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National Progress Indicators for Sustainable Economic, Social and Environmental Development

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PREFACE

This report on National Progress Indicators for Sustainable Economic, Social and Environmental Development is one of two reports which the National Economic and Social Council has prepared on foot of mandates in the Programme for Prosperity and Fairness. The other is *Benchmarking the Programme for Prosperity and Fairness* (NESC 2001a). These exercises fit with the Council's concern about the need to enhance evidence-based policy making. The concern with improving information for policy and measuring progress on key indicators is part of a wider interest in the development of indicators for the assessment of progress as reflected in the Regulatory Reform Unit to be established in the Department of the Taoiseach on foot of the OECD (2001) report, the development of indicators for the revised National Anti-Poverty Strategy (NESC 2001b) and the European Commission's work on structural indicators (European Commission, 2000). The Council considers these initiatives crucial to the implementation of evidence-based policy making and the reforms envisaged in the Strategic Management Initiative. These are key means to the end of a successful society as envisaged by the Council, that is one characterised by:

- economic inclusion based on full employment;
- social inclusion, reflecting full participation in those activities considered the norm in society;
- successful and continuing adaptation to change as the dynamic expression of competitiveness;
- commitment to the utilisation and development of the potential of the Information Society and the promotion of Research and Development;
- commitment to lifelong learning;
- sustainable and balanced development between regions and between urban and rural areas;
- commitment to the further development of the European Union and international solidarity; and
- an entrepreneurial culture.

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Following discussions in the Council, this report was prepared by the Council's secretariat. The work of drafting the report was largely undertaken by Carmel Corrigan, with substantial contributions also being made by Orla Lane and Ann Marie O'Connor.

The preparation of this report necessitated a wide range of consultations. The Council and the Secretariat wish to acknowledge all of these inputs and in particular express gratitude to officials in the Central Statistics Office, the National Competitiveness Council, the Environmental Protection Agency, Forfas and the Department of the Environment and Local Government. In addition researchers in the Economic and Social Research Institute and the National Economic and Social Forum provided information and comments. The report was enhanced through discussions with the Secretariat of Comhar. All of these inputs are gratefully acknowledged.

The administrative staff of the Council’s Secretariat provided essential support in the production and distribution of the various drafts of the report.

Part I

INTRODUCTION

The *Programme for Prosperity and Fairness* (PPF) directs the National Economic and Social Council (NESC) to consider the development of a framework to bring into operation national progress indicators to measure sustainable economic, social and environmental development.

The impetus for this project arises from a growing recognition that traditional measures of development, based on economic growth and development, are inadequate measures of progress. This traditional approach ignores the interaction between economic development, the availability and management of environmental resources to support this, and social development. It is increasingly recognised that a successful and sustainable society and economy is characterised not only by growth and rising incomes but also by balance in personal, family and work life, in the distribution of the economic gains across society and between successive generations, and in the sustainable use of those natural resources that are the ultimate means for those gains. Hence the growing popularity of the concept of 'sustainable development'. Recognising this, a multi-dimensional approach to national progress is adopted here.

The aim of this report is to identify a set of indicators that can be used to measure Ireland's progress towards sustainable economic, social and environmental development. It is intended that these indicators will allow for the presentation of a general picture of Ireland's development on key policy priorities over the coming years. Where possible, international comparisons are cited in order to place Ireland's progress in the context of other EU and OECD countries. It is not the intention of the paper to develop a detailed set of indicators for any one element of the NESC vision for Ireland or of sustainable development. A range of bodies has been specifically charged with carrying out such work (see Section 3.2 below).

This report identifies eighteen headline and twelve background indicators for measuring sustainable national progress. It is presented in two parts. The remainder of Part I has six sections. A

brief discussion of the choice of framework in Section 1 is followed by a discussion of the criteria used in selecting the indicators and the interrelationships between them within and across the three dimensions of sustainable development.

Section 3 considers key data issues. Section 4 outlines the NESC vision of a successful society and the dimensions of sustainable development which provide the framework for the indicators. The eighteen headline or primary indicators are outlined in Table 1. Twelve background or secondary indicators are identified in Table 2. A summary of change in recent years in each of the eighteen headline indicators is presented in Table 3. This presents an outline of the trends in Ireland's progress towards sustainable economic, social and environmental development. Part II of the report is comprised of three appendices. Appendix I contains three tables that highlight the interaction between and across the indicators. They illustrate the fact that the majority of indicators are relevant to more than one element of the NESC vision and also to more than one of the three dimensions of sustainable development. The Methodology notes for the headline indicators comprise Appendix II. Each note presents the definition of a particular indicator, the rationale for its inclusion, other organisations that use the indicator, data sources and issues and, where possible, statistical information pertaining to the mid- and late-1990s. Appendix III provides similar notes for the background indicators.

1. THE FRAMEWORK USED

The idea of progress implies advancement towards a particular end goal or objective, or a range of objectives. In most cases, agreement on indicators is made considerably easier if there is consensus on these objectives. The NESC vision for Ireland as outlined by the Council in its 1999 Strategy provides a set of objectives, the framework and the basis for the selection of indicators. This vision is based on broad goals of economic, social and environmental sustainability, thereby mirroring the three dimensions of sustainable development.

A number of frameworks for measuring sustainable development

were considered by the Council. These include economics-based frameworks, theme-based frameworks, pressure-state-response frameworks, multiple capital/wealth frameworks and aggregate frameworks. Here, the approach adopted is broadly a theme-based framework, such as that used by the UN/OECD/World Bank/IMF (2000) and the UK government (1999b). While acknowledging that theme-based frameworks have limitations, this broad approach is policy-relevant, easily understood and transparent. These features are particularly important in encouraging the adoption and use of such a framework and its indicators in the first instance. More complex frameworks that require significant analysis, skill and time in their implementation may meet with greater resistance. The themes in this framework are based on the key objectives of the NESC vision for Ireland. These are further detailed in Section 5 below.

2. CRITERIA FOR SELECTING INDICATORS

An indicator is a signal of a complex system or set of events (Hardi and Barg, 1997). By definition, therefore, an indicator should strike the right balance between simplification and comprehensiveness, while still being analytically sound.

The choice of appropriate indicators depends on a wide variety of factors. In order to reduce the arbitrariness in the selection procedure and to ensure that the indicators remain firmly linked to the vision and goals underlying the project, selection criteria agreed by the Council were used. These represent a synthesis of guidelines and criteria that have been recommended by analysts working in the field of sustainable development or have been applied in similar projects elsewhere (see, for example, Hardi and Barg (1997), Hardi and Zdan (1997), Meadows (1998), EPA (1999), OECD (2000)).

Indicators should be:

1) *Easily understandable* – they should be simple, clear and relatively easy to interpret. This criterion is particularly important if the audience for the indicators includes non-specialists, such as the general public or media;

2) *Policy-relevant* – they should relate not only to the three dimensions of sustainable development (economic, environmental and social) but should also be linked to the desired goals within each of these dimensions;

3) *Focused on priority issues* – they should concentrate on identifying and monitoring priority issues so that the project remains manageable and relevant. In the first instance, indicators should be issue-driven rather than data-driven. This is not to subjugate the important measurability criterion referred to below, but to ensure that key issues and objectives are not excluded simply because of data problems;

4) *Analytically sound* – they should be logically or scientifically defensible and representative of the information they are trying to summarise;

5) *Measurable* – they should be feasible in terms of current or planned data availability, bearing in mind cost and resource requirements of data collection and processing; and

6) *Subject to ongoing assessment* – they should be open to challenge, discussion and modification, to reflect changing objectives, the emergence of new issues and improvements in measurement techniques and data availability.

In addition to these criteria, two key concerns guided the selection of the indicators: keeping the number of indicators in the fifteen to twenty range, and assuring coherence within and across indicators in various categories.

A small number of indicators is important for three reasons. First, it keeps the project manageable and focused. This is of particular significance here where the appropriate disaggregation of many indicators across a number of variables, such as age, gender and region, is accepted as a matter of course and is essential in several areas to ensure policy relevance. Second, a small number of indicators has a greater chance of acceptance in policy arenas and among the potential audience of policy makers and politicians. Finally, in convincing the general public of the importance of sustainable economic, social and environmental development and

progress towards this, a small set of readily understood indicators is more likely to become part of a generalised understanding of sustainable development than a more exhaustive list.

In an attempt to limit the number of indicators for the reasons outlined above, but also to provide an appropriate and complete set of indicators, the approach used by a number of other organisations was adopted. This involves the selection of headline or primary indicators and a number of background or secondary indicators that provide additional information where appropriate (see UK Department of the Environment Transport and the Regions (1999), and UN/OECD/World Bank/IMF (2000)). This approach is valuable as it allows for the use of key of headline indicators by those concerned with the 'big' picture, but also provides for more in-depth analysis by those who wish to pursue this.

The second key consideration concerns the need for coherence within and across sets of indicators. A multi-dimensional approach that reflects not just the three dimensions of sustainable development but also objectives and priorities within these will be of little use if the final set of indicators is not coherent. This is important in considering the number of indicators to include, and also in strengthening the argument for broadening the measurement of national development beyond the economic dimension. Selecting a coherent set of economic, social and environmental indicators strengthens the legitimacy of each of the three categories by illustrating that these are part of a wider multi-dimensional whole.

The indicators should be *horizontally coherent*, that is, each set should be related to and supportive of each other. Indicators of economic development should have a relevance to those of social and environmental development, and vice versa, rather than each set being considered in isolation. This ensures that, in using the total set of indicators, a clear and coherent overview of progress towards sustainable development can be achieved. In addition, indicators selected within each dimension of sustainable development should have an internal coherence and be mutually supportive. Furthermore, the background or secondary indicators within each category should expand on the primary indicators within that

category. That is, each category – economic, social and environmental – should be *internally vertically coherent*.

The need for indicators that are coherent, mutually supportive and inter-linked reflects the dynamic nature of the concept of sustainable development itself. This recognises that there are linkages and interactions within the system and that these need to be managed to provide a balanced or sustainable outcome.

3. DATA ISSUES

3.1 Data Availability

Data issues are central to the selection of indicators. The absence of data alone should not, and did not, preclude an indicator from being selected below. Data are currently available for the majority of proposed indicators. What should be noted here is that the available data vary substantially in terms of their coverage, timeliness, regularity and consistency over time and disaggregation. Not surprisingly, it is in the areas of social and environmental indicators that most data problems are encountered. Where data are not readily available for the proposed indicator, a proxy indicator is suggested in instances where this is appropriate and data are available. While this provides a short-term solution to the problem, in the longer-term consideration needs to be given to the collection of more appropriate data, including the costs and methods of such data collection. For a very small number of indicators, a proxy is not identified, as data are known to be forthcoming.

3.2 National and International Comparisons

The development of a framework and selection of indicators for measuring national progress in Ireland should be mindful of similar activities here and in other countries. Much work is being undertaken by international organisations, including the OECD, the UN and the World Bank, in this area and the indicators presented here take account of this work. This ensures that any framework and indicators selected for Ireland, while specific to national

circumstances, do not digress from international practice so much as to be without value in an international context. Comparisons with the OECD and EU are provided below where data are available. Consideration could be given in the future to comparison with particular countries on the basis, for example, of their similarity to Ireland or their known excellence in relation to various indicators.

Similarly, attention needs to be paid to a number of national policy initiatives that are themselves concerned with measuring progress towards a set of goals or targets. This is particularly the case in relation to social and environmental policies where work of this kind is more recent. Particular examples here include the work of the Department of the Environment and Local Government, the Environmental Protection Agency and Comhar in relation to sustainable development indicators. Also relevant are the National Development Plan and its various Operational Programmes, the National Anti-Poverty Strategy and the work of the National Competitiveness Council.

The work of other bodies under various initiatives and policies has been drawn upon in the current paper with a view to complementing and supporting this work rather than duplicating it. A key distinction between the current paper and the work conducted by many of these bodies is the level of detail with which specific issues are addressed. It is the remit of many of these bodies to deal with one aspect of sustainable development and to examine the very wide-ranging issues, concerns and priorities within that. A clear example of this is the Environmental Protection Agency, which has developed an extensive and detailed set of indicators that address the many aspects of this one area. The current paper, on the other hand, attempts to identify indicators of relevance to each element of sustainable development, which reflect a broad range of policies that have been identified as priorities for the coming years.

3.3 GNP and GDP in Measuring Progress and Comparing Effort

An issue of crucial significance in making comparisons of Irish performance with that of other EU and OECD countries is the

relatively greater difference between GNP and GDP in Ireland. Because of the size of foreign direct investment (FDI) in Ireland and the associated repatriation of profits there is a significant difference between GNP and GDP in Ireland. No EU country and only one OECD country, New Zealand, approximates the magnitude of the Irish difference between GNP and GDP. This is recognised by the OECD in its economic surveys:

> The concentration of economic activity in multinational high-tech companies and the relatively high level of external debt means that GDP, the normal indicator of output, overstates both the level and growth of Irish incomes. The level of GNP, a more appropriate level of income, was over 12 per cent less than GDP in 1995, while its increase was about ½ percentage point less than the GDP in the five years ending 1995 (OECD, 1997: 18).

In 2000 GNP was 16 per cent less than GDP (Central Statistics Office, 2001: Tables 5 and 6).

In view of the difference between GNP and GDP in Ireland and the fact that GNP represents the resources available for redistribution it is the appropriate base for the measurement of progress in several of the indicators used in this report.

3.4 Benchmarking the Programme for Prosperity and Fairness

The *Programme for Prosperity and Fairness* (PPF) commits the NESC to 'benchmarking progress under the appropriate elements of the Operational Frameworks' contained in the national agreement (NESC, 2001). This work on benchmarking is obviously closely related to the development of national progress indicators and the two projects should be seen as complimentary. The framework adopted in both these projects is similar. Each uses a thematic framework, headline as well as background indicators and, where possible, an internationally comparative approach. The indicators for sustainable development of necessity apply to broad policies and objectives and are directed to measuring key aspects of progress as reflected in the vision for a successful society and sustainable

development. The benchmarking process is directly linked to the specific policy objectives of the frameworks of the PPF. All of the progress indicators are relevant to the benchmarking of the PPF although some of the headline indicators in this project are background indicators in the PPF project and some of the background indicators here are headline indicators there.

4. THE INDICATORS

4.1 The NESC Vision

As stated above, the thematic framework employed here takes as its starting point the NESC vision for Ireland and the three dimensions of sustainable development. The elements of the NESC vision for a successful society were outlined in *Opportunities, Challenges and Capacities for Choice* (NESC, 1999). These are:

- economic inclusion based on full employment;
- social inclusion, reflecting full participation in those activities considered the norm in society;
- successful and continuing adaptation to change as the dynamic expression of competitiveness;
- commitment to the utilisation and development of the potential of the Information Society and the promotion of Research and Development;
- commitment to lifelong learning;
- sustainable and balanced development between regions and between urban and rural areas;
- commitment to the further development of the European Union and international solidarity; and
- an entrepreneurial culture.

4.2 What is Sustainable Development?

The most widely accepted definition of sustainable development is

that given by the World Commission on Environment and Development (the Brundtland Commission) in 1987:

> …development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (WCED, 1987: 43).

This definition implies that development is sustainable if it enables future generations to enjoy a level of well-being that is at least as high as that of the current generation. It therefore incorporates a strong direction towards inter-generational equity. The concept of 'needs' is emphasised, implying that the basic needs of the world's poor both now and in the future should be given priority. It also incorporates a sense of the limitations on the environment to meet those needs. Finally, the definition reflects the dynamism of the concept, in other words, the idea that sustainable development is an evolving state that allows for change as long as it is balanced. Indeed, a key aspect of sustainable development is the idea of the 'whole' system that can co-evolve successfully in a changing environment. This recognises that there are linkages and interactions across the system and that these need to be managed to provide a balanced or sustainable outcome.

The Brundtland definition of sustainable development is sufficiently broad to encapsulate economic, environmental and social concerns. The addition of social concerns to the concept of sustainable development is relatively new, with the Brundtland Commission being one of the first to adopt this broader, more holistic approach. However, while most observers acknowledge the appropriateness of social concerns to sustainable development in a conceptual sense, social indicators continue to pose a challenge, given the very wide range of issues with which they are concerned. Of those that are relatively easy to measure (for example, employment), many are used as economic rather than social indicators. This has resulted in the relative under-development of social indicators compared to economic and environmental ones, although in Ireland work in the latter area is also relatively recent.

The multi-dimensional and dynamic concept of sustainable development evident in the Brundtland definition is adopted here.

The three elements of sustainable development – economic, social and environmental – as well as the interaction between these and the need for each to be supportive of the others is central to the concerns of this paper.

4.3 The Indicators

The indicators address the three dimensions of economic, social and environmental development and the primary elements of the NESC vision of a successful society. Although not referenced in the NESC vision as a specific objective, maintaining and managing the environment is taken to underlie various elements of the NESC vision and has also been included here as a separate element. Table 1 identifies the relevant headline indicators. Table 2 outlines the background indicators that are intended to support and expand on the headline indicators where appropriate.

The criteria and issues taken into consideration in the selection of indicators are outlined above. In attempting to limit the number of indicators, what may appear to some as relevant indicators have been excluded. This is not to suggest that these are unimportant in and of themselves. They are not included because they are not appropriate within the parameters of the current project. As indicated above, many of these indicators may be found elsewhere in the work of other bodies.

TABLE 1:

NATIONAL PROGRESS INDICATORS

Elements of NESC Vision	Headline Indicators	Sustainability Dimension
1. Successful Adaptation to Change	H1.1 Labour Productivity	• Economic Sustainability
	H1.2 Per Capita GNP/Annual GDP Growth Rates	• Economic Sustainability
2. Utilisation and Development of the Information Society	H2.1 Gross Domestic Expenditure on R&D as a Proportion of GDP (GERD)	• Economic Sustainability
	H2.2 Proportion of Households with Access to a PC/Internet	• Economic and Social Sustainability
3. Economic Inclusion	H3.1 Employment Rate	• Economic and Social Sustainability
	H3.2 Unemployment Rate	• Economic and Social Sustainability
	H3.3 Labour Force Participation Rate	• Economic and Social Sustainability
4. Social Inclusion	H4.1 Percentage of Households Living in Consistent Poverty	• Economic and Social Sustainability
	H4.2 Households and Persons Experiencing Relative Income Poverty	• Economic and Social Sustainability
	H4.3 Retention Rates to the end of Upper Secondary School	• Economic and Social Sustainability
	H4.4 Disability-Adjusted Life Expectancy at Birth and 60 Years	• Economic and Social Sustainability
	H4.5 Housing Stock and Completions: Local Authority and Private	• Economic and Social Sustainability
5. Lifelong Learning	H5.1 Participation in Adult and Continuing Education and Training	• Economic and Social Sustainability
6. Balanced Regional Development	H6.1 Employment Growth Rates by Region	• Economic and Social Sustainability
7. Commitment to EU/International Organisations	H7.1 Total ODA as a percentage of GNP	• Economic and Social Sustainability
8. Maintaining and Managing the Environment	H8.1 Greenhouse Gas Emissions	• Economic, Environmental and Social Sustainability
	H8.2 River Water Quality	• Economic, Environmental and Social Sustainability
	H8.3 Disposal and Recovery of Municipal Waste	• Economic, Environmental and Social Sustainability

TABLE 2:

BACKGROUND INDICATORS

Elements of NESC Vision	Background Indicators	Sustainability Dimension
1. Successful Adaptation to Change	B1.1 Business Investment in R&D	• Economic Sustainability
2. Utilisation and Development of the Information Society	B2.1 IT Graduates as a Percentage of all Graduates	• Economic Sustainability
	B2.2 Government Appropriations and Outlays on R&D as a Proportion of GDP (Gbaord)	• Economic and Social Sustainability
	B2.3 Internet Hosts per 1,000 population	• Economic and Social Sustainability
3. Economic Inclusion	B3.1 Number of Childcare Places per 1,000 Children Aged Under 5 Years (pre-school) and 6 to 15 Years (after-school).	• Social and Economic Sustainability
4. Social Inclusion	B4.1 Income Inequality Measure	• Social and Economic Sustainability
	B4.2 Number and Proportion of Public In-Patients Waiting 6 Months or More (Children) and 12 Months or More (Adults) for Targeted Specialities	• Social and Economic Sustainability
5. Balanced Regional Development	B5.1 Percentage FDI by Region	• Economic Sustainability
	B5.2 Gross Value Added by Region	• Economic Sustainability
	B5.3 Per Capita Expenditure on Infrastructure	• Economic, Social and Environmental Sustainability
6. Maintaining and Managing the Environment	B6.1 Vehicle Numbers: Cars per 1,000 Capita	• Environmental, Economic and Social Sustainability
	B6.2 Household and Commercial Waste Arising	• Environmental and Economic Sustainability

4.4 Interactions Within and Across Dimensions of Sustainable Development

The tabular presentation of the indicators above highlights one of the key issues in relation to indicators of sustainable development as it shows the indicators in a somewhat artificially separate manner in respect of the various elements of the NESC vision. It is clear from

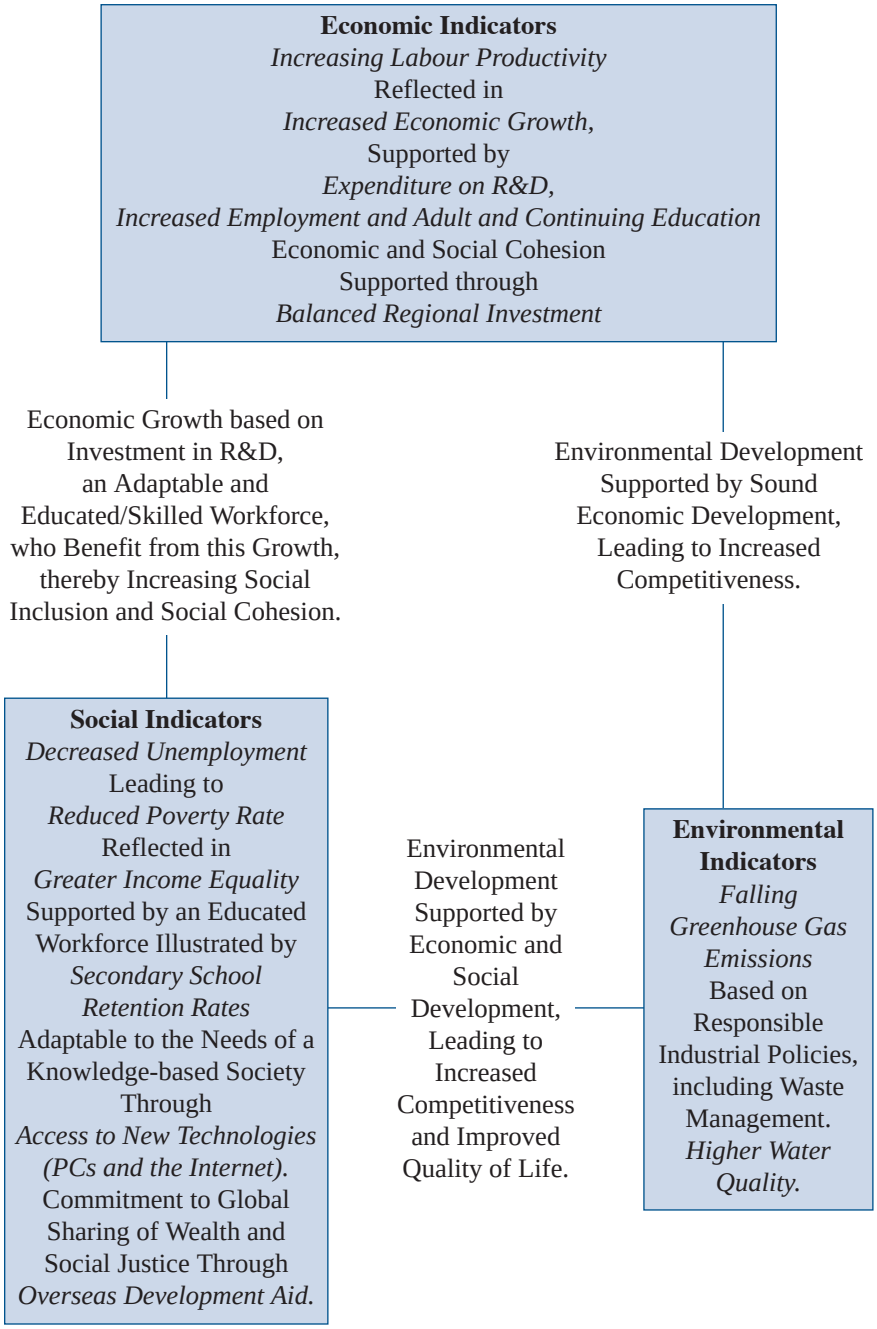
Table 1 that the majority of indicators are relevant to and support more than one dimension of sustainable development. Assuming a positive direction towards sustainable development across all three dimensions, Figure 1 illustrates some of the possible interactions between the proposed headline indicators within and across the dimensions of sustainable development. For example, in looking at the relationship between economic and social indicators, strong economic growth, supported by an educated and adaptable workforce, should result in higher secondary school retention rates and lower poverty and social exclusion as employment opportunities become available. In turn, lower poverty should result in higher retention rates in second-level school. These higher retention rates can then be expected to lead to lower poverty through greater employment, and will also support economic development by providing an educated workforce.

The relevance of an individual indicator to more than one element of sustainable development is relatively clear. Many indicators are also relevant to more than one element of the NESC vision. For example, while it is clear that the proportion of households with access to a PC or the Internet is relevant to the Utilisation and Development of the Information Society, this indicator is also relevant to Adaptability to Change and Economic Inclusion (in terms of supporting the development of an educated workforce familiar and comfortable with new and developing technologies as well as the growth of e-commerce), Social Inclusion (given the ever greater reliance on new technologies as a source of educational and social information) and Lifelong Learning (due to increased use of distance and technology-based learning). This cross-over between the elements of sustainable development and the elements of the NESC vision strengthens both the coherence of the indicators and the legitimacy of the multi-dimensional approach to sustainable development.

The three tables in Appendix 1 highlight the interaction between and across the indicators. It is noteworthy that the majority of indicators are relevant to more than one element of the NESC vision, and also to more than one of the three dimensions of sustainable development.

FIGURE 1:

POSSIBLE INTERACTIONS WITHIN AND ACROSS SETS OF INDICATORS



4.5 The Methodology Notes

The Methodology Notes for the headline indicators are presented in Appendix II and those for the background indicators in Appendix III. They are organised according to the element of the NESC vision to which they are relevant. Each indicates the dimensions of sustainable development to which it applies. A brief definition of each indicator is presented as well as the rationale for its inclusion, the availability of Irish and international data, other organisations using this indicator and the latest data available. Where possible, comparable international data have been included.

Disaggregated data are presented where appropriate and available. The principal disaggregation variables relevant to the indicators are gender, age, socio-economic status and region. Disaggregation on these dimensions is not appropriate for all indicators and is included only where performance on an indicator is known to be substantially different across the disaggregation dimension and where this has particular policy relevance. For example, while disaggregation is appropriate across all of these dimensions in relation to employment, unemployment and labour force participation, only regional differences are relevant to most infrastructural investment. However, disaggregated data are not always available or easily accessible, even where particularly relevant.

Disaggregation by region raises particular issues in respect of the most appropriate regional divisions to use. Following Agenda 2000, Ireland was divided into two regions for the purpose of allocating Structural Funds. These are the Border, Midland and Western (BMW) or NUTS II[1] Region, which retained its Objective 1 status, and the Southern and Eastern (SE) or NUTS II Region which qualified as an Objective 1 area in transition. The relative size of the two regions in the Irish context renders them relatively weak units of analysis.

An alternative to this approach is the eight NUTS III Regions that go to make up the BWM and SE Regions. These eight regions are:

1 NUTS is a French acronym that translates as Nomenclature of Territorial Units for Statistics.

the Border; the West; the Midlands; Dublin; the Mid-East; the South-East; the Mid-West and the South-West. These are based on Regional Authority areas that correspond, in the vast majority of cases, with county boundaries. While the NUTS III regions may prove a useful basis for regional disaggregation, data in relation to the relevant indicators is not always available at this level. Previous work by the Council clearly recognises that while significant differences exist between regions, intra-regional variations can be expected to be even greater in some instances (NESC 1997). While this applies to the eight NUTS III regions, it can be expected to apply even more so to the NUTS I and NUTS II regions.

Nonetheless, as there is an increasing focus on regional divisions in Ireland, more data are likely to become available at the level of the NUTS I and NUTS II level at least. The choice of an appropriate regional or alternative unit of spatial analysis warrants further consideration in the disaggregation of data on appropriate indicators.

In relation to a number of other dimensions on which indicators could be disaggregated, the question of equality warrants some consideration. Under the Equal Status Act 2000, nine areas are identified under which discrimination is now prohibited. These are gender, age, family status, marital status, religion, sexual orientation, membership of the Traveller community, disability and race. Ideally, disaggregation would be possible on all of these nine dimensions for some of the indicators identified below. However, in most instances, little or no data are currently available. Some pose very real data collection problems due to the potentially sensitive nature of the data required, for example on sexual orientation, or in respect of the complexity of the issues involved, for example, in measuring disability.

The *Programme for Prosperity and Fairness* recognises the dearth of data in relation to a number of these areas and suggests means by which the issue can be progressed with, and by, the relevant agencies, including the Central Statistics Office, the Equality Authority and the Department of Justice, Equality and Law Reform. Even were data available, however, disaggregation across all of the

nine dimensions would not be appropriate or relevant in the case of each indicator. The criterion for disaggregation is differential experience associated with the particular area. Where available and relevant, disaggregated data are provided.

5. PROGRESS TOWARDS SUSTAINABLE ECONOMIC, SOCIAL AND ENVIRONMENTAL DEVELOPMENT

Having identified a range of indicators, the question remains as to how well Ireland is performing in relation to these. A detailed analysis of Ireland's performance on each of these is neither the aim nor within the scope of this current paper. However, an overall picture of Ireland's performance in relation to sustainable development as illustrated by the indicators can be achieved.

Table 3 below shows the direction of change in the eighteen headline indicators during the 1990s. Not surprisingly, this table illustrates that Ireland has experienced positive change in relation to many of the indicators, but most particularly those related to economic growth and sustainability. Little or no change has been experienced in relation to a number of the social indicators, while the environmental indicators have moved in a negative direction. That economic progress has not, at least as yet, been translated into progress on social and environmental sustainability is not altogether surprising. Nonetheless, given that the indicators are linked to agreed priorities for national policy, our limited, or absence, of progress in the social and environmental areas gives cause for concern. The need for close and regular monitoring of our progress, or lack of it, in respect of these indicators is imperative. As many of these areas are also addressed under benchmarking of the PPF, this issue is further highlighted there.

The indicators themselves only convey information. For the indicators to be an effective policy tool they must be among the considerations of policy makers. In the case of a number of the headline indicators, the direction of future change is relatively predictable, at least in the short to medium term. Positive progress can be expected, for instance, in relation to GNP and GDP, PC and Internet access, employment rates and labour force participation.

Much of this positive change will occur as the somewhat expected impact of continued, albeit more moderate, economic growth. If we are to progress, however, on a number of indicators on which positive change is less assured, particularly in respect of social and environmental indicators, then policy-makers will need to take these into account and promote policies that effect positive change.

TABLE 3:

DIRECTION OF CHANGE IN HEADLINE INDICATORS, 1990s

Positive Change	No/Little Change	Negative Change
Labour Productivity: *increased by 18% (GDP) and 16% (GNP) 1994-1999.*	**Income Inequality:** *falling between 1994 and 1997 but only very slightly from a Gini Co-efficient of 0.377 to 0.374.*	**Green House Gas Emissions:** *increasing rather than decreasing over the period 1990 to 1998 and exceeding the limits agreed under the Kyoto Protocol.*
GDP and GNP Per Capita: *high, if moderating, growth rates 1996–1999.*	**Retention Rates to the end of Upper Secondary School Cycle:** *only slight progress made over the period 1994 to 1999 from 79% to 81.6% of students. Rate remains considerably lower for males (76.5%).*	**River Water Quality:** *proportion of unpolluted rivers fell during the 1990s, from 72% to 67%.*
Gross Domestic Expenditure on R&D as a Proportion of GDP: *increased by 75% 1990 – 1999, but from a very low base.*	**Participation in Continuing Education:** *no time series data are available, so difficult to judge.*	**Municipal Waste Disposal and Recovery:** *over-reliance on landfill and relatively low recycling levels in comparison to other EU countries.*
Proportion of Households with PC/Internet Access: *increasing significantly between 1998 and 2000.*	**Official Development Assistance as a Proportion of GNP:** *this changed little between 1986/87 and 1999. Level will need to be doubled if target of 0.7% of GDP by 2007 is to be met.*	
Employment Rate: *growth from 56.1% to 62.5% 1997 – 1999. Coming into line with the EU and OECD average.*	**Housing Stock and Completions: Local Authority and Private:** *increasing overall housing stock and completions. However, the ratio of local authority to private housing is decreasing in a period where housing need is increasing.*	
Unemployment Rate: *falling substantially since 1994. In 1999, this was well below the EU average.*	**Disability-Adjusted Life Expectancy at Birth and 60 Years:** *relatively good position in relation to OECD countries, but time series data are required.*	
Labour Force Participation: *increasing in the period 1994 – 1999, most substantially for women. Now approaching the EU average from a previously low base for women.*		
Experience of Consistent Poverty: *falling from 1994 - 1998 and exceeding targets set under the NAPS.*		
Regional Employment Growth: *growth rates more evenly spread between the regions.*		

6. CONCLUSION

In considering a framework for national progress indicators for sustainable economic, social and environmental development, and the selection of the indicators themselves, a key focus in this report has been on the practicalities of this exercise. This is not to imply that a minimalist approach has been or should be adopted. Instead, what is suggested is a framework based on an already widely accepted vision for Ireland as a successful society, which includes a manageable number of headline and core background indicators. However, the ideal set of indicators will take time to emerge and will need to be modified and adjusted over time as policy priorities change. This report is a first step in the process of identifying such a set of indicators. Those proposed here will need to be reviewed and modified or replaced as circumstances change.

The question of who will take responsibility for the implementation of a framework and the measuring of progress on the final set of indicators was not specified in the PPF. As there are a number of government departments and agencies involved in the collection of data on the proposed indicators, the effort required by any individual agency or department is not overwhelming. However, it will be necessary for central responsibility to be assumed by one department or agency. The Central Statistics Office would be an appropriate agency both in terms of expertise and mandate. Otherwise it may be an appropriate responsibility for the Regulatory Impact Assessment Unit to be established in the Department of the Taoiseach following the acceptance by the Government of the recommendations of the OECD (2001) report on regulatory reform. That report stresses the need to enhance effective evidence-based policy-making. The monitoring of progress on indicators of sustainable development would be an important contribution to that objective.

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Part II

APPENDIX 1

HEADLINE INDICATORS AND THE ELEMENTS OF THE NESC VISION

TABLE A1.1:

HEADLINE INDICATORS AND THE ELEMENTS OF THE NESC VISION

Headline Indicators	Relevant Elements of the NESC Strategy
H1.1 Labour Productivity	• Successful Adaptation to Change • Economic Inclusion
H1.2 Per Capita GNP/Annual GDP Growth Rates	• Successful Adaptation to Change • Economic Inclusion
H2.1 Gross Domestic Expenditure on R&D as a Proportion of GDP (GERD)	• Utilisation and Development of the Information Society • Successful Adaptation to Change • Economic Inclusion
H2.2 Proportion of Households with Access to a PC/Internet	• Utilisation and Development of the Information Society • Successful Adaptation to Change • Economic Inclusion • Social Inclusion
H3.1 Employment Rate	• Economic Inclusion • Successful Adaptation to Change • Social Inclusion
H3.2 Unemployment Rate	• Economic Inclusion • Successful Adaptation to Change • Social Inclusion
H3.3 Labour Force Participation Rate	• Economic Inclusion • Successful Adaptation to Change • Social Inclusion
H4.1 Percentage of Population Living in Consistent Poverty	• Social Inclusion • Economic Inclusion
H4.2 Households and Persons Experiencing Relative Poverty	• Social Inclusion • Economic Inclusion • Successful Adaptation to Change
H4.3 Retention Rates to the end of Upper Secondary School	• Social Inclusion • Successful Adaptation to Change • Economic Inclusion • Utilisation and Development of the Information Society • Lifelong Learning

H4.4 Disability-Adjusted Life Expectancy at Birth and 60 Years	• Social Inclusion • Successful Adaptation to Change • Economic Inclusion • Maintaining and Managing the Environment
H4.5 Housing Stock and Completions: Local Authority and Private	• Social Inclusion • Successful Adaptation to Change • Economic Inclusion • Maintaining and Managing the Environment
H5.1 Participation in Adult and Continuing Education and Training	• Lifelong Learning • Successful Adaptation to Change • Economic Inclusion • Utilisation and Development of the Information Society • Social Inclusion
H6.1 Employment Growth Rates by Region	• Balanced Regional Development • Successful Adaptation to Change • Economic Inclusion • Social Inclusion
H7.1 Total ODA as a percentage of GDP/GNP	• Commitment to EU/International organisations • Economic Inclusion
H8.1 Greenhouse Gas Emissions	• Adaptation to Change • Maintaining and Managing the Environment
H8.2 River Water Quality	• Adaptation to Change • Maintaining and Managing the Environment
H8.3 Disposal and Recovery of Municipal Waste	• Successful Adaptation to Change • Maintaining and Managing the Environment

TABLE A1.2

BACKGROUND INDICATORS AND RELEVANT ELEMENTS OF THE NESC STRATEGY

Background Indicators	Relevant Elements of the NESC Strategy
B1.1 Business Investment in R&D	• Successful Adaptation to Change • Economic Inclusion • Utilisation and Development of the Information Society
B2.1 IT Graduates as a Percentage of All Graduates	• Utilisation and Development of the Information Society • Successful Adaptation to Change • Economic Inclusion
B2.2 Government Appropriations and Outlays on R&D as a Proportion of GDP (Gbaord)	• Utilisation and Development of the Information Society • Successful Adaptation to Change • Economic Inclusion
B2.3 Internet Hosts per 1,000 Population	• Utilisation and Development of the Information Society • Successful Adaptation to Change • Economic Inclusion • Social Inclusion • Lifelong Learning
B3.1 Number of Childcare Places per 1,000 Children Aged under 5 years (pre-school) and 6 to 15 Years (after-school)	• Economic Inclusion • Successful Adaptation to Change • Social Inclusion
B4.1 Income Inequality Measure	• Social Inclusion • Economic Inclusion
B4.2 Number and Proportion of Public Patients Waiting 6 Months or More (Children) and 12 Months or More (Adults) for Targeted Specialities	• Social Inclusion • Economic Inclusion
B5.1 Percentage FDI by Region	• Balanced Regional Development • Economic Inclusion
B5.2 Gross Value Added by Region	• Balanced Regional Development • Economic Inclusion
B5.3 Per Capita Expenditure on Infrastructure	• Balanced Regional Development • Economic Inclusion • Social Inclusion • Maintaining and Managing the Environment
B6.1 Vehicle Numbers: Cars per 1,000 Capita	• Maintaining and Managing the Environment • Economic Inclusion • Social Inclusion
B6.2 Household and Commercial Waste Arising	• Maintaining and Managing the Environment • Successful Adaptation to Change • Economic Inclusion • Social Inclusion

TABLE A1.3

ELEMENTS OF THE NESC STRATEGY AND RELEVANT INDICATORS

Elements of the NESC Strategy	Relevant Indicators
Successful Adaptation to Change	H1.1 Labour Productivity H1.2 Per Capita GNP/Annual GDP Growth Rates H2.1 Gross Domestic Expenditure on R&D as a Proportion of GDP (GERD) H2.2 Proportion of Households with Access to a PC/Internet H3.1 Employment Rate H3.2 Unemployment Rate H3.3 Labour Force Participation Rate H4.3 Retention Rates to the end of Upper Secondary School H4.5 Housing Stock and Completions: Local Authority and Private H5.1 Participation in Adult and Continuing Education and Training H6.1 Employment Growth Rates by Region H8.1 Greenhouse Gas Emissions H8.2 River Water Quality H8.3 Disposal and Recovery of Municipal Waste B1.1 Business investment in R&D B2.1 IT graduates as a Percentage of all Graduates B2.2 Government Appropriations and Outlays on R&D as a Proportion of GDP (Gbaord) B2.3 Internet Hosts per 1,000 Population B3.1 Number of Childcare Places per 1,000 children aged under 5 years (pre-school) and 6 to 15 years (after-school). B5.1 Percentage FDI by Region B5.2 Gross Value Added by Region B5.3 Per Capita Expenditure on Infrastructure B6.1 Vehicle Numbers: Cars per 1,000 Capita B6.2 Household and Commercial Waste Arising
Utilisation and Development of the Information Society	H2.1 Gross Domestic Expenditure on R&D as a proportion of GDP (GERD) H2.2 Proportion of Households with Access to a PC/Internet H4.3 Retention Rates to the end of Upper Secondary School H5.1 Participation in Adult and Continuing Education and Training B2.1 IT Graduates as a Percentage of all Graduates B2.2 Government Appropriations and Outlays on R&D as a Proportion of GDP (Gbaord) B2.3 Internet Hosts per 1,000 Population

Elements of the NESC Strategy	Relevant Indicators
Economic Inclusion	H1.1 Labour Productivity H1.2 Per Capita GNP/Annual GDP Growth Rates H2.1 Gross Domestic Expenditure on R&D as a Proportion of GDP (GERD) H2.2 Proportion of Households with Access to a PC/Internet H3.1 Employment Rate H3.2 Unemployment Rate H3.3 Labour Force Participation Rate H4.1 Percentage of Population Living in Consistent Poverty H4.2 Households and Persons Experiencing Relative Poverty H4.3 Retention Rates to the end of Upper Secondary School H4.4 Disability-Adjusted Life Expectancy at Birth and 60 Years H4.5 Housing Stock and Completions: Local Authority and Private H5.1 Participation in Adult and Continuing Education and Training H6.1 Employment Growth Rates by Region H7.1 Total ODA as a Percentage of GDP/GNP H8.1 Greenhouse Gas Emissions H8.2 River Water Quality H8.3 Disposal and Recovery of Municipal Waste B1.1 Business Investment in R&D B2.1 IT Graduates as a Percentage of All Graduates B2.2 Government Appropriations and Outlays on R&D as a Proportion of GDP (Gbaord) B2.3 Internet Hosts per 1,000 Population B3.1 Number of Childcare Places per 1,000 children aged under 5 years (pre-school) and 6 to 15 years (after-school) B4.1 Income Inequality Measure B5.1 Percentage FDI by Region B5.2 Gross Value Added by Region B5.3 Per Capita Expenditure on Infrastructure B6.1 Vehicle numbers: Cars per 1,000 Capita B6.2 Household and Commercial Waste Arising

Elements of the NESC Strategy	Relevant Indicators
Social Inclusion	H2.2 Proportion of Households with Access to a PC/Internet H3.1 Employment Rate H3.2 Unemployment Rate H3.3 Labour Force Participation Rate H4.1 Percentage of Population Living in Consistent Poverty H4.2 Households and Persons Experiencing Relative Poverty H4.3 Retention Rates to the end of Upper Secondary School H4.4 Disability-Adjusted Life Expectancy at Birth and 60 Years H4.5 Housing Stock and Completions: Local Authority and Private H5.1 Participation in Adult and Continuing Education and Training H6.1 Employment Growth Rates by Region H8.1 Greenhouse Gas Emissions H8.2 River Water Quality H8.3 Disposal and Recovery of Municipal Waste B2.2 Government Appropriations and Outlays on R&D as a Proportion of GDP (Gbaord) B2.3 Internet Hosts per 1,000 Population B3.1 Number of Childcare Places per 1,000 children aged under 5 years (pre-school) and 6 to 15 years (after-school) B4.1 Income Inequality Measure B4.2 Number and Proportion of Public In-Patients Waiting 6 months or more (children) and 12 months or more (adults) for Targeted Specialities B5.3 Per Capita Expenditure on Infrastructure B6.1 Vehicle Numbers: Cars per 1,000 Capita
Lifelong Learning Balanced	H2.2 Proportion of Households with Access to a PC/Internet H4.3 Retention Rates to the end of Upper Secondary School H5.1 Participation in Adult and Continuing Education and Training
Regional Development	H6.1 Employment Growth Rates by Region B5.1 Percentage FDI by Region B5.2 Gross Value Added by Region B5.3 Per Capita Expenditure on Infrastructure
Commitment to EU/International Organisations	H7.1 Total ODA as a percentage of GDP/GNP
Maintaining and Managing the Environment	H4.4 Disability-Adjusted Life Expectancy at Birth and 60 Years H4.5 Housing Stock and Completions: Local Authority and Private H8.1 Greenhouse Gas Emissions H8.2 River Water Quality H8.3 Disposal and Recovery of Municipal Waste B5.3 Per Capita Expenditure on Infrastructure B6.1 Vehicle Numbers: Cars per 1,000 Capita B6.2 Household and Commercial Waste Arising

TABLE A1.4

COMPONENTS OF SUSTAINABLE DEVELOPMENT AND RELEVANT HEADLINE AND BACKGROUND INDICATORS

Components of Sustainability	Headline Indicators
Economic Sustainability	H1.1 Labour Productivity H1.2 Per Capita GNP/Annual GDP Growth Rates H2.1 Gross Domestic Expenditure on R&D as a Proportion of GDP (GERD) H2.2 Proportion of Households with Access to a PC/Internet H3.1 Employment Rate H3.2 Unemployment Rate H3.3 Labour Force Participation Rate H4.1 Percentage of Population Living in Consistent Poverty H4.2 Households and Persons Experiencing Relative Poverty H4.3 Retention Rates to the end of Upper Secondary School H4.4 Disability-Adjusted Life Expectancy at Birth and 60 Years H4.5 Housing Stock and Completions: Local Authority and Private H5.1 Participation in Adult and Continuing Education and Training H6.1 Employment Growth Rates by Region H7.1 Total ODA as a percentage of GDP/GNP H8.1 Greenhouse Gas Emissions H8.2 River Water Quality H8.3 Disposal and Recovery of Municipal Waste B1.1 Business Investment in R&D B2.1 IT Graduates as a Percentage of All Graduates B2.2 Government Appropriations and Outlays on R&D as a Proportion of GDP (Gbaord) B2.3 Internet Hosts per 1,000 Population B3.1 Number of Childcare Places per 1,000 children aged under 5 years (pre-school) and 6 to 15 years (after-school) B4.1 Income Inequality Measure B4.2 Number and Proportion of Public In-Patients Waiting 6 months or more (children) and 12 months or more (adults) for Targeted Specialities B5.1 Percentage FDI by region B5.2 Gross Value Added by Region B5.3 Per Capita Expenditure on Infrastructure B6.1 Vehicle Numbers: Cars per 1,000 Capita B6.2 Household and Commercial Waste Arising

Components of Sustainability	Headline Indicators
Social Sustainability	H2.1 Gross Domestic Expenditure on R&D as a Proportion of GDP (GERD) H2.2 Proportion of Households with Access to a PC/Internet H3.1 Employment Rate H3.2 Unemployment Rate H3.3 Labour Force Participation Rate H4.1 Percentage of Population Living in Consistent Poverty H4.2 Households and Persons Experiencing Relative Poverty H4.3 Retention Rates to the end of Upper Secondary School H4.4 Disability-Adjusted Life Expectancy at Birth and 60 Years H4.5 Housing Stock and Completions: Local Authority and Private H5.1 Participation in Adult and Continuing Education and Training H6.1 Employment Growth Rates by Region H7.1 Total ODA as a percentage of GDP/GNP H8.1 Greenhouse Gas Emissions H8.2 River Water Quality H8.3 Disposal and Recovery of Municipal Waste B2.2 Government Appropriations and Outlays on R&D as a Proportion of GDP (Gbaord) B2.3 Internet Hosts per 1,000 Population B3.1 Number of Childcare Places per 1,000 children aged under 5 years (pre-school) and 6 to 15 years (after-school). B4.1 Income Inequality Measure B4.2 Number and Proportion of Public In-Patients Waiting 6 months or more (children) and 12 months or more (adults) for Targeted Specialities B5.3 Per Capita Expenditure on Infrastructure B6.1 Vehicle Numbers: Cars per 1,000 Capita B6.2 Household and Commercial Waste Arising
Environmental Sustainability	H4.4 Disability-Adjusted Life Expectancy at birth and 60 Years H4.5 Housing Stock and Completions: Local Authority and Private H8.1 Greenhouse Gas emissions H8.2 River Water Quality H8.3 Disposal and Recovery of Municipal Waste B5.3 Per Capita Expenditure on Infrastructure B6.1 Vehicle Numbers: Cars per 1,000 Capita B6.2 Household and Commercial Waste Arising

APPENDIX II

HEADLINE INDICATOR METHODOLOGY NOTES

HEADLINE INDICATORS

Element of NESC Vision of a Successful Society: Successful Adaptation to Change

Dimension of Sustainable Development: Economic Sustainability

Indicator H1.1: Labour Productivity.

Definition: The unit of output per unit of labour input.

Rationale for Inclusion: This is a measure of a dynamic, competitive and technologically advanced economy, indicating a flexible workforce, as well as adaptable businesses. In the Irish case, one particular facet of this indicator should be noted, that is, labour productivity is significantly higher and has grown faster in foreign-owned than in Irish-owned companies. High labour productivity is therefore, to a significant degree, reflective of the high level of FDI in Ireland and its technological nature.

Used as an Indicator by: OECD, Eurostat, National Competitiveness Council.

Data Availability and Sources: Data are available for Ireland in the *National Income and Expenditure* reports produced annually by the Central Statistics Office (CSO). This appears as GDP and GNP at constant market prices per person at work (Table B, Main Aggregates). The most recent data refer to 1999. However, labour productivity is more commonly reported in terms of growth or decline over a given period. For information on Ireland and for international comparison on this basis, data are available in the OECD's *Main Economic Indicators*, the most recent edition of which was published in 2000. However, while the figures are provided for each country, no overall average for the OECD is provided. An alternative source is the *EC Economic Data Pocket Book*. This provides EU comparisons for annual average growth rates.

Labour Productivity, Ireland 1994 and 1997

Per Person at Work	1994	1997	1999 (Preliminary)
GDP IR£	31,764	36,908	38,852
GNP IR£	28,578	32,216	33,076

Source: Central Statistics Office (2000), *National Income and Expenditure 1999.*

Annual Labour Productivity Growth Rates as a proportion of GDP, 1994 - 1999

	1994	1997	1999 (estimate)	1994-1999
Ireland	2.6	4.1	4.5	3.75
EU 15	3.0	1.1	1.9	1.60

Source: Eurostat (2000), *EC Economic Data Pocket Book December 2000,* and the National Competitiveness Council (2000), *Annual Competitiveness Report 2000.*

Element of NESC Vision of a Successful Society: Successful Adaptation to Change

Dimension of Sustainable Development: Economic Sustainability

Indicator H1.2: Gross National Product (GNP) per Capita and Growth Rates.

Proxy: For international comparisons, GDP is the commonly used measure.

Definition: GNP: the total value of goods produced in the country, less profits generated by foreign-owned companies. GDP: the total value added produced in the country, including profits of foreign-owned companies.

Rationale for Inclusion: This is a standard measure of overall economic performance. The per capita data provide a static or 'state' picture at a given point in time, while the growth rates reflect the changes over time. Gross Domestic Product is commonly used for cross-national comparisons of progress, but due to the high level of foreign investment and foreign-owned companies in Ireland there is a relatively large difference between GDP and GNP. In 2000 GNP was 16 per cent less than GDP (Central Statistics Office, 2001: Tables 5 and 6). In view of this the fact that it represents the resources available for redistribution, GNP is the appropriate base for several of the indicators used to measure progress.

Used as an Indicator by: GDP is used by the OECD, UN, World Bank, Eurostat, and the National Competitiveness Council

Data Availability and Sources: Per capita GDP and GNP and growth rate data are published annually by the CSO in *National Income and Expenditure*. The most recent data relate to 1999. For international comparison, data are available for GDP in the OECD publication, *National Accounts: Main Aggregates, Volume 1*. The

most recent edition of this annual publication containing relevant information covers the period 1960 - 1997.

In this and other international comparisons, GDP and GNP per head are frequently expressed in terms of Purchasing Power Parities (PPPs). These are 'the rates of currency conversion that equalise the purchasing power of different currencies by eliminating differences in price levels between currencies' (OECD, *National Accounts: Main Aggregates 1960-1997, Volume 1*, p. 159). These PPPs are then most commonly expressed in terms of US Dollars. The EU provides a similar measure of GDP per capita and growth in terms of Purchasing Power Standards (PPS). The data presented here on international growth rates refer to the annual growth rate of GDP (OECD *Economic Outlook*, No. 67, June 2000). The growth rates in GNP are taken from the Department of Finance's *Budget 2001* publication.

GDP and GNP Per Capita and Growth Rates Per Capita IR£ 1995 Constant Market Prices, Ireland

Per Person at Work	1994	1997	1999 (Preliminary)
GNP Per Capita	9,467	11,774	13,384
GDP Per Capita	10,523	13,489	15,721

Source: Central Statistics Office (2000), *National Income and Expenditure 1999.*

GDP Per Capita PPPs (US$) Current Prices

	1996	1997 (estimated)
Ireland	18,484	20,634
EU	19,699	20,546
OECD	20,576	21,487

Source: OECD (1999), *National Accounts Main Aggregates 1960-1997, Volume 1*, Table 2.

Growth Rates in Real GDP

	1996-97	1998-99
Ireland	10.7%	8.7%
EU	2.5%	2.3%
OECD	3.4%	3.0%

Source: OECD (2000), *Economic Outlook*, No. 67, June 2000, Statistical Annex, Table 1.

Growth Rates in Real GNP, Ireland

1997	1999	2001 (projected)
9.3%	7.8%	7.4%

Source: Department of Finance (2000), *Budget 2001*.

Element of NESC Vision of a Successful Society: Utilisation and Development of the Information Society

Dimension of Sustainable Development: Economic Sustainability

Indicator H2.1: Gross Domestic Expenditure on R&D as a Proportion of GDP (GERD).

Definition: This comprises all of a country's expenditure on Research and Development activities as a proportion of GDP. It includes expenditure by Government, businesses and industry, and investment from abroad.

Rationale for Inclusion: This illustrates the level of priority attached to the development of a knowledge-based economy, thereby contributing to the development of increased productivity and competitiveness. In a global economy increasingly driven by technology and technological changes, it is unwise for any country to simply follow the lead of others in the field of technology as this will limit productivity. It is important that as much R&D as possible takes place in Ireland in order to ensure that both a skill base and a good reputation in this increasingly important area are developed. This is particularly important in attracting Foreign Direct Investment. In addition, investment in R&D contributes to the development of a skilled and adaptable workforce and a population that can embrace the changes emerging as a result of rapid and ongoing technological advances.

Used as an Indicator by: OECD, Eurostat.

Data Availability and Sources: Data are available for Ireland and the OECD in the publication *Science, Technology and Industry Outlook.* The most recent edition of this annual publication was published in January 2000. The most recent data included for Ireland relate to 1997 (see Annex, Table 8).

Gross Domestic Expenditure on R&D as a proportion of GDP (GERD)

	1990	1997
Ireland	0.8%	1.4%
EU	2.0%	1.8%
OECD	2.4%	2.2%

Source: OECD (2000), *Science, Technology and Industry Outlook.*

Element of NESC Vision of a Successful Society: Utilisation and Development of the Information Society

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator H2.2: Proportion of Households with Access to a PC/Internet.

Definition: The proportion of households that have a personal computer and/or have Internet access.

Rationale for Inclusion: In the information and knowledge-based society, the role of information in economic and social inclusion has become crucially important. Accessing information is increasingly dependent upon having access to, and knowing how to use, information technologies. Primary among these are personal computers and the Internet. The use of these technologies in education and in the workplace is steadily increasing and those without access to them, and knowledge of how to use them, will become increasingly economically and socially marginalised. Wide access to these technologies is therefore essential for the development of a skilled and knowledgeable workforce and population.

Used as an Indicator by: OECD.

Data Availability and Sources: A module concerning PC and Internet access was included in Quarter 3 of the 1998, and Quarter 4 of the 2000 Quarterly National Household Survey. Results from these were published in March 2001 and were disaggregated on a number of key socio-economic and regional variables. It is probable that this module will be included in the QNHS on a biannual basis. In addition, this is the subject of a new question on the Census 2001.

The World Bank, as part of its World Development Indicator Reports, publishes data on the number of PCs per 1,000 population.

Also, the Irish Information Society Commission has collected data from a variety of sources, including the UN, the OECD and Nielsen/Netratings in relation to the number of Internet users per 1,000. Both of these are provided below in order to provide an international comparison.

Proportion of Irish Households with PC and Internet Access, 1998 and 2000

	PC Permanently in Dwelling		With PC Used for Internet Access[1]	
Regional Authority	**1998**	**2000**	**1998**	**2000**
Border	11.7	25.1	22.1	62.0
Dublin	24.6	37.9	31.0	66.5
Mid-East	25.4	38.8	26.0	64.1
Midland	13.1	28.5	21.7	55.4
Mid-West	15.3	30.6	23.4	58.1
South-East	15.6	29.0	25.3	63.0
South-West	16.7	30.8	23.3	62.9
West	13.4	27.1	23.0	57
Gender of Reference Person				
Male	19.9	33.6	28.5	64.8
Female	17.3	31.4	25.1	61.4
Age of Reference Person				
Less then 25 years	13.8	26.5	28.5	52.0
25 – 34 years	19.3	33.2	33.3	66.1
35 – 44 years	28.4	47.2	25.8	63.3
45 – 54 years	28.6	46.4	24.4	64.1
55 – 54 years	15.3	29.7	25.8	61.5
65+ years	3.5	8.5	23.0	58.5
ILO Economic Status of Reference Person				
In Employment	25.6	42.7	27.9	64.9
Unemployed	13.4	23.6	20.1	54.0
Not Economically Active	11.2	20.6	24.4	58.8
No. of Employed Persons in Household				
None	3.9	7.8	23.9	52.7
1	18.9	32.8	26.7	61.9
2	29.1	47.8	28.5	64.9
3 or more	31.1	50.6	23.7	64.5
ALL HOUSEHOLDS	18.6	32.4	26.8	63.0

Source: CSO (March 2000), *Quarterly National Household Survey: Home Computing, Fourth Quarter 2000.* Dublin: CSO.

Note: 1. This is the proportion of all households with a PC who use this for Internet Access. The proportion of households with PC Internet access in 2000 was 20.4%, compared to 5% in 1998.

PCs per 1,000 Population

	1996	1998
EU		
Austria	148.0	252.0
Belgium	167.3	286.0
Finland	182.1	349.2
France	150.7	207.8
Germany	233.2	304.7
Greece	33.4	51.9
Ireland	**145.0**	**271.7**
Italy	92.3	173.4
Netherlands	232.0	317.6
Portugal	60.5	81.3
Spain	94.2	144.8
Sweden	214.9	361.4
UK	192.6	263.0
Non-EU		
Australia	311.3	411.6
Canada	192.5	330.0
China	3.0	8.9
India	1.5	2.7
Japan	128.0	237.2
US	362.4	458.6
World	49.9	70.6

Source: World Bank (1998, 2001), *World Development Indicators 1998, 2001*. Data for 1999 included in the *World Development Indicators 2001* are from the International Telecommunication Union's (ITU) *World Telecommunication Development Report 1999.*

No. of Internet users per 1,000 population

	1995	1998	2000
Australia	55.4	234	398
Austria	18.6	66	210
Canada	41.2	212	430
Denmark	38.3	179	432
Finland	139	305	309
France	8.6	47	108
Germany	18.3	86	189
Ireland	**11.2**	**72**	**214**
Italy	5.2	37	193
Japan	7.2		207
Netherlands	38.8	125	429
Norway	64.1	304	491
New Zealand	50.1	180	340
Portugal	9.1	25	
Spain	3.8	50	117
Sweden	51	290	509
UK	25.6	137	328
US	38	283	573

Source: Information Society Commission (2000), *Update on Benchmarking Ireland in the Information Society.* Available from http://www.isc.ie

Element of NESC Vision of a Successful Society: Economic Inclusion

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator H3.1: Employment Rate.

Definition: Two definitions are commonly used: the proportion of people of working age 15 to 64 in employment (OECD, Eurostat Labour Force Surveys), and the proportion of people aged 15 years and over in employment (calculated from the Irish QNHS surveys).

Rationale for Inclusion: This is the clearest indication of the demand for labour, reflecting economic activity and growth.[2]

Used as an Indicator by: OECD, Eurostat, UN.

Data Availability and Sources: The employment rate for Ireland can be calculated on the basis of the number of people in employment (ILO definition) and the population aged 15 years and over. This calculation has a different basis from the employment rate used in international publications, which refers to those aged 15 to 64 years. The international data are used here to allow for comparisons. The figures provided are taken from the annual OECD publication, *Employment Outlook*, June 2000 (Statistical Annex, Tables B and C).

In comparing the situation in Ireland to that in other countries, and particularly our fellow EU member states, consideration has to be given to the appropriate age groups that one compares. It has been common practice to look at the population aged 15 to 64 years, that is, broadly between the end of compulsory education and compulsory retirement. Participation rates are also commonly cited

2. Labour force participation and unemployment rates are influenced by, and are indicators of, labour supply and demand and are included below. High employment rates should also, although do not necessarily, indicate and contribute to improved social circumstances.

for the total population aged 15 years and over, and also for what is sometimes referred to as the primary working age group, that is, those aged 25 to 54 years. Each of these groups presents a different comparative picture. Due to Ireland's relatively large youth population and relatively small older population, Ireland differs significantly from most EU states. For this reason, the most appropriate comparison is probably based on the 25 to 54 year age group. In addition, employment rates are not gender neutral – women have lower employment rates than their male counterparts in most countries.

Employment Rates (ILO Classification) by Age and Gender, Intenational Comparison[1]

	Ireland		EU 15		OECD	
	1997	**1999**	**1997**	**1999**	**1997**	**1999**
Men						
15-24	40.6	49.7	41.2	43.4	49.6	51.1
25-54	81.7	86.4	85.0	86.3	88.2	88.5
55-64	57.8	61.7	47.7	48.3	60.1	60.8
15-64	67.6	73.5	70.4	72.0	75.9	76.6
Women						
15-24	35.6	42.9	33.0	35.5	39.8	42.3
25-54	53.0	60.0	62.5	64.7	63.1	63.6
55-64	22.2	25.7	26.6	27.8	36.1	37.6
15-64	44.6	51.3	50.7	53.1	54.1	55.4
Total						
15-24	38.1	46.4	37.2	39.5	44.7	46.7
25-54	67.3	73.2	73.8	75.5	75.5	75.9
55-64	40.1	43.8	36.9	37.8	47.7	48.9
15-64	56.1	62.5	60.6	62.6	64.9	65.1
Growth Rates	3.6	5.8	0.8	1.6	1.7	1.3

Source: OECD (2000), *Employment Outlook*, June 2000, Statistical Annex, Tables B and C, and OECD (2000), *Economic Outlook*, June 2000, Statistical Annex, Table 20.

Note: 1. The total Employment Rate in Ireland for all those aged 15 years and over calculated from the 1997 Labour Force Survey and the Quarterly National Household Survey for the second quarter of 1999 are 49% and 54.6% respectively.

Element of NESC Vision of a Successful Society: Economic Inclusion

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator H3.2: Unemployment Rate.

Definition: Much discussion has taken place on the most appropriate definition and consequently the count of the unemployed. In Ireland, three measures are used: the ILO unemployment count, the Principal Economic Status (PES) count and the Live Register count (see page 411-412 of *Opportunities, Challenges and Capacities for Choice* for more detail on these measures). Here, the ILO definition and count is used due to its rigour in classifying the unemployed and its wide use in international comparisons. Using this definition, the unemployed constitute those who have not worked for pay for even one hour in the previous week, who have actively sought work in the previous four weeks and who are available to take up employment within two weeks.

Rationale for Inclusion: The unemployment rate is an indicator of both the supply of, and demand for, labour, with low unemployment being associated with economic growth and stability. In addition, the risk of income poverty and consistent poverty, and therefore of social exclusion more broadly, are found to be high among the unemployed. Reducing the rate of unemployment will go some way to reducing both economic and social exclusion.

The issues concerning age and gender raised in relation to employment rates are also relevant here.

Used as an Indicator by: OECD, UN, Eurostat, World Bank.

Data Availability and Sources: For Ireland, data are available up to 1997 in the annual Labour Force Surveys produced by the CSO. Figures relate to the month of April, as this corresponds with the

date of the annual survey. Since 1997, data have been available from the Quarterly National Household Survey. This provides one of the most up-to-date counts of the unemployed and is given below. The data for international comparison is taken from the OECD's publication, *Economic Outlook, June 2000.*

Unemployment Rates by Age and Gender for the Population Aged 15 years and over, Ireland 1994, 1997 and 2000

	April 1994	April 1997	Mar – May 2000
Men	14.7	10.4	4.3
Women	14.8	10.3	4.2
Total	14.7	10.3	4.3

Source: Central Statistics Office, *Labour Force Survey 1997* and *Quarterly National Household Survey, Third Quarter 2000.*

Unemployment Rate of Persons aged 15 years and over by NUTS3 Region, Ireland 1994, 1997 and 2000

	1994	1997	2000
Border	14.6	11.8	6.6
Midlands	13.6	9.5	5.5
West	14.0	9.7	5.0
Dublin	15.0	11.1	3.4
Mid-East	12.9	8.4	3.7
Mid-West	13.2	10.0	4.0
South-East	17.7	11.4	4.9
South-West	15.1	9.1	3.8
State	14.7	10.3	4.3

Source: Central Statistics Office, *Labour Force Survey 1997* and *Quarterly National Household Survey, Fourth Quarter 2000.*

Unemployment Rates by Age and Gender, International Comparison

	Ireland		EU 15		OECD	
	1997	**1999**	**1997**	**1999**	**1997**	**1999**
Men						
15 – 24	16.9	8.6	18.8	16.1	12.9	11.7
25 – 54	9.7	5.7	8.1	6.9	5.3	4.9
55 – 64	6.4	4.2	9.3	8.4	5.6	5.6
Total 15 - 64	10.6	6.1	9.6	8.2	6.5	6.0
Women						
15 - 24	15.2	8.3	22.5	18.6	14.0	11.9
25 - 54	9.3	4.8	10.8	9.8	6.8	6.1
55 - 64	4.9	4.3	9.7	9.0	4.8	4.6
Total 15 - 64	10.4	5.5	12.4	10.9	7.8	6.9
Total						
15 - 24	16.1	8.5	20.5	17.2	13.4	11.8
25 - 54	9.5	5.3	9.3	8.1	5.9	5.4
55 - 64	6.0	4.2	9.5	8.6	5.3	5.2
Total 15 - 64	10.5	5.8	10.8	9.3	7.0	6.4

Source: OECD, *Employment Outlook*, June 2000, Statistical Annex, Tables B and C.

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Dimension of Sustainable Development: Economic and Social Sustainability

Indicator H3.3: Labour Force Participation.

Definition: This is the proportion of the population who are either in, or are actively seeking, employment. Although there has been considerable debate in relation to the most appropriate labour force participation measure, particularly when measuring female participation rates, the ILO definition is used here to allow for international comparisons. This comprises two categories based on their situation in the week prior to the survey. The *Employed* comprises people who worked, for profit or payment, for one hour or more in the week before the survey. The *Unemployed* comprises people who were not in work in the week before the survey, but who were available for work and had actively sought work in the preceding four weeks.

Rationale for Inclusion: The Labour Market Participation Rate is a key indicator of our capacity to meet the demand for labour. It is primarily an indicator of labour supply, but is also reflective of demand as participation rates tend to increase as demand increases. It is therefore also an indicator of perceived and real opportunities for labour market participation. This indicator should be considered in conjunction with both Employment and Unemployment Rates.

The issues concerning age and gender raised in relation to employment rates are also relevant here.

Used as an Indicator by: OECD, Eurostat.

Data Availability and Sources: For Ireland, data are available up to 1997 in the annual Labour Force Surveys produced by the CSO. Figures relate to the month of April, as this corresponded with the date of the annual survey. Since 1997, this has been replaced by the

Quarterly National Household Survey (QNHS), which provides similar information but, due to changes in the questions used, the number of people reporting that they are in the labour force and in part-time employment has increased. The CSO attributes a once-off increase in the labour force of 20,000 to these changes. This accounts for approximately 10 per cent of the total increase of 206,600 in the labour force between 1997 and 2000, and approximately 0.5 per cent of the increased participation rate. These changes should be borne in mind when comparing figures from the LFS with those from the QNHS.

For international comparisons, the principal sources of information available are Eurostat's *European Labour Force Survey* and the OECD's *Employment Outlook*. These are annual publications. Eurostat employs the ILO definition of labour force participation. However, the female labour force participation rate for the population aged 15 years and over is not readily available in this publication but can be calculated on the basis of population and labour force figures, which are provided by age group (Tables 1 and 8). In addition, the age group 25 – 54 is not distinguished in the published Eurostat or CSO reports. However, this age group is clearly distinguished by the OECD in its annual publication, *Employment Outlook* (Statistical Annex, Tables B and C). The complete age breakdown from this latter publication is presented below.

Labour Force Participation Rate for Men and Women Aged 15 years and over, Ireland 1994, 1997 and 2000

	April 1994	April 1997	Mar – May 2000
Men	68.0	67.8	71.0
Women	39.0	42.0	47.2
Total	53.3	54.7	58.9

Source: Central Statistics Office, *Labour Force Survey 1994* and *1997* and *Quarterly National Household Survey, Third Quarter 2000.*

Labour Force Participation Rate by NUTS 3 Region, Ireland 1994, 1997 and 2000

	1994	1997	2000
Border	51.7	52.1	54.1
Midlands	55.8	55.0	55.9
West	55.3	53.4	57.8
Dublin	52.5	57.4	62.7
Mid-East	51.1	57.6	62.4
Mid-West	52.0	52.5	58.7
South-East	51.9	52.7	56.2
South-West	51.6	52.5	56.5
State	53.3	54.7	58.9

Source: Central Statistics Office, *Labour Force Survey 1997, Quarterly National Household Survey, Third Quarter 2000,* and figures provided by the Central Statistics Office.

Labour Force Participation Rate by Gender and Marital Status, Ireland 1994, 1997, 2000

	1994	1997	2000
Males			
Single	59.1	60.6	67.3
Married	78.0	76.7	76.9
Separated/Divorced	73.2	72.6	73.0
Widowed	20.5	21.0	24.4
Total	68.0	67.8	71.0
Females			
Single	49.6	51.6	57.8
Married	37.9	41.1	47.9
Separated	48.8	53.0	58.9
Widowed	7.7	9.0	9.4
Total	39.0	42.0	47.2
Total			
Single	54.7	56.4	62.9
Married	57.9	58.9	61.4
Separated/Divorced	57.6	60.4	64.1
Widowed	10.5	11.7	12.5
Total	53.3	54.7	58.9

Source: Central Statistics Office, *Labour Force Survey 1994* and *1997*; *Quarterly National Household Survey, Third Quarter 2000*, and figures provided by the Central Statistics Office.

Labour Force Participation Rates by Age and Gender, International Comparison

	Ireland		EU 15		OECD	
	1997	**1999**	**1997**	**1999**	**1997**	**1999**
Men						
15 – 24	48.9	54.4	50.7	51.8	57.0	57.8
25 - 54	90.5	91.6	92.5	92.6	93.1	93.0
55 - 64	61.7	64.4	52.6	52.7	63.6	64.5
Total 15 - 64	75.6	78.3	77.8	78.4	81.1	81.5
Women						
15 - 24	41.9	46.8	42.7	43.6	46.2	48.0
25 - 54	58.4	63.1	70.1	71.7	67.7	67.8
55 - 64	23.3	26.9	29.5	30.5	37.9	39.4
Total 15 - 64	49.7	54.3	57.9	59.5	58.7	59.5
Both Sexes						
15 – 24	45.5	50.7	46.7	47.8	51.6	53.0
25 – 54	74.4	77.3	81.3	82.2	80.3	80.3
55 – 64	42.6	45.7	40.8	41.4	50.4	51.6
Total 15 - 64	62.7	66.3	67.9	69.0	69.8	70.4

Source: OECD, *Employment Outlook*, June 2000 Statistical Annex, Tables B and C.

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Indicator H4.1: Proportion of Households Living in Consistent Poverty.

Definition: The proportion of households whose disposable income is below 50 per cent or 60 per cent of the average disposable income and which also experience an enforced lack of certain basic necessities. These necessities are heating, one substantial meal each day, chicken, meat or fish every second day, a 'roast' or equivalent once a week, a warm coat, new rather than secondhand clothes and being able to pay everyday household expenses without falling into arrears. The rate of consistent poverty is expressed as a range. The lower point of this refers to the proportion of households experiencing income poverty at the 50 per cent line and enforced deprivation of at least one of the above items, while the higher point is to those experiencing income poverty at the 60 per cent line and enforced lack of one or more items.

Rationale for Inclusion: Although poverty and social exclusion are not synonymous, the rate of poverty reflects the level of social and economic exclusion in a society. It also reflects a society's commitment to the eradication of poverty and increased social justice. Consistent poverty is one of the most commonly used measures of poverty in Ireland and Europe today and reflects the overall aim of the Irish National Anti-Poverty Strategy.

Used as an Indicator by: Eurostat, Irish National Anti-Poverty Strategy.

Data Availability and Sources: The consistent poverty rate is derived from the Living in Ireland Survey, which is undertaken on an annual basis by the Economic and Social Research Institute. The

most recent published figures are included in *Monitoring Poverty Trends: Results from the 1998 Living in Ireland Survey* produced by the ESRI for the NAPS Inter-Departmental Policy Committee. The obvious time-lag is one limitation with this data. That it is based on a survey of those residing in private households is another, as this excludes some of the poorest in our society including the homeless, Travellers, and women and children in refuges. In addition, there is no international comparable time series data currently available. Little published data are available for this measure on a disaggregated basis, for example, by age, marital status or gender. However, such data can be produced from the LIIS on a commissioned basis. Disaggregated data are available, however, on the basis of economic status and is included below for its value in highlighting the position of people with a disability and the elderly (retired). This indicator is best used in conjunction with measures of relative income poverty as shown in Indicator B4.1 below.

Proportion of Irish Households Experiencing Consistent Poverty at the 50% and 60% Relative Income Poverty Line, 1994 - 1998[3]

1994	1997	1998
9-15%	7-10%	6-8%

Source: Economic and Social Research Institute (2000), *Monitoring Poverty Trends: Results from the 1998 Living in Ireland Survey,* Working Paper No. 132, and National Anti-Poverty Strategy (2000), *Social Inclusion Strategy: Annual Report of the Inter-Departmental Policy Committee 1999/2000.*

3. Consistent Poverty is defined as the proportion of households or individuals experiencing income poverty at the 50 per cent or 60 per cent relative income line and enforced deprivation of one or more items considered to be necessities (see list above). However, when only one figure is being expressed rather than a range, it is now common practice to use the higher 60 per cent relative income line. The following were the 40 per cent, 50 per cent and 60 per cent relative income lines for a single adult in 1994, 1997 and 1998. These are also expressed as a range. These refer to the equivalence scale used to weight households and income according to the number of adults and children in various households. The scales applied range from a weight of 1 for the first adult, 0.6 for the second and subsequent adults and 0.4 for each child, to 1 for the first adult, 0.7 for all other adults and 0.5 for each child.

Average Weekly Income per Adult Equivalent at the 40%, 50% and 60% Relative Income Poverty Lines, Ireland 1994, 1997 and 1998

	1994	1997	1998
40% Line	£48.80 - £52.56	£62.33 – £67.00	£70.89 - £76.38
50% Line	£61.00 - £65.70	£77.92 - £83.77	£88.62 - £95.48
60% Line	£73.21 - £78.83	£93.50 – £100.52	£106.34 - £114.58

Source: Calculated on the basis of information contained in Economic and Social Research Institute (2000), *Monitoring Poverty Trends: Results from the 1998 Living in Ireland Survey,* Working Paper No. 132.

Proportion of Irish Households in Each Planning Region Experiencing Consistent Poverty at the 60% Relative Income Poverty Line 1987, 1994 and 1997

	1987	1994	1997	
East	13.6	13.6	8.9	
South-West	16.3	13.0	11.1	
South-East	16.9	18.3	13.4	
North-East	20.6	12.8	14.0	
Mid-West	19.7	13.4	7.3	
Midlands	19.7	13.1	9.1	
West	13.8	7.3	4.8	
North-West and Donegal	22.9	23.5	11.5	
State	16.4	14.9	9.8	

Source: Fahey, T. and J. Williams, 'The Spatial Distribution of Disadvantage in Ireland' in Nolan, B., P.J. O'Connell and C.T. Whelan (eds.) (2000), *Bust to Boom: The Irish Experience of Growth and Inequality,* Dublin: Economic and Social Research Institute and Institute of Public Administration, and Nolan, B., C.T. Whelan and J. Williams (1998), *Where are Poor Households?*, Dublin: Oak Tree Press with the Combat Poverty Agency.

Proportion of Irish Households Experiencing Consistent Poverty at the 60% Relative Income Poverty Line by Labour Force Status, 1994, 1997, 1998

Labour Force Status of Household Reference Person	1994 %	1997 %	1998 %
Employee	5.5	11.8	7.4
Self-Employed	2.6	2.9	2.6
Farmer	2.1	1.6	4.7
Unemployed	33.8	28.9	25.6
Ill/Disabled	10.4	10.5	10.8
Retired	12.7	14.1	17.4
Home duties	32.9	30.3	31.5
Total	100	100	100

Proportion of Irish Households in Each Labour Force Status Category Experiencing Consistent Poverty at the 60% Relative Income Poverty Line, 1994, 1997 and 1998[4]

Labour Force Status of Household Reference Person	1994 %	1997 %	1998 %
Employee	2.3	2.6	1.4
Self-Employed	4.7	3.4	2.5
Farmer	4.8	2.3	5.3
Unemployed	52.7	35.7	29.7
Ill/Disabled	43.7	32.6	28.1
Retired	10.5	7.7	7.5
Home duties	29.4	17.2	15.3

Source: Economic and Social Research Institute (2000), *Monitoring Poverty Trends: Results from the 1998 Living in Ireland Survey*, Working Paper No. 132, and National Anti-Poverty Strategy (2000), *Social Inclusion Strategy: Annual Report of the Inter-Departmental Policy Committee 1999/2000.*

4. These two tables on labour force status present two very different figures in relation to poverty. The first refers to the total number of households experiencing poverty distributed by the labour force status of the household reference person (previously referred to as the household head). This is the incidence of poverty. For example, in 1998, 7.4 per cent of all households experiencing poverty has a reference person who was in employment. In contrast, the second table presents the proportion of households with a reference person in each labour force category which were in poverty. Therefore, in 1998, 1.4 per cent of households with a reference person who was in employment experienced consistent poverty. This is referred to as the *risk* of poverty of the various groups.

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Indicator H4.2: Households and Persons Experiencing Relative Poverty.

Definition: Relative poverty relates to the concept of exclusion from what are deemed an adequate living standard and 'normal' or 'usual' activities in a given society due to a lack of financial resources. It is usually expressed as the proportion of households or people that fall below a poverty line based on a proportion of either the mean or median income of all households or the total population. The most common relative poverty lines employed are 40 per cent, 50 per cent and 60 per cent of mean or median incomes. The *incidence* of poverty refers to the number or proportion of the total population that fall below relative poverty lines. Poverty *risk* refers to the proportion of a specific group that experience poverty. For example, the poverty risk of households headed by an unemployed person is the proportion of all households headed by an unemployed person that experience poverty.

Rationale for Inclusion: Relative income poverty is now widely accepted as one of the most appropriate indicators of economic and social inclusion in developed countries. As with consistent poverty (see H4.1 above), it provides a clear indication of the degree of economic and social exclusion and of a country's commitment to its eradication. It is one of the key components of the consistent poverty measure and is also relevant in examining income inequalities.

Used as an Indicator by: National Anti-Poverty Strategy, Eurostat.

Data Availability and Sources: Data are available for Ireland for the mid- and late- 1990s from the Irish Living in Ireland Surveys (LIIS). These surveys are undertaken as part of the European

Community Household Panel (ECHP). Data are currently available from the 1998 LIIS Survey, and data has been collected for 1999 and 2000. It is now almost certain that the final ECHP, and therefore the final LIIS, will take place in 2001. Data for these years can be made available through the ESRI. Eurostat is now concentrating on information needs at European level and within this on new data collection priorities and mechanisms in relation to poverty and inequality. National statistics bodies and research institutes are feeding into this process and will play a role in determining and shaping the indicators for which data will be collected. Given the importance of this data to the National Anti-Poverty Strategy, it is probable, although not certain, that income data will still be possible.

Disaggregated data on relative poverty are available on a limited time series basis in the annual *Monitoring Poverty Trends* reports prepared for the National Anti-Poverty Strategy Inter-Departmental Policy Committee. While not presented in these reports, data can be broken down by gender, age and marital status on a commissioned basis. Regional data are available but it is important to note that published information relates to planning regions that do not correspond to the NUTS regions. The latter is also available on a commissioned basis.

Incidence of Poverty: Proportion of Households and People Below the 40%, 50% and 60% Relative Income Poverty Lines, 1994,1997 and 1998[1]

	1994	1997	1998
40% Line			
Households	7.0	7.0	10.0
People	6.8	8.1	8.8
50% Line			
Households	16.5	19.8	24.2
People	18.8	18.2	19.5
60% Line			
Households	32.9	34.2	33.5
People	29.4	30.7	29.1

Note: 1. Based on Equivalised Income takes into account differences in the size and composition of households. The equivalence scale used here is the OECD scale where a weight of 1 is applied to the first adult, 0.7 to the second and subsequent adults and 0.5 to each child.

Risk of Poverty: Proportion of Various Household Types Falling Below the 50% Relative Income Poverty Line, 1994, 1997 and 1998

	1994	1997	1998
1 adult	22.5	40.1	50.8
2 adults	9.3	14.1	17.3
3 or more adults	10.0	12.1	12.0
2 adults, 1 child	14.0	17.0	14.8
2 adults, 2 children	12.7	12.8	13.1
2 adults, 3 children	22.5	28.2	9.8
2 adults, 4 or more children	36.7	39.5	24.9
Others with children	32.7	26.2	28.6
All	18.6	22.4	24.6

Risk of Poverty: Proportion of Households with Reference Person's of Various Labour Force Status Falling Below the 50% Relative Income Poverty Line by 1994, 1997 and 1998

	1994	1997	1998
Employee	2.8	4.0	2.3
Self-employed	15.1	17.1	15.8
Farmer	21.5	16.3	22.0
Unemployed	57.3	54.9	56.2
Ill/disabled	50.7	60.4	72.6
Retired	10.2	23.3	28.7
Home duties	33.2	48.6	58.4
All	18.6	22.3	24.3

Source: ESRI (2000), *Monitoring Poverty Trends: Results from the 1998 Living in Ireland Survey*. Report for the National Anti-Poverty Strategy's Inter-Departmental Policy Committee.

Risk of Poverty: Proportion of Households in Each Planning Region Experiencing Income Poverty at the 60% Relative Income Poverty Line 1987, 1994 and 1997[1]

	1987	1994	1997
East	19.3	29.1	31.6
South-West	31.0	34.4	34.4
South-East	33.3	40.0	47.9
North-East	35.7	38.2	51.1
Mid-West	32.9	39.2	36.3
Midlands	41.1	39.7	38.6
West	31.0	35.5	36.3
North-West and Donegal	42.6	43.5	44.0
State	29.0	34.7	36.7

Source: Fahey, T. and J. Williams 'The Spatial Distribution of Disadvantage in Ireland' in Nolan, B., P.J. O'Connell and C.T. Whelan (eds.) (2000), *Bust to Boom: The Irish Experience of Growth and Inequality*, Dublin: Economic and Social Research Institute and Institute of Public Administration, and Nolan, B., C.T. Whelan and J. Williams (1998), *Where are Poor Households?*, Dublin: Oak Tree Press with the Combat Poverty Agency.

Note: 1. The 50% relative income line was not used here in this study.

Relative Income Poverty Rates by Gender and Age at the 60% of the Median Equivalised Income per Person, 1996(%)[1]

		B	DK	D	EL	E	F	IRL	I	L	NL	A	P	UK	EU-13[2]
Total	**Pop.**	17	12	16	21	18	16	**18**	19	12	12	13	22	19	17
Total	**Male**	16	11	15	20	18	15	**17**	18	12	11	11	20	17	16
	Female	18	13	17	21	18	17	**19**	19	13	13	14	23	21	18
<18 Years	**Male**	21	4	20	20	23	18	**24**	23	21	15	15	21	25	21
	Female	19	5	20	18	24	19	**24**	23	15	15	16	25	25	21
18-24 Years	**Male**	17	29	23	25	23	25	**11**	23	8	25	12	14	18	22
	Female	19	31	25	24	21	29	**16**	29	20	29	13	17	28	26
25-34 Years	**Male**	11	8	15	14	14	11	**11**	18	9	10	7	10	13	14
	Female	13	11	18	14	17	13	**13**	19	11	13	12	14	17	16
34-44 Years	**Male**	13	6	12	14	17	11	**16**	14	7	9	9	19	12	13
	Female	17	6	15	16	17	13	**20**	18	11	10	11	19	15	15
45-54 Years	**Male**	12	7	13	18	18	12	**17**	17	9	8	11	17	11	13
	Female	16	6	15	19	17	11	**16**	18	11	9	10	18	14	14
55-64 Years	**Male**	17	13	13	20	18	15	**18**	15	13	6	8	21	11	14
	Female	17	12	12	24	17	15	**16**	16	15	10	12	26	15	15
≥65 Years	**Male**	19	23	12	31	15	15	**10**	13	9	9	12	35	23	16
	Female	23	27	18	34	14	18	**20**	16	11	8	20	37	29	20

Source: Eurostat (2000), *European Social Statistics: Income, Poverty and Social Exclusion*, Luxembourg: Office for Official Publications of the European Commission.

Note: 1. The 60 per cent Median Income Line is frequently used in comparative EU analysis and is the measure adopted throughout this study by Eurostat.
2. Finland and Sweden not included.

Element of NESC Vision of a Successful Society: Social Inclusion

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator H4.3: Retention Rates to the end of the Upper Secondary School Cycle.

Definition: This is the 'estimated percentage of entrants to Junior Cycle in a given year who complete second level in a publicly-aided school with a Leaving Certificate (Including Leaving Certificate Applied)', Department of Education and Science, *Statistical Report 1997/1998*.

Rationale for Inclusion: Level of educational qualification is associated with labour market experience. Upper secondary education is widely considered the minimum level required to protect people, to a certain extent, from unemployment over their lifecycle. Given the very close link between labour market experience and poverty, education is also closely associated with experience of poverty and social exclusion. In addition, education level is also associated with broader life chances and activities, including participation in adult and continuing education, in social activities and in active citizenship activities. In addition, the National Anti-Poverty Strategy set targets for the retention of 90 per cent of students to the end of the senior cycle by the year 2000 and 98 per cent by 2007.

Used as an Indicator by: OECD, National Anti-Poverty Strategy.

Data Availability and Sources: Data are available in the Department of Education and Science's annual *Statistical Report 1998/99* (Figure F). Because this is based on estimates produced by the Department of Education, primarily for planning and finance reasons. The Department uses the results of the Annual School Leavers Survey, which is conducted annually by the Economic and

Social Research Institute. This survey includes 3,000 people who left second level schools at the end of the previous academic year. Therefore, students who left the school system in 1997 were surveyed in 1998.

As this is clearly an Irish measure related to Irish public examinations, there is no direct international comparison. The OECD, however, publishes graduation rates based on the number of students who graduate from upper secondary programmes as a proportion of the total population of usual school graduation age. This measure is not directly comparable with retention rates in Ireland and is further complicated by the fact that, in some countries, graduation does not require completion of a final examination.

Retention Rates to the end of the Upper Secondary School Cycle for Ireland

	1994	1997	1999
Male	74.4	74.5	76.5
Females	83.8	85.5	86.8
Total	79.0	79.9	81.6

Source: McCoy, S. and B. Whelan (1995, 1998), *The Economic Status of School Leavers: Results from the School Leavers Survey,* and McCoy, S. and J. Williams (2001 forthcoming), *1999 Annual School Leavers Survey* Dublin: Economic and Social Research Institute, Department of Education and Science and Department of Enterprise, Trade and Employment.

Element of NESC Vision of a Successful Society: Social Inclusion

Dimension of Sustainable Development: Social and Economic Sustainability

Indicator H4.4: Disability-Adjusted Life Expectancy (DALE).

Definition: Disability-Adjusted Life Expectancy (DALE) (sometimes called Healthy Life Expectancy) is broadly defined by the World Health Organisation as "…the expectation of life lived in equivalent full health" (*The World Health Report 2000 Health Systems: Improving Performance*). It is calculated on the basis of overall life expectancy less years of ill health, which are weighted according to severity of the disability/illness. Some of the information used is taken from national vital statistics registrations and some from national and/or international surveys. The measure takes into account physical and cognitive disability, general health status and major disabling conditions in each country.

Rationale for Inclusion: Disability-Adjusted Life Expectancy (DALE) is an indicator of both the life expectancy and the long-term health of the population. It reflects changes not only in health care and medicine, but also in areas such as housing, education and environmental services. It has implications for a wide range of social policies relating to ageing. DALE has a number of additional advantages as a summary measure of health status. First, it is easily related to the more commonly used life expectancy, but goes beyond this by recognising that not all of a population's life will be lived in good health. This is of particular relevance in developed countries, such as Ireland, where standard life expectancy is high, older populations are common and growing and therefore disability/serious illness must be a key priority in terms of long-term health and health care. Secondly, because good health for as much of life as is possible has to be the primary objective of any health system, it is easy to see how this indicator relates to health

care, services and provision. Finally, as a summary health indicator it is easy to understand and interpret by a non-medical audience.

Used as an Indicator by: WHO, Eurostat, OECD, UN, World Bank.

Data Availability and Sources: Disability-Adjusted Life Expectancy was compiled for the first time in 2000 on a country-by-country basis by the World Health Organisation. These data are available in *The World Health Report 2000 Health Systems: Improving Performance*. While not available prior to 1999, the WHO intends to use DALE as a key component of its measurement of health system performance and therefore data will be available for future years.

Life Expectancy and Disability-Adjusted Life Expectancy (DALE) in Years, Selected OECD Countries, 1999

	Life Expectancy at Birth		Disability-Adjusted Life Expectancy (DALE)					
Country	Male	Female	WHO Rank[1] (191 Countries)	Total Population at Birth	Males at Birth	Males at Age 60 years	Females at Birth	Females at Age 60 Years
Japan	77.6	84.3	1	74.5	71.9	17.5	77.2	21.6
Australia	76.8	82.2	2	73.2	70.8	16.8	75.5	20.2
France	74.9	83.6	3	73.1	69.3	16.8	76.9	21.7
Sweden	77.1	81.9	4	73.0	71.2	16.8	74.9	19.6
Spain	75.3	82.1	5	72.8	69.8	16.8	75.7	20.1
Italy	75.4	82.1	6	72.7	70.0	16.2	75.4	19.9
Greece	75.5	80.5	7	72.5	70.5	16.9	74.6	18.8
Switzerland	75.6	83.0	8	72.5	69.5	16.0	75.5	20.6
Canada	76.2	81.9	12	72.0	70.0	16.0	74.0	18.9
Netherlands	75.0	81.1	13	72.0	69.6	15.4	74.4	19.7
UK	74.7	79.7	14	71.7	69.7	15.7	73.7	18.6
Norway	75.1	82.1	15	71.7	68.8	15.1	74.6	19.7
Belgium	74.5	81.3	16	71.6	68.7	15.8	74.6	19.6
Austria	74.4	80.0	17	71.6	68.8	15.2	74.4	18.7
Luxembourg	74.5	81.4	18	71.1	68.0	15.8	74.2	19.7
Iceland	76.1	80.4	19	70.8	69.2	14.9	72.3	17.0
Finland	73.4	80.7	20	70.5	67.2	14.5	73.7	18.5
Germany	73.7	80.1	22	70.4	67.4	14.3	73.5	18.5
USA	73.8	79.7	24	70.0	67.5	15.0	72.6	18.4
Ireland	73.3	78.3	27	69.6	67.5	13.9	71.7	16.6
Denmark	72.9	78.1	28	69.4	67.2	14.2	71.5	17.2
Portugal	72.0	79.5	29	69.3	65.9	14.0	72.7	17.7
New Zealand	73.9	79.3	31	69.2	67.1	14.4	71.2	17.0
Czech Republic	70.7	78.2	35	68.0	65.2	12.7	70.8	16.4
Slovakia	68.9	76.7	42	66.6	63.5	12.7	69.7	16.0
Poland	67.9	76.6	45	66.2	62.3	12.5	70.1	16.6

Source: World Health Organisation (2000), *The World Health Report 2000 Health Systems: Improving Performance*, Geneva and Washington: WHO.

Note: 1. Rank position refers to the Disability-Adjusted Life Expectancy of the total population at birth. Other non-OECD countries with high DALE rankings were Monaco (9th position), Andorra (10th), San Marino (11th), Malta (21st), Israel (23rd), Cyprus (25th), Dominica (26th) and Singapore (30th).

Element of NESC Vision of a Successful Society: Social Inclusion

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator H4.5: Housing Stock and Completions: Local Authority and Private.

Definition: This is the number of existing housing units (stock) and the number of completions in a given time period. This rate per 1,000 population takes into account population change.

Rationale for Inclusion: It is now widely accepted that housing shortages are one of the main constraints on Ireland's continued economic growth and competitiveness, as well as a threat to social cohesion and quality of life. Changing demographics, mainly increased longevity, a rise in the number of people in the household formation stage and decreasing family sizes, as well as an expanding population due to inward migration, are among the factors contributing to the current and projected housing shortages. The stock of housing provides a snap-shot picture of available housing units at any one time while completions provide a dynamic indicator of change in the supply of housing.

Distinguishing between local authority and private housing is important. As house prices and private rents continued to rise, the demand for local authority housing, as recorded in the tri-annual Housing Needs Assessment, has risen very substantially in recent years. The supply of local authority housing is an indicator of the Government's commitment to providing accommodation for those who can least afford to purchase housing from their own resources. In addition to indicating the main supply of social housing, local authority housing completions have an impact on other housing sectors. Many of those who are eligible for local authority housing currently reside in unsuitable or unaffordable private rented accommodation. Local authority housing provision can lessen the demand for private rented stock, thereby releasing some of the

pressure in this currently over-crowded and generally expensive sector of accommodation.

This indicator should be used in conjunction with targets sets in the National Development Plan 2000 – 2006 and the Department of the Environment and Local Government report, *Action on Housing* (2000).

Used as an Indicator by: Department of the Environment and Local Government, Irish National Development Plan, Eurostat.

Data Availability and Sources: Data on total housing stock on an annual basis is available on request from the Department of the Environment and Local Government. These are estimates for each year other than years in which a full Census of Population is completed. The estimates are based on the actual figure for the previous Census year, plus additions less an obsolescence rate. Data on Local Authority stock and all house completions is compiled on a quarterly basis by the Department of the Environment and Local Government and published in the *Quarterly* and *Annual Housing Statistics Bulletin*. Completions in all tenure types are based on the number of new connections to the Electricity Supply Board. There is a time-lag of approximately four to six months on these figures. The 2000 report became available in April 2001.

Three additional points should be noted in relation to these figures. First, while the total number of local authority houses completed is reported below, this does not represent the actual net increase in stock in local authority houses as many existing properties are sold during any one year. However, this is accounted for in both the local authority and total stock figures for the following year. This is why the difference between the local authority stock figures for consecutive years is lower than the number of completions and acquisitions for the same year. Second, data on completions of private houses contains those that are specifically built as holiday/ second homes, investment properties and new houses that are built for general purchase but are purchased as second homes. Ideally, these should be separated and removed from the figures, as they do not meet a primary housing need. Finally, information of the rate of completions of voluntary housing is provided separately below but no accurate figures are available on the stock of such housing.

Housing Stock and Completions in Ireland, 1995 - 2000

Year	Housing Stock			Housing Completions			
	Local Authority[1] (per 1,000 population)	Private[2] (per 1,000 population)	Ratio of Local Authority to Private	Local Authority[3] (per 1,000 population)	Private (per 1,000 population)	Ratio of Local Authority to Private	Voluntary Housing Completions
1995	95,735 (26.6)	1,019,265 (283)	1:10.6	3,842 (1.1)	26,604 (7.4)	1:6.9	1,011 (0.28)
1996	97,219 (26.8)	1,026,019 (283)	1:10.6	3,573 (1.0)	30,132 (8.3)	1:8.4	917 (0.25)
1997	98,394 (26.9)	1,078,606 (295)	1:11.0	3,217 (0.9)	35,454 (9.7)	1:11.0	756 (0.21)
1998	98,862 (26.7)	1,113,138 (300)	1:11.2	3,282 (0.9)	39,093 (10.6)	1:11.9	485 (0.13)
1999	99,259 (26.5)	1,151,741 (308)	1:11.6	3,713 (1.0)	43,024 (11.5)	1:11.6	579 (0.15)
2000	99,163 (26.2)	1,193,837 (315)	1:12.0	3,207 (0.8)	46,657 (12.3)	1:14.6	951 (0.25)

Source: Department of the Environment and Local Government (2001), *Annual Housing Statistics Bulletin 2000*, and requested figures provided by the Department of the Environment and Local Government; Central Statistics Office (2000), *Population and Migration Estimates* April 2000, Dublin: Central Statistics Office.

Note: 1. This stock figure refers to the number of local authority houses let on 31st December of the previous year.
2. These figures are based on estimates provided by the Department of the Environment and Local Government.
3. This includes housing completions and acquisitions.

Element of NESC Vision of a Successful Society: Lifelong Learning

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator H5.1: Participation in Adult and Continuing Education and Training.

Definition: This is the proportion of adults aged 25 to 64 years in education and/or training over a given period of time. Education and training tend to be broadly defined and may include in-company training, private tuition, correspondence courses or distance learning, community education etc. This measure may relate specifically to job-related training, to recreational interests or personal development. In international comparisons it does not include education within the formal school system. Therefore, an adult returning to secondary school to undertake the Leaving Certificate would not be included here.

Rationale for Inclusion: Participation in adult education and training that is job-related has a key role to play in maintaining human capital and improving productivity. With the growth of technology, the importance of encouraging workers to upgrade their skills constantly has become increasingly important. However, adult education and training that is not job specific but related to personal development may also have a key role to play in developing human capital, an adaptable workforce with a capacity to learn and change and an active citizenry.

Used as an Indicator by: OECD.

Data Availability and Sources: International data are contained in the OECD's *Education at a Glance* (Table C1.4). Although this is an annual publication, the data used in both the 1998 and 2000 editions refer to 1994/1995 data collected as part of the International Adult Literacy Survey, which has not been replicated.

Although information is available on a country-by-country basis, no information is provided for the participating countries as a whole and therefore there is no readily available international comparator. The data used here is taken from the 1998 report as this includes a wider range of participants than the data included in the 2000 report.

Percentage of Irish 25 – 64 Year Olds Participating in Continuing Education and Training by Age and Gender, 1994 - 1995

	25-34 years	35-44 years	45-54 years	55-64 years	25-64 years
Men	26	21	20	10	20
Women	30	30	19	8	24
All	28	25	20	9	22

Proportion of 25 – 44 Year Olds in Selected EU Member States Participating in Continuing Education and Training by Age and Gender, 1994 - 1995

	25 – 44 Years	44 – 64 Years	25 – 64 Years
Ireland			
Men	24	15	20
Women	30	14	24
Total	27	15	22
Netherlands			
Men	46	25	38
Women	41	25	34
Total	44	24	36
UK			
Men	54	34	46
Women	53	32	44
Total	54	33	45

Source: OECD (1998), *Education at a Glance, 1998 Edition.*

Element of NESC Vision of a Successful Society: Balanced Regional Development

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator H6.1: Employment Growth Rates by Region.

Definition: This is the growth in the number of people in employment in each of the NUTS III regions (Regional Authority Regions).

Rationale for Inclusion: The regional employment growth rate is an indicator of the regional distribution of economic growth and, given the relationship between unemployment and poverty, of social well-being. It can also indicate where imbalances in regional industrial development and investment and in labour market policies arise and where targeted policies are needed. It should be borne in mind, however, that this indicator is a reflection of the number of people living in each region in employment irrespective of where that employment is located. Each region will have some people in residence but in employment elsewhere. This is disproportionately true of the Mid-East region where a considerable proportion of the population is employed in Dublin. For this reason figures for the Mid-East and Dublin are provided together and separately below.

Used as an Indicator by: Department of Finance, CSF Evaluation Unit.

Data Availability and Sources: The number of people in employment in each of the regions is published on a quarterly basis in the Quarterly National Household Survey, from which employment growth rates can be derived.

Regional Employment Growth based on place of residence 1993 - 2000

		No. In Employment		Employment Growth Rate	
	April 1993	**Mar-May 1998**	**Mar-May 2000**	**1993-1998**	**1998-2000**
		000	**000**	**%**	**%**
Border	126.8	145.9	161.7	13.09	10.83
Midlands	62.7	77.2	85.2	18.78	10.36
West	115.4	139.9	162.9	17.51	16.44
Dublin	366.6	482.6	533.8	24.04	10.61
Mid-East	105.7	156.2	177.6	32.33	13.70
Mid-West	102.4	129	144.9	20.62	12.33
South-East	126.6	149.3	166.9	15.20	11.79
South-West	176.9	214.5	237.7	17.53	10.82
State	1183.1	1494.5	1670.7	20.84	11.79

Source: CSO (1998, 2000), *Quarterly National Household Survey* and FÁS (2000), *Regional Aspects of Ireland's Labour Marke*t, Labour Market Update Paper, January 2000.

Element of NESC Vision of a Successful Society: Commitment to EU and International Organisations

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator H7.1: Net Official Development Assistance (ODA) Disbursed as a percentage of GNP.

Definition: ODA is defined by the UN as 'Grants or loans to countries or territories that are undertaken by the official sector, with promotion of economic development or welfare as the main objective, on concessional financial terms.' (UN *Human Development Report, 1999*).

Rationale for Inclusion: ODA is a measure of the commitment of national governments to closing the gap between the First and Third Worlds, to global economic, social and environmental development and world wide social justice. Ireland has set a target of increasing ODA to 0.7 per cent of GNP by 2007.

Used as an Indicator by: OECD, UN, Eurostat.

Data Availability and Sources: Figures for Ireland are produced by the Department of Foreign Affairs in their Annual Report and are given below. International data are published in the United Nations publication, *Human Development Report*. The most recent edition of this was published in 2000. Two possible measures are used in calculating ODA as a percentage of GNP: ESA 79 and ESA95.[5] The

5. ESA79 and ESA95 refer to two systems of national accounts applied by EU countries. ESA95 was, as the name suggests, introduced in 1995 and until 1997 Ireland operated a partial ESA95 system that incorporated two of the most substantial changes in the ESA79 system. These were the treatment of royalties as payments for services, where they had been treated as factor income under the ESA79 system, and the attribution of the entire profits of multinationals to the parent company in the transition from GDP to GNP. Under ESA79 only profits remitted were treated in this way. By 1998 Ireland was operating a full ESA95 system of accounts with changes introduced in respect of the treatment of capital formation, imputed rent, insurance and Government fees and taxes. Further details of these changes can be found in the Department of Finance's annual National Income and Expenditure publication.

OECD and the UN used the former measure up to 1999. The latter measure was introduced across the EU in 1995 as a new system for calculating GNP. Both figures are produced by the Department of Foreign Affairs for 1992 to 1999.

Official Development Assistance as a Percentage of GNP Ireland

	1986/1987	**1997**	**1999**
ESA 79[1]	0.23%	0.31%	0.35%
	1994	**1997**	**2000**
ESA 95	0.23%	0.27%	0.30%

Source: ESA79 data taken from the United Nations' *Human Development Report 1999*, Table 14, with the exception of the 1999 figure for Ireland, which is supplied by the Department of Foreign Affairs. ESA95 data for Ireland are supplied by the Department of Foreign Affairs.

Element of NESC Vision of a Successful Society: Maintaining and Managing the Environment

Dimension of Sustainable Development: Environmental, Economic and Social Sustainability

Indicator H8.1: Greenhouse Gas Emissions.

Definition: Net emission of the three main greenhouse gases (carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) measured in Kilo Tonnes (kt) of CO_2 equivalent. Three other greenhouse gases are included here – sulphur hexafloride (SF_6), hydroflourocarbons (HFCs) and perflourocarbons (PFCs) – although these are minor contributors to overall emissions. The base year for the measurement of emissions of the main three gases is 1990, while the base year for the latter three is 1995 as provided for in the Kyoto Protocol. The net figure refers to total gross emissions less CO_2 sinks in forests.

Rationale for Inclusion: Climate change is widely accepted to be one result of increasing concentrations of greenhouse gases in the atmosphere. While certain marginal benefits may arise from this climate change, for example, enhanced agricultural production in Ireland, the negative impact outweighs the positive. The level of greenhouse gases in the atmosphere is one of the most widely accepted indicators of the state of the environment. Under the Kyoto Protocol (adopted in 1997 in the EU, with member states preparing for ratification by June 2002), industrial countries agreed to reduce their greenhouse gas emissions (six gases) by 5 per cent of their 1990 levels by the 2008 – 2012. Ireland agreed to limit its increase in greenhouse gas emissions to no more than 13 per cent above its 1990 level in the same time period. However, Ireland has already exceeded this limit and, if not addressed, will continue to do so at an increasing rate. Industry, particularly agriculture, energy and transport, are the main contributors to this increasing level of greenhouse gases.

Used as an Indicator by: Irish Environmental Protection Agency (EPA), National Competitiveness Council, UN, OECD, World Bank.

Data Availability and Sources: Data for Ireland is collected by the EPA and included in its reports and a number of reports of the Department of the Environment and Local Government. These provide the most regular data sources. Data for Ireland is also included in the OECD publication *Environmental Performance Review: Ireland,* published in June 2000.

Total Net Green House Gas Emissions in Kilo Tonnes, Ireland 1990 and 1999

	CO_2	CH_4	N_2O	HFC, PFS, SF_6	Total Emissions	Emissions Index	Sinks	Net Total	Net Index
1990	31,575	12,836	9,085	256	53,752	100.0	0	53,752	100.0
1999	41,887	13,307	10,143	256	65,593	122.0	–858	64,736	120.4

Source: Department of the Environment and Local Government.

Element of NESC Vision of a Successful Society: Maintaining and Managing the Environment

Dimension of Sustainable Development: Environmental, Economic and Social Sustainability

Indicator H8.2: River Water Quality.

Definition: The proportion of rivers that are polluted. This is based on a four-fold classification: Unpolluted, Slightly Polluted, Moderately Polluted and Seriously Polluted, on the basis of the level of various biological and chemical materials.

Rationale for Inclusion: Fresh water constitutes one of the main economic and social resources of Ireland, providing water for domestic, industrial and agricultural use. Rivers are the primary source of fresh water and its quality reflects a number of waste management policies, including urban and municipal waste disposal, and the treatment, management and disposal of agricultural and industrial waste. In addition, as approximately 75 per cent of all drinking water is supplied by rivers, this has implications for households and the health of the nation. Changes in policy in relation to waste management, particularly in respect of phosphorous and nitrogen levels, are expected to show results in this area over the coming years.

Used as an Indicator by: EPA, OECD.

Data Availability and Sources: The Environmental Protection Agency conducts an assessment of river and stream water quality every three years. The biological survey is based on samples taken from approximately 3,200 locations around Ireland and has been ongoing since 1971, thereby allowing a historical perspective. In addition, a chemical survey of rivers is undertaken on samples taken from 2,100 locations.

River Water Quality in Ireland, 1987 - 1997

	Percentage of 13,200 km Baseline		
River Quality	**1987-1990**	**1991-94**	**1995-97**
Unpolluted	77.3	72.2	66.9
Slightly Polluted	12.0	16.3	18.2
Moderately Polluted	9.7	10.9	14.0
Seriously Polluted	0.9	0.6	0.9

Source: EPA (1999), *Environment in Focus.*

Element of NESC Vision of a Successful Society: Maintaining and Managing the Environment

Dimension of Sustainable Development: Environmental, Economic and Social Sustainability

Indicator H8.3: Disposal and Recovery of Household and Commercial Waste Arising (Municipal Waste).

Definition: Two definitions are commonly used in measuring household and commercial waste arising. The first of these is tonnes (000s) of household and commercial waste collected by or on behalf of local authorities per annum. The second relates to the waste generated rather than collected. This figure takes account of the fact that not all of the population is served by a municipal collection service. The figures for Ireland below refer to this latter measure.

Rationale for Inclusion: The disposal and recovery of waste is now one of the main challenges in environmental management. Increasing levels of waste generation, such as is occurring in Ireland, place a growing burden on the environment and on existing waste management services.

Used as an Indicator by: EPA, National Competitiveness Council.

Data Availability and Sources: Data for Ireland for 1993 to 1995 are available in the Department of the Environment and Local Government's 1997 publication *Sustainable Development: A Strategy for Ireland.* Data for 1998 are contained in the 2000 EPA publication *Ireland's Environment: A Millennium Report.* Data will continue to be available from the EPA National Waste Database, which will provide information on various aspects of waste and waste management in the future. Reports on the basis of this database are produced every three years. The next report will contain data for 2001 and will be released in the following year. Some international data are available in the OECD publication *Environmental Performance: Ireland 2000.*

Disposal and Recovery of Household and Commercial Waste: Ireland 1993 - 1998

	1993	1995	1998
Landfill	92.6	92.2	91.0
Recycling	7.4	7.8	9.0
Total	100	100	100

Source: EPA (2000), *Ireland's Environment: A Millennium Report*, Environmental Protection Agency, and Department of the Environment and Local Government (1997), *Sustainable Development: A Strategy for Ireland*, Dublin: The Stationery Office.

Comparative Municipal Waste Disposal and Recovery, late 1990s

Country	Landfill	Incineration	Composting	Recycling	Other
Ireland	92.2	0.0	0.0	7.8	0.0
Netherlands	35.2	26.9	22.5	15.5	0.0
France	47.0	45.7	6.9	0.0	0.3
Denmark	21.7	54.4	11.1	12.2	1.0
UK	80.0	14.3	0.0	5.7	0.0
Europe Average	66.0	18.0	6.0	9.0	1.0

Source: EPA (2000), *Ireland's Environment: A Millennium Report*: Environmental Protection Agency.

APPENDIX III

BACKGROUND INDICATOR METHODOLOGY NOTES

BACKGROUND INDICATORS

Element of NESC Vision of a Successful Society: Successful Adaptation to Change

Dimension of Sustainable Development: Economic Sustainability

Indicator B1.1: Business Investment in R&D.

Proxy: Not required.

Definition: This is the amount of money invested in R&D by businesses as a proportion of GDP.

Rationale for Inclusion: In a global economy increasingly driven by technology and technological changes, simply following the lead set by other countries will ultimately limit productivity. It is important that as much R&D as is possible takes place here in order to ensure that Ireland develops both a skill base and a reputation for excellence in this increasingly important area. Businesses have a key role to play here in supplementing Government investment in this area.

Used as an Indicator by: OECD, National Competitiveness Council.

Data Availability and Sources: Data are available for Ireland in the Annual Competitiveness Reports (Table A7) produced by the National Competitiveness Council. These draw on material from the OECD and also provide an international comparison. The most recently published data on business R&D investment refer to 1997 for the majority of countries.

Investment in R&D by Businesses as a Proportion of GDP

	1996	1997
Ireland	1.13 Rank 13 of 27	1.18 Rank 10 of 26
OECD	1.49	1.53

Source: National Competitiveness Council (2000), *Annual Competitiveness Report 2000*.

Element of NESC Vision of a Successful Society: Utilisation and Development of the Information Society

Dimension of Sustainable Development: Economic Sustainability

Indicator B2.1: IT Graduates as a Percentage of All Graduates.

Proxy: Computer science and mathematics graduates as a proportion of all graduates.

Definition: The number of tertiary students graduating in computer science and mathematics as a proportion of all graduates. This includes those qualifications awarded by both non-university tertiary institutions and university-level qualifications.

Rationale for Inclusion: Given the now well-recognised growth in the information and knowledge based society and economy, it is essential that a sufficient skills base is available to Irish industry if it is to keep pace with its competitors. This is becoming increasingly important with the growth in e-commerce. In addition, the development of a workforce with a high level of technological skills is essential if Ireland is to maintain its competitive position and continue to attract foreign direct investment.

Used as an Indicator by: OECD.

Data Availability and Sources: Although the OECD is now producing information on graduates in computing, with data available for 1998, the suggested proxy is considered more appropriate as many mathematics courses contain training or modules in computer programming. This is in fact a partial indicator as anecdotal evidence suggests that it is exposure to IT rather than formal education or training in computing or other IT-related courses that shapes the level of skills in the workforce. Nonetheless, one of the strengths of this indicator is that it could be used in

relation to either the dimension of adaptation to change or that of developing the Information Society.

Data are available for Ireland in the OECD publication, *Education at a Glance*, which also provides international data. The most recent report was published in June 2000 and contains data referring to 1998 for the majority of countries. However, the basis of the indicators used changes between previous reports and the current one. Therefore, the data for 1998 given below are based on the amalgamation of two categories – computing, and mathematics and statistics. These are separated in the most recent report but were presented as one category in previous editions.

Computer Science and Mathematics Graduates as a Proportion of all Graduates

	Non-University		University	
	1996	**1998**	**1996**	**1998**
Ireland	6%	10.3%	6%	6.4%
OECD Average	3%	3.9%	3%	3.5%

Source: OECD (2000), *Education at a Glance*, 2000 Edition.

Element of NESC Vision of a Successful Society: Utilisation and Development of the Information Society

Dimension of Sustainable Development: Economic Sustainability

Indicator B2.2: Government Appropriations and Outlays on R&D as a proportion of GDP (Gbaord).

Proxy: Not required.

Definition: This comprises government expenditure on Research and Development activities as a proportion of GDP.

Rationale for Inclusion: This illustrates the level of priority given by national government to the development of a technologically advanced economy, a knowledge-based society, a skilled and adaptable workforce and population that can embrace technological advances. It is important that as much R&D as is possible takes place in Ireland in order to ensure that both a skill base and a good reputation in this increasingly important area is developed. This indicator can, in most instances, be further broken down to expenditure by sector, thereby showing the level of priority attached to different sectors.

Used as an Indicator by: Eurostat.

Data Availability and Sources: Data are available for Ireland and the OECD in the *Eurostat Yearbook: A Statistical Eye on Europe*. The most recent edition of this was published in 2000 and the most recent data contained here relate to 1998.

Government Appropriations and Outlays on R&D as a proportion of GDP (Gbaord)

	1997	1998
Ireland	0.32%	0.31%
EU 15	0.79%	0.76% (estimate)

Source: Eurostat (2000), *Statistical Yearbook: A Statistical Eye on Europe.*

Element of NESC Vision of a Successful Society: Utilisation and Development of the Information Society

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator B2.3: Internet Hosts per 1,000 Population.

Proxy: Not Required

Definition: Internet hosts per 1,000 of the population, that is, the number of registered Internet users. This differs from the number of people with Internet access (see H2.2) as a number of people may access the Internet via the same host. The number of hosts will therefore be substantially lower than the number of users.

Rationale for Inclusion: The proportion of Internet hosts in a country illustrates to some extent the degree to which businesses and the population are subscribing to new technologies and the information society more generally. However, as the National Competitiveness Council points out, this is a less-than-perfect measure of Internet access and penetration due to the use of various suffixes. While those using the standard Irish suffix, .ie, are counted, those using alternatives, such as .com, are not.

Used as an Indicator by: National Competitiveness Council, various OECD countries.

Data Availability and Sources: Data are available in the annual reports of the National Competitiveness Council. No information is available for either the EU or the OECD as whole areas, but Ireland's position relative to the OECD member countries can be ranked, giving a clear indication of its relative position.

Internet Hosts per 1,000 Population

	1997	2000
Ireland	9.8	16.32
Rank Position	11 of 19	16 of 28

Source: National Competitiveness Council (1998 and 2000), *Annual Report of the Competitiveness Council.*

Element of NESC Vision of a Successful Society: Economic Inclusion

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator B3.1: Number of Childcare Places per 1,000 children aged 5 years and under (pre-school) and 6 to 15 years (after-school).

Proxy: None.

Definition: The number of childcare places available to (i) pre-school children and (ii) school-going children under the minimum school leaving age per 1,000 children in the relevant age groups.

Rationale for Inclusion: The issue of childcare has moved to the forefront of economic and social policy in the past number of years, and commitments relating to childcare provision are included in the National Development Plan as well as the previous and the current National Agreement. The availability of childcare is essential for a number of reasons. These include increased participation in the labour force, particularly by women, the attainment of family-friendly policies that support economic and social inclusion, the attainment of equality in the work force and combating educational disadvantage.

It is important to distinguish between places available for pre-school children and the range of care types available to them (playgroups/schools, crèches, childminders etc.) and after-school care (childminders, in-school provision, community-based after-school groups etc.). It is also worth noting that in many EU countries, and particularly those with lengthy maternity and paternity leave, a further distinction is made between children aged less than 3 years and those aged 3 to 5 years. However, in countries such as Ireland where maternity leave is comparatively short, it is acceptable to distinguish on the basis of a single pre-school group, that is, the under-5s. The demand for services for these two groups,

the nature of services required and the patterns of usage of these can be expected to vary substantially. In relation to pre-school places a clear distinction should be made between full-time places, such as those provided by crèches, and part-time places, such as those provided by playgroups. This is of central importance in considering the issue of labour force participation. Of importance in relation to all types of childcare is the identification of the main funders or combination of funders of the services, that is, parents, the State or employers. This is vital to the issue of affordability and the development of policy options to meet the demand for childcare.

Used as an Indicator by: OECD.

Data Availability and Sources: There are few or no data available at a central level on childcare in Ireland. A range of Government departments have been involved in the provision of childcare and responsible for the collation of information on their various provisions and initiatives. Since 2000, however, the Department of Justice, Equality and Law Reform has been coordinating the delivery of childcare. Nonetheless, little is known about the number of pre-school places that are available in community and in private facilities, and even less about after-school provision. Following the introduction of notification regulations in 1996, the Department of Justice, Equality and Law Reform undertook the creation of a Childcare Census and Database in 1999. This includes data on employer, community and private pre-school service providers who had notified the Health Boards of their services, but excludes Government programmes which provide a mixture of childcare and early education, such as Early Start. These data are available on a county-by-county basis in locations such as county libraries. A National Report on the findings of the Census is being prepared by Area Development Management Ltd. and should be available in mid-2002. In addition, the thirty-three recently established County Childcare Committees are being required to update the collection of statistical data on childcare services in each county. Data issues are also being considered by the Inter-Departmental Synergies Committee on Childcare, which is chaired by the Department of Justice, Equality and Law Reform.

Given the importance of childcare and its increasing policy relevance it is suggested here that data be collected on this issue. Any measures in this area will require the co-operation of childcare providers in all sectors and a co-ordinating or lead agency to oversee the collection of information. It is probable that data collection in this area will require the development of a specific survey or census of childcare provision as existing surveys do not lend themselves to this task. However, the inclusion of a module in the Quarterly National Household Survey has been explored by the Department of Justice, Equality and Law Reform and will probably be included in the June-August 2002 Survey. Initial results are expected by the end of 2002.

Element of NESC Vision of a Successful Society: Social Inclusion

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator B4.1: Income Inequality.

Definition: The degree of inequality in the distribution of income across deciles of households.

Rationale for Inclusion: The distribution of income is recognised as a realistic measure of command over resources generally and inequality in society including inequality in earnings, in employment and education opportunities etc. Three means of assessing income inequality are presented here. The first of these is the proportion of disposable income (income from earnings plus social welfare, less income tax and social welfare contributions) accruing to the bottom and top deciles of households. The second measure is the Gini Coefficient, a summary indicator that illustrates inequality across the income scale. The Gini Co-efficient uses a scale of 0 to 1. A score of 0 indicates perfect equality and a score of 1 complete inequality. The higher the Gini Coefficient the greater the degree of income inequality. The third is the ratio between the proportion of income accruing to the bottom and top deciles.

The Gini Coefficient is useful as a summary measure of income inequality, and has the advantage of presenting a picture of inequality in one figure that is attached to an easily understood scale (0 to 1). The limitations of the Gini Coefficient lie in the fact that it is a summary measure and therefore only partially reveals what is happening in relation to income inequality. It will not, for instance, illustrate where the principal inequalities lie. The income deciles, on the other hand, require more attention to detail but present a clearer and more complete picture of the pattern of inequality and changes over time.

Gini Coefficient and Decile Ratio Used as Indicators by: United Nations, OECD, World Bank, Eurostat.

Data Availability and Sources: Data are available for Ireland for the mid- and late- 1990s from the Irish Living in Ireland Surveys (LIIS) (for example, see Nolan et al. (eds.) 2000, *Bust to Boom: the Experience of Growth and Inequality*). These data relate to household *disposable* income for 1994 and 1997. These surveys are undertaken as part of the European Community Household Panel (ECHP). Data are currently available from the 1998 LIIS Survey, and data has been collected for 1999 and 2000. It is now almost certain that the final ECHP, and therefore the final LIIS, will take place in 2001. Data for these years can be made available by the ESRI. Eurostat is now concentrating on information needs at a European level and within this on new data collection priorities and mechanisms in relation to poverty and inequality. National statistics bodies and research institutes are feeding into this process and will play a role in determining and shaping the indicators for which data will be collected. It is probable, although not certain, that income data will still be collected and that comparative analyses of inequalities will be still be possible.

Information for EU countries is available from the ECHP but the time-lag here is considerable, with the most recent information relating to 1994. To allow for international comparison, this information relates to *equivalised* disposable household income expressed in terms of Purchasing Power Parities. Equivalised income takes into account differences in the size and composition of households. The equivalence scale used here is the OECD scale where a weight of 1 is applied to the first adult, 0.5 to the second and subsequent adults (defined as persons aged 14 years and over), and 0.3 to each child aged under 14 years. The analysis is based on income in a given week, where as the analysis of the LIIS is based on income over a year. In addition, the analysis conducted by Eurostat on the ECHP is different to the analysis of the LIIS, with the data being treated quite differently. Therefore European comparisons should be made on the basis of international rather than national data. This is available in the Eurostat publication,

Statistics in Focus: Population and Social Conditions, No. 11, 1998, which uses 1994 as its reference year.

It is useful to consider this indicator along with those relating to consistent poverty (H4.1) and relative poverty (B4.1).

Income Inequality: Proportion of Disposable Income Accruing to the Top and Bottom Decile of Households, 1994 and 1997

	Bottom Decile		Top Decile		Gini Coefficient		Decile Ratio	
	1994	**1997**	**1994**	**1997**	**1994**	**1997**	**1994**	**1997**
Ireland (LIIS)	2.3	2.1	26.4	25.8	0.377	0.374	1:11.5	1:12.3
Ireland (Eurostat)	3.0	NA	26.6	NA	0.36	NA	1:8.9	NA
EU 13[1]	2.6	NA	24.0	NA	0.32	NA	1:9.2	NA

Source: Nolan B. and B. Maitre 'Income and Inequality' in Nolan, B., P.J. O'Connell and C.T. Whelan (eds) (2000), *Bust to Boom: The Irish Experience of Growth and Inequality:* Dublin Institute of Public Administration and Eurostat (1998), *Statistics In Focus: Population and Social Conditions No. 11*.

Note: 1. This does not include Finland or Sweden.

Element of NESC Vision of a Successful Society: Social Inclusion

Dimension of Sustainable Development: Social and Economic Sustainability

Indicator B4.2: Number and Proportion of Public Patients Waiting 6 months or more (children) and 12 months or more (adults) for Targeted In-Patient Specialities.

Definition: Number and Proportion of Public Patients Waiting 6 months or more (children) and 12 months or more (adults) for procedures in Cardiac Surgery, Ear, Nose and Throat, Gynaecology, Ophthalmology, Orthopaedics, Plastic Surgery, Surgery (General), Urology and Vascular Surgery. These are the 'Targeted Specialities' under the Waiting Lists Initiative.

Rationale for Inclusion: Duration spent waiting for specific procedures represents a clear indicator of access to and availability of public health services. Time waiting for treatment is also one of the key aspects of the health service that shapes people's experience of, and attitudes to, the health service. The reduction of in-patient waiting times for specific procedures to less than 12 months for adults and 6 months for children is the principal aim of the Irish Government's Waiting Lists Initiative (WLI), first introduced in 1993. This provides a very clear policy context and ultimate goal for this indicator.

Waiting lists and the duration spent on them have a number of drawbacks as indicators. For instance, there are no standard or accepted criteria for placing people on the waiting lists for particular procedures and therefore the lists do not reflect the variable levels of need of patients. In addition, the reasons for people coming off the waiting lists also needs to be considered as some may choose to pursue private treatment, and some may die. While these drawbacks do not render waiting lists valueless as an indicator, they signal the need for caution when using this

information. In addition, while data is available by Health Board area/region this is of limited use. Patients may be on waiting lists in more than one area/region or may move from one area/region to another between accounting periods.

Used as an Indicator by: Department of Health and Children, OECD (forthcoming).

Data Availability and Sources: Data on the numbers on waiting lists and the time spent waiting for treatment is compiled by each hospital, collated by Waiting List Co-ordinators in each Health Board area and entered onto a database by the Department of Health and Children. Data are collected on a quarterly basis.

Children Waiting 6 Months or more and Adults 12 Months or more for Treatment by Target Specialities, Ireland 1996 - 2000

	ADULTS WAITING 12 MONTHS OR MORE									
	Dec. 1996		Dec. 1997		Dec. 1998		Dec. 1999		Dec. 2000	
Speciality	N	%	N	%	N	%	N	%	N	%
Cardiac Surgery	1,030	74	969	76	776	67	816	73	270	54
ENT	1,124	40	1,937	47	2,864	58	3,040	58	2,469	62
Gynaecology	396	20	600	27	1,079	36	799	31	453	33
Ophthalmology	647	30	803	29	1,199	30	1,617	39	807	27
Orthopaedics	2,188	45	3,037	48	3,615	50	3,704	60	2,007	47
Plastic Surgery	467	58	883	62	942	57	1,080	59	1,141	68
Surgery (General)	666	27	1,110	40	1,063	32	1,069	34	881	34
Urology	560	37	802	50	829	55	901	49	821	57
Vascular	1,158	64	1,781	65	1,931	69	1,807	66	1,488	65
	CHILDREN WAITING 6 MONTHS OR MORE									
	Dec. 1996		Dec. 1997		Dec. 1998		Dec. 1999		Dec. 2000	
Speciality	N	%	N	%	N	%	N	%	N	%
Cardiac Surgery	55	100	66	68	57	78	67	76	29	67
ENT	1,524	62	1,714	57	2,143	76	1,688	76	1,347	80
Ophthalmology	162	64	101	44	256	71	269	81	169	69
Orthopaedics	53	83	89	88	88	81	64	64	86	36
Plastic Surgery	157	80	218	72	257	65	445	78	436	84
Surgery (General)	69	64	48	30	101	58	147	53	69	45
Urology	20	77	6	40	12	57	36	62	9	47

Source: (1998) Report of the Review Group on the Waiting List Initiative. Unpublished report to the Department of Health and Children, and figures provided by the Department of Health and Children.

Element of NESC Vision of a Successful Society: Balanced Regional Development

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator B5.1: Percentage of Foreign Direct Investment (FDI) by Region.

Proxy: New Employment Created by Foreign-Owned Companies by Region.

Definition: Employment creation: this is the number of new permanent jobs created by foreign-owned firms.

Rationale for Inclusion: The proportion of FDI by region is not available and, according to the IDA, is unlikely to be produced in the future. New employment created by foreign-owned firms acts as a proxy for the level of investment in the regions by foreign-owned companies. This reflects employment created due to new investment by foreign-owned firms entering the regions and also employment created by the expansion of foreign-owned firms already in place.

Used as an Indicator by: Forfás.

Data Availability and Sources: Data are collected on an annual basis through the Forfás Employment Survey. This covers foreign-owned firms supported by IDA Ireland, Enterprise Ireland, Shannon Development and Údaras na Gaeltachta. Data on Irish-owned firms is also collected and is shown below for comparative purposes. This is available for the eight NUTS III regions, although only the total number of jobs created is published in the annual report. Data on job gains (new jobs), jobs losses and net change has been supplied by Forfás.

New Permanent Jobs Created by Foreign-Owned Companies Supported by IDA Ireland, Enterprise Ireland, Shannon Development and Údaras na Gaeltachta 1994, 1997, 2000

	Job Gains			Job Losses			Net Change in Employment		
	1994	**1997**	**2000**	**1994**	**1997**	**2000**	**1994**	**1997**	**2000**
All Regions	11,564	16,126	25,371	-6,347	-6,224	-9,330	5,217	9,902	16,041
South-East	876	946	1,075	-821	-543	-925	55	403	150
Border	1,452	1,042	1,807	-327	-803	-1,469	1,125	239	338
Mid-West	1,710	1,508	2,617	-829	-677	-939	881	831	1,678
South-West	1,289	1,662	4,359	-1,359	-1,186	-721	-70	476	3,638
Dublin	3,136	6,318	9,940	-1,701	-1,756	-3,105	1,435	4,562	6,835
West	1,346	1,794	2,640	-753	-702	-770	593	1,092	1,870
Mid-East	1,284	2,272	2,252	-295	-130	-680	989	2,142	1,572
Midlands	471	584	681	-262	-427	-721	209	157	-40

Source: Figures provided by Forfás.

New Permanent Jobs Created by Irish-Owned Companies Supported by Enterprise Ireland, Shannon Development and Údaras na Gaeltachta 1994, 1997, 200

	Job Gains			Job Losses			Net Change in Employment		
	1994	**1997**	**2000**	**1994**	**1997**	**2000**	**1994**	**1997**	**2000**
All Regions	11,488	14,435	6,138	-9,555	-8,297	-11,505	1,933	6,138	6,847
South-East	1,444	1,325	300	-1,269	-1,025	-1,019	175	300	308
Border	1,765	1,746	435	-1,392	-1,311	-1,913	373	435	-263
Mid-West	1,137	853	133	-931	-720	-1,065	206	133	-3
South-West	1,393	1,673	656	-1,343	-1,017	-1,116	50	656	2,188
Dublin	2,833	5,490	2,888	-2,926	-2,602	-3,814	-93	2,888	3,511
West	1,292	1,407	653	-726	-754	-1,206	566	653	694
Mid-East	1,069	1,140	601	-732	-539	-750	337	601	545
Midlands	555	801	472	-236	-329	-622	319	472	-133

Source: Figures provided by Forfás.

Element of NESC Vision of a Successful Society: Balanced Regional Development

Dimension of Sustainable Development: Economic Sustainability

Indicator B5.2: Per Capita Gross Value Added by Region.

Proxy: Not required.

Definition: While GDP is the national measure of economic performance, Gross Value Added (GVA) is the equivalent measure at regional level. It is a measure of goods and services produced in the region at the value that the producers receive, less any taxes payable and plus subsidies receivable as a consequence of their production or sale.

Rationale for Inclusion: GVA provides an indication of the relative economic well-being in the regions, of the distribution of economic growth and of the convergence or divergence between the economies of the regions.

Used as an Indicator by: Department of Finance.

Data Availability and Sources: Figures are available from the CSO, which publishes GVA data annually in its *Regional Accounts* series. The most recent data refers to 1998. In addition, copies of the regional database, which includes GVA, are available on request from the National Development Plan/Community Support Framework Evaluation Unit in the Department of Finance. GVA figures are included in this and are based on the data produced by the CSO. As GVA can be influenced by the performance of any one company in a given year, the three-year average for 1996 – 1998 is also provided below.

GVA by NUTS II and NUTS III Region at Basic Prices

	Regional GVA Per Capita State = 100				Regional GVA per Capita as % of EU Average EU15 = 100			
	1996	**1997**	**1998**	**Average 1996-1998**	**1996**	**1997**	**1998**	**Average 1996-1998**
Border, Midlands and Western	75.8	73.1	74.0	74.3	71.3	76.0	80.0	75.9
Border	77.6	77.1	77.9	77.5	73.0	80.1	84.1	79.3
Midlands	71.3	68.2	67.7	69.1	67.0	70.9	73.1	70.4
West	76.4	71.5	73.3	73.7	71.8	74.4	79.2	75.3
Southern and Eastern	108.8	109.7	109.3	109.3	102.2	114.1	118.1	111.7
Dublin	133.3	133.7	134.8	133.9	125.3	139.0	145.6	137.0
Mid-East	84.7	86.8	73.5	81.6	79.6	90.2	79.4	83.0
Dublin and Mid-East	**121.3**	**121.9**	**119.3**	**120.7**	**114.0**	**126.8**	**128.8**	**123.4**
Mid-West	94.2	89.5	90.2	91.1	88.6	93.0	97.4	93.2
South-East	86.8	81.7	78.9	82.2	81.6	85.0	85.2	84.0
South-West	100.7	109.5	116.1	109.4	94.7	113.9	125.4	111.9
State	100.0	100	100.0	100.0	94.0	104	108.0	102.2

Source: Figures for 1994 provided by the Department of Finance. Central Statistics Office, *Statistical Release: Regional Accounts*, January 2001.

Element of NESC Vision of a Successful Society: Balanced Regional Development

Dimension of Sustainable Development: Economic and Social Sustainability

Indicator B5.3: Infrastructural Expenditure Per Capita.

Proxy: Not required.

Definition: State expenditure on infrastructure per capita in the regions.

Rationale for Inclusion: The National Development Plan (NDP) clearly states that our infrastructure is under strain and insufficient to meet current and future economic and social needs. Infrastructural development has been unevenly distributed across the regions, with most taking place in major urban centres, their hinterlands and access routes to these. More balanced infrastructral investment is necessary if regional imbalances in economic growth are to be addressed and further FDI attracted to the regions. In addition, infrastructural investment has social implications, as it will affect settlement patterns, employment opportunities, availability of services and general quality of life. This issue is of considerable importance in the Government's Regional Development and Spatial Strategies.

Used as an Indicator by: Department of Finance.

Data Availability and Sources: Some data are available from the Department of Finance for the 1993 – 1999 period. However, this is not considered to be very reliable. Data for the current National Development Plan (NDP) period of 2000 – 2006 will start to come on stream later this year. The Department of Finance is currently developing a database for this purpose. Data will be available from county level up, and for each of the Operational Programmes, Sub-Programmes, Measures and Projects under the NDP. These data will be more reliable, consistent and regular than previous data on regional infrastructural expenditure.

Element of NESC Vision of a Successful Society: Maintaining and Managing the Environment

Dimension of Sustainable Development: Environmental, Economic and Social Sustainability

Indicator B6.1: Number of Passenger Cars per 1,000 Population.

Proxy: Not required.

Definition: Number of registered privately-owned cars per 1,000 population.

Rationale for Inclusion: This indicator is particularly relevant at the moment in the context of ongoing policy debates on public transport, as well as spatial and regional development. Increasing road traffic produces a number of detrimental effects on the environment. It increases the emission of noxious gases that are damaging to human health and the natural and built environment and levels of noise pollution, especially in cities. While the introduction of emission limits on vehicles is a positive development, the advantage gained in terms of quality may be lost due to increased quantity of vehicles.

Used as an Indicator by: EPA, National Competitiveness Council.

Data Availability and Sources: Data on the number of vehicles registered are collected annually by the Department of the Environment and Local Government. There is approximately a one-year time-lag on this data, with data for the end of 1999 becoming available in late 2000. Per capita figures are not provided. Internationally comparative data on a per capita basis is available in the Eurostat publication *EU Transport in Figures Statistical Pocket Book.* This appeared as an indicator in the National Competitiveness Council Annual Report for the first time in 1997.

Total Number of Passenger Cars

	1993	1997	1999
Private Cars	891,027	1,134,429	1,269,245
Total Vehicles	1,151238	1,432,330	1,608,156

Source: Department of the Environment and Local Government (1994, 1998 and 2000), *Irish Bulletin of Vehicle and Drives Statistics 1993, 1994 and 1999.*

No. of Cars per 1,000 population[1]

	1994	1996	1998	% Increase 1994 - 1998
Ireland	262	272	309	17.9%
EU 15	422	434	451	6.9%

Source: European Commission (2000), *Transport in Figures Statistical Pocket Book, January 2000.*

Note: 1. This appeared as an indicator in the National Competitiveness Council Annual Report for the first time in 1997.

Element of NESC Vision of a Successful Society: Maintaining and Managing the Environment

Dimension of Sustainable Development: Environmental, Economic and Social Sustainability

Indicator B6.2: Household and Commercial Waste Arising (Municipal Waste).

Proxy: Not required.

Definition: Two definitions are commonly used in measuring household and commercial waste arising. The first of these is tonnes (000s) of household and commercial waste collected by, or on behalf of, local authorities per annum. The second relates to the waste generated rather than collected. This figure takes account of the fact that not all of the population is served by a municipal collection service. The figures for Ireland below refer to this latter measure.

Rationale for Inclusion: The generation of waste is now one of the main problems facing environmental management. Waste arising reflects our economic activities, industrial development, lifestyle and consumption patterns. Increasing levels of waste generation place a growing burden on the environment and on existing waste management services. The Irish Sustainable Development Strategy has set a target of stabilising municipal waste by 1999 and reducing this by 20 per cent by 2010.

Used as an Indicator by: EPA, National Competitiveness Council.

Data Availability and Sources: Data for Ireland for 1993 to 1998 are available in the 2000 EPA publication, *Ireland's Environment: A Millennium Report.* Major surveys have been carried out by the EPA in 1995 and 1998, the latter as part of the development of a National Waste Database. Reports on the basis of this database are produced every three years. The next report will contain data for 2001 and will be released in the following year. Some international

data are available in the OECD publication, *Environmental Performance: Ireland 2000.*

Household and Commercial Waste Arising (Tonnes): Ireland

1995	1998
1,848,232	2,056,652

Source: EPA (2000), *Ireland's Environment: A Millennium Report.*

Comparative Municipal Waste Generation per Capita, late 1990s

Country	Tonnes per Capita
Ireland	560
USA	720
New Zealand	350
Denmark	560
Norway	630
Portugal	380
Switzerland	600
OECD Europe	450
OECD	500

Source: OECD (2000), *Environmental Performance: Ireland 2000.*