√	√			
Claregalway	√				
Claremorris	√	√			
Donegal	√	√			√
Dungloe	√			√	
Dunfanaghy	√	√		√	
Dunmore	√				
Ennis	√	√			
Ennistymon	√				
Falcarragh	√	√		√	
Galway	√	√	√		
Gort	√	√			
Kilrush	√				
Letterkenny	√	√ (x 2)	√		
Letterfrack	√				
Lifford	√	√			
Loughrea	√	√			
Newmarket–on-Fergus	√				
Roscommon	√	√			
Shannon	√	√	√		
Sligo	√	√	√		
Swinford	√				
Tuam	√			√	
Tullamore	√				
Westport	√			√	

Source: Telecommunications for e-Business, A User's Guide. 2000.
Note: This has most likely been up-dated since then however as this is of a commercially sensitive nature it is difficult to get an up-dated picture.

12.8 NDP Support for Telecommunications Infrastructure

Exchequer funding for broadband networks is based on recognition that in an unregulated market not all areas or sectors will benefit equally from profit-driven private investment. Accordingly, in the National Development Plan, £119.7m was allocated to promote investment in advanced telecommunications, with two thirds of this earmarked for the BMW region. In January 2001, investment initiatives amounting to £59.3m, as part of the NDP, were awarded to six different companies to support eight projects which cover counties in the Western Region (see Table 12.3).

Until these initiatives become operational most of the towns in the Western Region are only served by Eircom's local network and the lack of competition and reduced capacity has resulted in higher prices and an unreliable service in comparison to other urban centres such as Dublin and Cork.

Table 12.3 Projects Awarded under the National Development Plan January 2001

Company	Project	Status	Funding Sought (Million)
Esat Telecom*	Wireless Local Loop		£0.9
Esat Telecom*	xDSL		£8.0
Esat Telecom	SW Cork Digital Link		£2.2
ESBI*	National Fibre Optic Network		£13.1
Eircom*	Broadband Transmission + ADSL	Cancelled	£9.7
Formus*	BMW BWA Infrastructure	Cancelled – Closure of Formus	£1.5
Formus	SE ME BWA Infrastructure	Cancelled – Closure of Formus	£1.4
Formus*	SW MW BWA Infrastructure*	Cancelled – Closure of Formus	£1.8
Chorus*	BMW Broadband Corridor*		£4.8
Chorus	SE Broadband Corridor		£10.8
Chorus	Kerry Broadband Corridor		£1.5
Nevada tele.com*	Regional e-Commerce hubs		£3.4
Crossan Cable	Broadband Infrastructure - Longford		£0.2
Total			**£59.3**

* Refers to those projects which will have some rollout in the Western Region.

Not all of these have proceeded for reasons explained below. Only the following look set to materialise in the region.

- ESB International will construct the state's first national broadband network from the northern tip of Donegal to the south of Wexford. Fibre optic cables will be linked around existing ESB electricity lines, which will allow for very high telecoms capacity. This will enable telecom operators to compete for the first time in towns and villages in all regions enabling better services at a reduced cost.
- Nevada tele.com will set up regional e-commerce hubs in Sligo, Castlebar and Carrick-on-Shannon.
- Chorus will develop a broadband corridor in the Border Midlands and West regions, linking towns Castlebar, Ballina, Sligo, Donegal, Letterkenny and Buncrana.
- By June 2001, it is anticipated that Esat will have erected 232 base stations to enable Wireless Local Loop (WLL) serving 32 towns across Ireland.

12.9 Delays and Cancellations

The projects awarded NDP funding include large national projects involving extensive cabling (such as ESBI) and regional rollout using alternative technologies, such as DSL and WLL. These latter technologies are particularly important for provision in less densely populated areas, as it is very costly to roll out fibre cable to areas outside major centres. The DSL suite of technologies delivers broadband access over telephone lines using existing infrastructure and without the need for new cabling. This technology is well established in the US.
WLL can provide broadband access to a customer's premises over a wireless link up to 5 km from the base station. However it is slower than DSL and requires line of sight from the base station for transmission.

Deployment of these technologies has been delayed due to

1. Global cutbacks in telecommunication investment which have precipitated the closure of some telecom companies (Formus) and a contraction in the investment programmes of others (Eircom and Esat).
2. DSL and WLL technologies are carried on the existing telephony network, most of which is owned by Eircom. Difficulties in deregulation (agreeing tariffs for access to Eircom's network – Unbundling of the Local Loop) have delayed the process of rolling out DSL.

Furthermore, NTL who had announced plans to provide advanced digital, interactive TV services nationwide, have now decided to confine rollout of new services to areas where there is high demand (essentially large urban centres).

The implications of the delays and cancellations for towns in the Western Region are illustrated in Appendix Table 12.3A.

The result of all these delays is that at best there will be no competition in the Western Region, (Eircom will remain the monopoly provider) and at worst there will be no rollout whatsoever. Either way, the Western Region is seriously disadvantaged.

12.10 More Recent Developments

In light of the contraction of investment as noted above and concern expressed by business and telecommunications providers on the weakness of some parts of ICT provision, the Department of Public Enterprise announced a 10 point strategy in May 2001. This plan contains a series of initiatives for the next 18 months that include

- A feasibility study on a public private partnership to build and operate a North West to South West infrastructure corridor; the extension of networks under the NDP; support to local authorities and regional development agencies; investment in regional points of presence.
- The establishment of a high level international group of experts who are to report on priorities for policy action within six months.
- Increased funding for the Community Application of Information Technology (CAIT) initiative.

12.11 Telecommunications – Key Points

- Ireland has very good international connectivity, but internally provision and competition is very uneven and mainly confined to the larger centres. International access from the Western Region (essentially transmission to and from Dublin) incurs additional cost to the user. This extra connection cost, as well as the poorer quality of this service, acts as a deterrent to businesses locating outside of Dublin. It also adds to the cost base of businesses currently located in the region.

- Backbone infrastructure in the Western Region is considerably weaker than in the East and South, both in terms of capacity and choice of provider. This means that the Western Region cannot compete for mobile investment.

- Broadband access is underdeveloped. The delays in Unbundling of the Local Loop (ULL - ending of the Eircom monopoly) mean that there is, as yet, little competition for SME and residential users. In addition, the planned roll-out of technologies is seriously delayed.

- There is no 'dark fibre' available anywhere in the Western Region. Dark fibre is designed to be managed by a purchaser rather than the carrier/owner. The availability of dark fibre would allow other carriers to enter the market more easily and offer additional services, as well as stimulating competition.

- The DSL suite of technologies is recognised as one way of dealing with access to the fibre backbone. This technology is well established in the US. However, the planned DSL development has been cancelled, as both Eircom and Esat have pulled out from state-sponsored rollout plans.

- Another appropriate technology for more remote areas is Wireless Local Loop (WLL). Again the planned development of WLL has been restricted due to the closure of Formus.

- NTL who had announced plans to provide advanced digital, interactive TV services nationwide, have now decided to confine rollout of new services to areas where there is high demand (essentially large urban centres).

- As the deregulation process is evolving, rollout is proceeding in areas with high-density business and residential usage. It is the free market that is largely determining supply and provision. If free market principles continue to determine rollout, then much of the Western Region will have extremely limited provision and capacity. This will hamper the efforts at enticing new investment into the region as well as limiting the development of existing businesses there.

- Eircom may continue to be a monopolistic provider in the Western Region, so that consumers have no choice of service or price. This will postpone private investment, which could prove detrimental to the region's ability to participate in e-commerce, further widening the digital divide.

Table 12.4 Glossary of Telecommunications Terms

ADSL	Asymmetric Digital Subscriber Line. Access technology over the ordinary telephone cable. Allows access speeds from the network to the user of up to 8Mbit/s depending upon the distance to the nearest broadband node.
ATM Node	Provides for access speeds of 34 and up to 155 Mbit/s. Asynchronous Transfer Mode – a fast switching and multiplexing technique that allows voice, data, audio and video to be carried on the same network.
Cable Modem	A device enabling connection from a TV or PC to a cable TV line and receive data at high speeds and internet access.
DWDM	Dense Wave Division Multiplexing. A new technology allowing for increased capacity of existing fibre links.
GSM	Global System for Mobile. A digital two-way cellular system.
GPRS	General Packet Radio Service. Offers a fast (up to 155 kbit/s) connection for the transmission of data to mobile phones. GPRS supports a wide range of bandwidths which is an efficient use of limited bandwidth and suitable for sending and receiving small bursts of data such as e-mail and web browsing.
Frame Relay	Form of data networking appropriate for organisations with 3 or more locations with mid to high bandwidth needs. Voice services are available but still under-developed. Frame Relay gradually being replaced by faster technologies such as ATM.
HDSL	High-Speed Digital Subscriber Line. Allows two-way transport up to 2 Mbit/s over 2 or 3 twisted pair copper cables. Deployed along the network as demand requires.
HSCSD	High Speed Circuit Switched Data. A mobile network technology that offers data rates of up to 57.7kbit/s.It is only available on Eircell's network
IP	Internet Protocol. Forms the basis for a connectionless packet delivery service. Cellular services such as GPRS will use IP to provide an 'always-on' internet and e-mail connection.
ISDN	Integrated Services Digital Network. Offered in two forms – Basic ISDN (2 x 64kbit/s channels) and the faster Primary ISDN (30 x 64kbit/s channels).
LAN	Local Area Network. A high-speed communications system designed to link computers and other data processing devices within a small area.
LLU	Local Loop Unbundling. Allowing other telecommunication companies and service providers access to the former incumbent's local network to provide services directly to the customer.
Optical Fibre Node	Provides for access speeds of 2Mbit/s.
MMDS	Multipoint Microwave Distribution Systems. An analogue broadcasting medium which allows distribution of a number of analogue television channels. It is used to provide 'cable' television where cable-laying is not viable.
PDH	Plesiochronous Digital Hierarchy. An older technology used in the backbone network. Traditionally used to link every local exchange in the country for voice but not very suitable for the provision of broadband services. It is being replaced by SDH.
SDH Node	Provides for access speeds of 2, 34, 45 up to 155Mbit/s. Synchronous Digital Hierarchy.
UMTS	Universal Mobile Telephone Service, a third generation (3G) mobile system. It is a European system attempting to combine cellular, cordless, low-end wireless services providing data speeds of up to 2Mbps.
VSAT	Very Small Aperture Terminals. Suitable for applications such as transmission of voice and data from head office to branch office providing bandwidth from 9.6Kbit/s up to 45 Mbit/s.
VPN	Virtual Private Network. The provision of private voice and data networking from the public switched network through advanced public switches.
WAP	Wireless Access Protocol. A technology allowing mobile phones to access the web. A protocol for the transmission of data over low bandwidth wireless networks.
WLL	Wireless Local Loop. This technology allows companies to beam high-speed internet services to buildings via radio waves rather than using wires. This allows the service to become operational faster than traditional broadband connections, which have to be installed by digging up roads and laying cable.
XDSL	An umbrella term for the new generation of dedicated subscriber line technologies that allows high-speed broadband communications over existing copper wires. Enables the provision of high speed Internet and multimedia services. (Up to thirty times faster than traditional modem services).

Part III

Developing the Western Region
Key Priorities

13. DEVELOPING THE WESTERN REGION KEY PRIORITIES

13.1 Introduction

The analysis in Part I of this report – based on the most up to date material available to the WDC – highlighted the very limited progress in achieving balanced development in the Western Region since the publication of the WDC's *Blueprint for Success* and the National Development Plan. Despite Ireland's record rates of growth and prosperity, the Western Region has been losing ground over the past few years. While there has been population and employment growth in the region, both are unevenly spread and concentrated in Galway, and to a lesser extent in Clare. The remaining five counties – Donegal, Sligo, Leitrim, Mayo and Roscommon – continue to exhibit the characteristics associated with low growth and underdevelopment and their relative position is worsening.

13.2 The Nature of the Development Challenge

Five key conclusions from the analysis will serve to highlight the extent of the development challenge facing the region.

- The key productive sector of manufacturing and services has a weaker structure in the Western Region. There is a relatively high reliance on 'low tech/low value' industries so that wages, salaries and net output are much lower than in the more developed parts of the country, where growth can largely be attributed to 'high tech/high value' firms. Apart from Galway and Clare, the region is attracting a tiny share of investment through state-supported industrial employment – a net gain of only 201 jobs (out of a total to the region of 2,807) for Donegal, Sligo, Leitrim, Mayo and Roscommon combined, over 1999-2000. Net industrial output in the Western Region grew at a rate of less than a third of the national average between 1991 and 1998.
- Many of the best and brightest leave the seven western counties because they cannot find jobs to match their high educational levels. This leaves a major human resource deficit in the region and a major gap in the knowledge infrastructure. The absence of a third level institution of sufficient size and status north of Galway means that the region has a weak research and technology capacity and is disadvantaged in attracting research funding or the new 'knowledge-based' industries.
- Limited opportunities for growth exist in natural resource based productive sectors such as agriculture (e.g. organic farming, specialist crops), the marine (e.g. aquaculture, value-added seafood) and forestry. However, there is considerable potential for development in tourism.
- Population growth is occurring but is associated particularly with the larger towns. The region is predominantly rural, with only four towns with population in excess of 10,000 and a further five with more than 5,000.
- Detailed analysis of the state of transport, energy and telecommunications infrastructure reveals the nature and scale of the major infrastructure deficit in the Western Region. This is largely the result of decades of under-investment so that weak transport, power and telecommunications infrastructure are now the major inhibitors of development in the region.

We are, at present, in a situation where a great deal of public expenditure is committed to investment in infrastructure under the NDP, but the Western Region nevertheless remains seriously underdeveloped and unable to compete in a deregulated environment. This is sufficiently serious to warrant radical and dramatic action.

13.3 Developing the Western Region - The Policy Context

In *Blueprint for Success* the Western Development Commission set out a comprehensive set of recommendations for each of the productive sectors and has since followed up with blueprints of detailed action plans and implementation strategies for key sectors – foreign direct investment, tourism and organic agri-food[61].

These WDC blueprints are based on detailed analysis and set out clearly how significant development can be achieved in the region. However, the success of these, or any other development strategies for the region, is fundamentally hampered by the region's infrastructure deficit. Put simply, this centres on the state of road, rail and air infrastructure and on the availability of power and telecommunications capacity to underpin and sustain a modern competitive economy.

The Western Development Commission Act 1998 specifically requires the WDC

> *to promote, foster and encourage the provision and maintenance and, if appropriate, the enlargement of and procure the provision of assistance for, such infrastructure projects, both local and regional, as it considers necessary or expedient for the purposes of economic and social development in the Western Region (WDC Act 1998, Part II s.8d).*

In concluding this report therefore, we wish to concentrate on addressing two of the most pressing issues for regional development by proposing strategies that will:

- tackle the Western Region's transport, power and telecommunications (trans/powercom) infrastructure deficit – this largely involves actions where it is appropriate for the WDC to act as a catalyst and facilitator; and
- revitalise the Western Region's economy through supporting investment – a set of actions where it is appropriate for the WDC to play a proactive role.

Before turning to the detail of these, it is important to make clear the WDC's view on the broad parameters that we believe will influence the effectiveness and feasibility of regional development strategies for this decade and the next. We group these under two broad headings – spatial and infrastructure.

[61] See Western Development Commission, *Blueprint for FDI; Blueprint for Tourism Development in the West; Blueprint for Organic Agri-Food Production.*

13.3.1 The Spatial Debate

The spatial dimension of economic development is recognised by government in the NDP and given effect in the preparation of a *National Spatial Strategy*. The WDC believes that the following **four assumptions**, which are prominent in debates about the spatial dimension of development, **are not a sufficient or appropriate basis on which to build a development strategy for the Western Region**. These are:

- Only large centres can contribute significantly to economic growth so they should receive the bulk of state support.
- Existing spatial patterns should determine future development.
- There are too many public agencies involving a lot of overlap and duplication.
- There is a large number of local projects and development groups whose work, in the absence of a broader strategic focus, can sometimes involve wasteful duplication and poor value for money.

While acknowledging that each of these assumptions has some validity, the Western Development Commission's approach to a spatial strategy for the Western Region is based on the following principles.

Dominance of large centres. The national spatial imbalance, whereby growth has been concentrating in the Dublin and the East Region, is mirrored in the Western Region where Galway dominates. This has two important implications. Firstly, the success of Galway in attracting investment is creating diseconomies of congestion that must be tackled now to ensure continued sustainable development there. Secondly, Galway (and parts of Clare) have achieved sufficient critical mass to be self-sustaining and may no longer need the same degree of direct public support to attract investment.

Achieving dispersal. Given the weak urban structure of the Western Region, an exclusively city-led approach to development is inappropriate. There is therefore a need to understand and target 'functional economic areas' comprising groups of smaller towns. Existing spatial patterns are not immutable and new spatial relations can be created. In productive sectors such as tourism, fisheries and specialist agri-food production, smaller centres can become growth hubs.

Co-ordination. Agencies can work together in partnership, as long as they have a clear strategic focus and are facilitated to do so. However, the challenges of getting agencies to work effectively together, particularly when they are organised on different spatial and sectoral lines, is considerable and needs to be supported.

Harnessing local resources. Locally based development activity constitutes a considerable resource in the Western Region. It can be harnessed productively within the context of a well co-ordinated strategic approach to tackling western development, particularly in relation to tourism development, local infrastructure provision, social inclusion and quality of life.

13.3.2 The Infrastructure Debate

In regard to infrastructure, the WDC believes that the **following assumptions**, which are prominent in discussion about infrastructure investment at national level, **are not sufficient or appropriate to address the infrastructure deficit in the Western Region.** These are

- The investment provisions in the NDP have addressed/are addressing the 'infrastructure problem'.
- Congestion should largely determine priority in infrastructure development.
- Deregulation of the energy and telecommunications markets is a positive development as competition will lower prices and improve choice.
- While delays might be inevitable, there is generally sufficient capacity to deliver infrastructure in and between local authorities.
- Local protest is a major inhibitor of infrastructure development.

The Western Development Commission believes that an approach to infrastructure development for the Region must be based on the following principles.

Objective of infrastructure development. In more developed regions, current extensive investment in infrastructure is driven by severe congestion problems and the need to serve the majority of the population as quickly as possible. In the Western Region, a different rationale is required; investment in infrastructure is essential to drive development, and historical patterns should not determine current or future investment, particularly when they are likely to exacerbate, rather than alleviate, problems of congestion. Without adequate infrastructure, the Western Region cannot compete for mobile investment. In this context, the 2003 review of NDP expenditure will be crucial.

Deregulation effect. Deregulation means that expansion of utility infrastructure (power and telecommunications) to the rest of the population takes place at a pace controlled by the utility provider and not by Government policy or infrastructure requirements. The deregulated market is already affecting the rollout of telecommunications infrastructure to the Western Region and this will continue to exacerbate its weak position, as profit-driven investors concentrate on areas of greatest demand. In a deregulated market only government intervention can redress regional imbalances.

Relative remoteness of the Western Region. This weakens the imperative to provide an adequate infrastructure. This is best understood by the lack of urgency in providing an electrical infrastructure that is robust, with sufficient spare capacity to allow the Western Region to compete with, for example, the east of the country for major ICT/e-commerce investments. A key focus of infrastructure expenditure must be to mitigate the disadvantages of remoteness.

Delivering infrastructure priorities. Delivering on infrastructure priorities after decades of under-investment is a major challenge to local authorities that are themselves undergoing restructuring and often have to work with a depleted staff complement. Acceleration of infrastructure provision will increasingly require a joint approach from neighbouring local authorities.

Local engagement. Local engagement with western development will ensure that local objections are well founded and meaningful. Programmes of consultation and partnership with local groups can maximise ownership and 'buy in' to infrastructure projects of regional strategic significance.

13.3.3 Determining Priorities for Infrastructure Development

The provision of adequate access, communications and power into the Western Region is the only basis on which economic and social development can be based. All other local or centrally driven initiatives to promote production in sectors such as tourism, fisheries, agriculture and industry will have limited success and little long-term impact unless these basic elements of infrastructure are put in place.

Action can take place at three levels

- National level through government initiatives
- Regional level, through the work of various agencies, and/or the WDC
- County and sub-county level through local authorities, including County Development Boards and other county structures or locally based development groups.

In prioritising transport, power and telecoms infrastructure investment, it is necessary to make hard choices about location and access. Furthermore, it is preferable to make these choices based on a vision that does not predetermine development patterns, or regard existing patterns as immutable. It is inappropriate therefore to base investment wholly on large towns without regard to the rural characteristics of the region. It is also desirable to create a dynamic or framework for new centres to emerge within the region through the development process. The WDC's priorities for infrastructure provision are based on the need to facilitate more balanced development across the region.

13.4 Reaching the Western Region – Transport

13.4.1 Road Access

Given the peripherality of the Western Region and the significance of road infrastructure in achieving balanced regional development (it is estimated that in excess of 90 per cent of all internal passenger and freight traffic in Ireland is by road), it is essential to substantially improve the links between the Western Region and the rest of Ireland and within the region in order to

- Facilitate existing and future economic activity
- Ensure speedy and efficient access to the airports
- Improve access to and between towns in the region
- Improve the coastal routes to support tourism and marine development.

The key road routes to the region are shown on Figure 9.1
These are:

- East-west access routes N2, N3, N4, N5, N6, N7, N26 and N60
- North-south corridors N13, N15, N17/18, N19 and N61 which include access to Knock, Shannon and Derry airports
- The coastal/tourist route from Clare to Inishowen
- Key regional link roads N16, N56, N58, N59, N63, N83, N84 and N85.

The NDP contained a significant commitment to expenditure on road infrastructure. Nationally, £3.4 billion of state and EU funding is to be provided for national roads, together with a further £1 billion of private sector investment, and £300m for maintenance of the road network. **None of the major routes to the Region are to be part of the core national network to be developed to high quality motorway/dual carriageway standard.** However, major improvements are indicated for the N4 in Roscommon; N5 in Roscommon; N13 in Donegal, N16 in Leitrim; N17 in Galway/Mayo; N18 in Clare; and N26 in Mayo. National Secondary Roads earmarked for improvement include the N56 in Donegal, N59 in Mayo and N85 in Clare.

While the N4, N6, N7, N15, and N17/18 are designated as major inter-urban routes and earmarked for significant investment in the NDP, other major **primary road routes** into and through the region, notably the N2 and N5, are in need of major upgrading. Businesses in the region are constantly pointing out to the WDC the cost to them of the inadequate road quality, especially the N5, which is the main primary route to the east coast for counties Mayo and Roscommon. There is ample evidence from them and from the development agencies that poor road quality is a major deterrent to investment in the region.

Given the importance of the N60 as an access road to and through Roscommon and Mayo and the function of the N61 as a **link** between Sligo and Athlone, there is a case for investing in significant improvements to bring them up to a standard comparable to primary routes.

The **coastal roads** are vitally important for tourism and the marine sectors in the region and for local access for coastal communities. The coastal route should be maintained to a standard to ensure safe and adequate levels of service for probable increasing volumes of tourist and local traffic.

Regional roads are important arteries between primary routes and in providing access to smaller towns in the region and facilitating local linkages. They are also important in helping economic hubs to develop within the region and must be upgraded and maintained to an adequate standard.

The WDC is conscious of the fact that road development is both an inter and intra regional issue. While key roads in the region are in need of urgent attention as outlined above, it is necessary to adopt a strategic approach to developing road infrastructure.

Key Recommendation 1 – Reaching the Western Region

Given the critical importance of road infrastructure for the development of the Western Region, and in the light of the issues highlighted in this report, the WDC believes that there is a need for a strong strategic response to the provision of road infrastructure.

Accordingly we recommend the establishment of a **Western Region Roads Infrastructure Consultative Group** chaired by a senior official in the National Road Authority and comprising officials of the National Roads Authority, Department of Environment and Local Government, Forfás, Local Authorities and the WDC.

This Group should

1. Review the current level of investment in road infrastructure in the Western Region in the light of the issues raised in this report, and the urgent need to improve access to and through the seven western counties.
2. Examine the level of planned investment in the region and identify where and how much additional investment is required.
3. Identify key priorities based on a clear development rationale, rather than only on existing traffic flows.
4. In view of the critical importance of cross-border routes for the north-west of the region, identify a structured approach to cross-border co-operation in relation to road development.
5. Decide whether a more permanent steering committee with a similar composition should be established in order to bring about a more strategic and structured approach to road infrastructure development in the region and foster co-operation between local authorities.

This Group should be set up by September 2001 and report its findings together with a costed development schedule by February 2002, with an interim report for consultation in December 2001.

In addition to this key recommendation on road infrastructure, the WDC wishes to make the following recommendations regarding air and rail infrastructure.

13.4.2 Rail and Air Access

Rail transport can be a serious alternative to the road network, but only if it is a quality service that is safe, reliable and efficient. Until the *OnTrack 2000* investment programme is completed, capacity constraints are impeding the introduction of additional quality services. The WDC recommends that

- Completion of these improvements should be followed by the immediate introduction of better services and new timetabling, particularly in relation to early and late express services between major centres.
- Feasibility studies should be undertaken to examine the economic and commercial viability of establishing additional rail services connecting larger towns in the region to surrounding areas along the existing rail lines.

- The development of a Western Rail Corridor (Sligo – Limerick) has the potential to provide significant freight and passenger transport and facilitate tourism in the region. Serious investigation of the feasibility of a Western Rail Corridor should be undertaken. This could also be linked to the development of commuter routes between centres in the region.

Air access is extremely important for both tourism and business interests in the Western Region. There is evidence of additional latent demand for services through Knock, particularly among the business community. But additional demand can only be fully capitalised on, when access to airports is improved through upgrading the road network, particularly the N17/N18 to Shannon and Knock.

- As Shannon and Knock airports are spatially well located with international runway facilities, the WDC believes that they should be prioritised for international access. Knock has the potential to become a regional access and development hub and this is point is explained in Section 13.8 below.

13.5 Powering the Western Region – Electricity and Gas

13.5.1 Electricity Generation and Transmission

Electricity generation capacity is inadequate for the Western Region and there is a significant risk of unplanned interruptions in supply as demand outstrips generation capacity. Loss of a major generator during the winter peak would give rise to severe difficulty in maintaining voltage levels in parts of the Region.

The electricity transmission system in the Western Region is neither reliable nor robust and there are large parts of the region experiencing low voltage, low capacity and the threat of voltage collapse. There is considerable risk of unplanned outages due to the weaknesses in the transmission system. This has immense implications for the investment and effectively precludes much of the region from attracting industries that are particularly reliant on quality power supply.

There are considerable time lags in the provision of new infrastructure. Construction of new generation and transmission facilities can face long lead times - up to seven years on major projects.

13.5.2 Gas Infrastructure

Currently, all of the potential customers for Corrib gas, which will be piped ashore on the north Mayo coast, are located in the east and south regions. The Western Region has no existing natural gas infrastructure. Proposals for gas network extension into the Western Region include establishing domestic and commercial supplies to the nearest population centre (Galway 2001). On completion of this pipeline, Galway, Ennis and other major population centres are likely to get industrial and domestic supplies. These connections will be developed purely on a commercial basis with the larger population centres being first to be developed.

Only Government intervention can accelerate the extension of the gas grid to major centres in the Western Region. In this context, the announcement that the pipeline will be extended to the north west – to Ballina and Sligo – is significant, and is an acknowledgement of 'market failure' in the region.

13.5.3 Powering the Western Region – Actions Recommended

We have already set out, in Chapter 11, a number of actions which need to be taken relating to energy supply in the Western Region. These are:

- To increase electricity generation capacity in the Western Region, the construction of one or more smaller power plants, by the private sector, using Corrib gas is recommended. The use of 'smaller' output stations (100MW) will put less strain on the distribution system. The impact of the outage of such a station would be less damaging than the loss of an 'optimal' 400MW station. These power stations could be located at any location where the pipeline offtakes are adjacent to the national power grid.
- There may be a case for a partnership-type arrangement between ESB/Eirgrid and a gas producer (such as a Corrib partner) to build such a power station in the Western Region. This would provide a balance between grid/infrastructure investment and

power station investment. At least two locations should be studied Galway and Bellacorrick – Galway because it is a population centre and Bellacorrick where there is an existing power station and an overhead cable infrastructure which could minimise planning disruption.

- It is necessary to actively promote the construction of CHP[62] plants particularly, as they are more efficient and environmentally friendly, regardless of the fuel they burn. This should include the lifting of regulatory restrictions that currently impede development of CHP.
- In situations of 'market failure', ways of encouraging private sector investment through state support (as in the case of telecommunications), or by fiscal measures should be instituted.
- The routing and construction of the Ballina/Sligo gas pipeline should be linked to facilitate future links into Donegal and Northern Ireland.
- The routes of the Galway and Sligo gas pipelines should allow maximum feasible access to gas by towns in the region, and in particular to Knock Airport.

[62] Combined Heat and Power.

13.6 Connecting the Western Region –Telecommunications Infrastructure

Telecommunication rollout is proceeding in areas with high-density business and residential usage. If free market principles determine rollout, then much of the Western Region will have extremely limited capacity/provision. This will hamper efforts to entice new investment into the region as well as limiting the development of existing businesses there.

It is of critical importance for the Western Region that investment in the rollout of telecommunications infrastructure proceeds as quickly as possible. Further delay will result in the opening of an unacceptable technical and communication gap that will become increasingly impossible to bridge. In order to achieve this and a commensurate upgrading of energy infrastructure, several key actions must now be undertaken at national, regional and local level.

In order to progress the above recommendations regarding power and telecoms, it is necessary to set up a High Level Strategic Working Group as set out in the next section.

Key Recommendation 2 – Powering and Connecting the Western Region

Notwithstanding the limits of the market and of the state's responsibility in ensuring access to power and telecom facilities for all regions, the deterioration in infrastructure provision and the worsening situation in the context of deregulation, require a new approach.

Accordingly, the WDC recommends the establishment of a **High Level Strategic Working Group on Power and Telecommunications in the Western Region**. The Working Group should be chaired by a senior official in the Department of Public Enterprise (Assistant Secretary Level) and should comprise relevant officials from DPE, Department of Marine and Natural Resources, Department of Enterprise, Trade and Employment and the relevant statutory bodies.

The Group should

- Develop an appropriate strategy for the rollout of power and telecommunications infrastructure ('powercoms') in the Western Region. This should include commissioning a gap analysis to provide a comprehensive picture of the outstanding weaknesses in 'powercoms' in the Western Region. Údarás na Galetachta has already undertaken a similar study of telecom infrastructure for the Gaeltacht areas. The gap analysis should include consideration of the recommendations regarding power generation and transmission outlined above. It should also identify strategies to maximise the rollout of fibre, cable and other telecom technologies in the region.
- Ensure co-ordination and co-operation in relation to digging and ducting between relevant infrastructure operators/providers.
- Develop specific proposals on how best to deploy the NDP funding for telecoms. These might include specific proposals for a 'carriers carrier' approach to the provision of basic fibre infrastructure in association with local authorities.
- Give consideration to ways of accelerating the competitive process such as enticements to operators to extend rollout beyond the commercially viable areas. De-regulation of the 'powercom' market is proving difficult with the telecom incumbent (Eircom) reluctant to share its network. This would help to speed up this process. Similar problems are emerging in the deregulation of electricity.
- Address the issue of price and tariff structures at regional level so that lower density areas are not disadvantaged by higher prices. 'Powercom' costs must be relatively inexpensive to encourage take-up in the residential and SME sectors and enhance competitiveness in the latter.
- Identify ways of overcoming the current segmented approach to 'powercoms' and transport infrastructure provision e.g. shared access routes and facilities, as well as the potential of public private partnerships in ICT[63] provision.

This Group should be set up by September 2001 and report its findings together with a costed development schedule by February 2002, with an interim report for consultation in December 2001.

[63] Information and Communications Technology.

In addition to the work of the High Level Strategic Group, the WDC believes that there is much that could be done at regional level and local levels.

- Organisations such as Enterprise Ireland, the IDA, Shannon Development and Údarás na Gaeltachta, the Chambers of Commerce and IBEC should consider developing and forming a joint strategy to attract private investment into rolling out new infrastructure and to articulate concern about gaps in provision and the need for new investment.
- Local Authorities should become more proactive in dealing with 'powercoms' providers and work closely with one another in order to ensure more speedy and efficient rollout. Operators point to difficulties with local authorities in gaining planning permission for infrastructure developments. There is a need to develop mechanisms for avoiding lengthy planning delays while accommodating legitimate objections.
- Local authorities should develop county ICT strategies that encompass the facilitation of broadband access, including the idea of a 'carriers carrier' and maximisation of potential usage of ICT. Some counties have already taken the lead in this and have developed digital economy strategies for key sectors.
- The perceived lack of sufficient demand and difficulties associated with the planning process discourage private investment in energy and broadband infrastructure outside of major centres. Local recognition and concern about energy needs and the benefits of broadband access must be advanced and articulated in order to convince private operators to invest.
- The Western Development Commission's Investment Action Programme strategy, outlined in section 13.8 below, can play a key role in facilitating town partnerships to identify and articulate local demand and to work with 'powercom' providers.

13.7 Revitalising the Western Region

13.7.1 Introduction

This report has highlighted the limited success of state supported job creation in the Western Region outside of well-established locations such as Galway and parts of Clare. A range of factors accounts for the very low levels of net job creation and development outside of these areas. These include

- Poor infrastructure
- The weakness of the region's industrial base which is overly dependent on traditionally structured enterprises
- The dispersal of population and business - over 80 per cent of the population of the region lives in towns with populations of less than 5,000
- The fact that current development policies have been largely city-led
- The existence of a large number of agencies involved in development without one single coherent strategy or initiative to focus effort outside large centres of population

In this chapter we have already described the type of response which is necessary to deal with the infrastructure deficit. In addition, it is necessary to implement a two-part initiative to firstly, enable a greater variety of towns to compete more successfully for new mobile inward investment. And secondly, to enable businesses to become more globally competitive in the context of a region where both population centres and businesses are widely dispersed. It is intended that this initiative will add value to national strategies currently in place by the state development agencies by addressing the particular challenges in the Western Region. The WDC, therefore, proposes a two-part initiative aimed at making

- More locations in the region investment ready, and
- Key industrial sectors in the region more globally competitive.

13.7.2 Investment Ready Locations – Invest in the West

The WDC proposes the establishment of an Invest in the West programme aimed at making more locations in the Western Region investment ready. Specifically, support should be directed towards

- Facilitating towns, villages and rural areas in the Western Region to attract investment and to develop sectors, which will ensure their sustainable economic and social development
- Stimulating significant long-term development in both smaller urban and rural areas, by providing a co-ordinated approach to the development of towns, villages and rural areas
- Assisting these areas in the provision of critical services and other priority development in their areas, in particular the development of business sites, accommodation and other facilities that can make locations more attractive.

Intervention should focus on two principal types of area-based initiatives for the Western Region.

1. Urban Investment Action Programme (Population >5,000)
2. Town and Investment Village Action Programme (Population< 5,000)

Recommendation 3 – Invest in the West

Towns over 5,000 Population.
These towns are already acting as foci for growth and as suggested in the WDC's *Blueprint for FDI in the West* should establish partnerships to maximise their attractiveness to investors. IDA, Enterprise Ireland and Shannon Development should develop a joint strategy to facilitate and promote investment into these towns.

They should also actively encourage and support the establishment of a Knowledge Centre for the North West Region based on collaboration between existing third level institutions on both sides of the border.

Locations with less than 5,000 Population.
It is proposed that the WDC's Western Investment Fund should be augmented to spearhead a three-year investment programme, which will be used to support plans by local town partnerships to attract employers to locate in their area. Locations will be invited to apply for investment support and the most feasible locations will be assisted. It is envisaged that investment plans for towns would contain measures to provide business facilities such as sites, accommodation, and initiatives to improve the attractiveness of towns, including measures to provide social and cultural facilities. The WDC investment would be used to lever additional support from national and local bodies, and add value to the work of other agencies, so that the maximum level of resources are channeled into effective and viable plans to create and attract investment and jobs into local areas.

For areas with less than a population of 1,000, support would, in general, be aimed at putting in place critical services which will ensure an attractive environment for working and living.

Flagship Investment Location
The WDC proposes that significant public resources be allocated for the development of infrastructure, business parks and facilities for Knock Airport to enable it to act as an important development hub. Where possible, the WDC will commit significant investment support to stimulate the creation of quality business facilities around the airport.

Implementation
It is proposed that the WDC be enabled to spearhead the implementation of the Invest in the West process by providing pump-priming investment. The WDC will foster and encourage the involvement of other statutory bodies at national and local level in this process. In this way such bodies will be able to contribute additional resources at the local level. While there are many sources of local development funds, this process can help streamline and increase the effectiveness of such funds and stimulate them to focus on the most viable and effective projects.

13.7.3 Investment Action Programme – Globally Competitive Sectors

The WDC proposes that efforts to support individual enterprises should be augmented with an action plan to develop key sectors, which draw on the natural resources of the region. In particular, in the tourism and food sectors, more assistance should be given to enable smaller businesses to network and cluster more effectively, in order to achieve greater economies of scale and to become more globally competitive.

Tourism Action Programme
One of the key structural weakness of the tourism sector in the region derives from the multiplicity of tourism initiatives in the region, which are too small and dispersed to achieve long-term viability. The WDC in its publication *Blueprint for Tourism Development in the West* has already outlined a zonal approach to tourism development in the Region. The strategy addresses the infrastructure requirements for tourism development in the region as well as the need to achieve a more co-ordinated approach to developing, marketing and managing the tourism potential of the Western Region. A particular feature of the strategy is that it focuses on enabling local communities and the private sector to develop tourism projects which cover a larger local area and which have greater economies of scale.

A Steering Group under the leadership of Bord Fáilte is already in the process of implementing the strategy.

Investment Action Programme – Agri-Food Production
The added value food sector is growing and the WDC has already submitted recommendations and action plans to government. It has submitted recommendations on the development of value-added seafood, based on a WDC workshop in 1999. The WDC has also submitted an action plan for organic agri-food production in the Western Region. The WDC's recommendations are drawn from the common themes emerging from these and from other studies. These studies highlight the small-scale, dispersed nature of the food industry in the region. The WDC's approach is designed to complement the work of other state bodies and in particular the measures outlined by Enterprise Ireland in its strategy document *Driving Growth in Regional Enterprise.* The WDC's key recommendations are as follows:

- The provision of distribution and marketing channels for producers in the region so that they can link more effectively to centralised distribution and new media communication channels. Feasibility studies should immediately be undertaken to establish how this can be achieved.
- The creation of networks and clusters among producers so that they can achieve economies of scale to tackle larger and more lucrative export markets.
- Provision of greater levels of training, research and development funding for food producers.

13.7.4 Indicative Indicators of Achievement
If the WDC recommendations for the development of locations and sectors are implemented then the following indicative outputs can be anticipated
- More towns in the region that are investment ready and attractive for the relocation of businesses

- More attractive, high quality business parks and associated facilities spread throughout the region
- More villages/rural areas with vastly improved recreational and quality of life facilities
- More effective marketing and distribution channels for food and natural resource based businesses in the region
- The establishment of flagship tourism attractions which combine to attract 500,000 visitors annually

These indicators are not intended to be exhaustive, but they are meant to reflect some of impact of implementing the WDC strategy for revitalising the Western Region. They also reflect the additional gains to be obtained from balancing the conventional city-led approach with a strategy for more dispersed development.

13.8 Conclusion

The conclusion to be drawn from *The State of the West* is that the scale of the infrastructure and investment deficit in the Western Region is unacceptably high, and that the specific measures currently flowing from the National Development Plan are insufficient to redress it. The reasons for the deficit come, not only from a lack of expenditure, but from a failure to sufficiently address the broader regional implications of the current regulatory, legislative and national planning framework. This failure at central government level is a major cause of the persistent disadvantage of the Western Region.

As a first step, ownership for resolving these deep-seated problems needs to be vested with the appropriate government departments in a way that involves them in taking a more regionally centred approach to infrastructure policy planning. To facilitate this, the WDC has proposed the establishment of a Western Region Roads Infrastructure Group and, in regard to power and telecommunications, a High Level Strategic Working Group. We have suggested that each of these should report their final proposals by February 2001, with an interim report for consultation in December 2001.

Such levels of responsibility, ownership and action at central level can then be complemented by initiatives at regional level where private, public and voluntary sectors work together in more effective partnerships to make more parts of the region investment ready, and key sectors more globally competitive. Private sector investment in the region cannot be expected to flourish in the absence of a significant, tangible and immediate commitment by government to provide the infrastructure conditions to underpin such investment.

Hence, regional partnership and central commitment are the two driving forces for successful development of the Western Region.