Research Programme on Environmental Attitudes, Values and Behaviour in Ireland

Trends in Irish Environmental Attitudes between 1993 and 2002

First Report of National Survey Data

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Executive Summary

Introduction

Trends in Irish Environmental Attitudes Between 1993 and 2002 is the first main data report from the Research Programme on Environmental Attitudes, Values and Behaviour in Ireland. The aim of the report is to present the results from the 2001/2002 fielding of a national survey on environmental attitudes developed by the International Social Science Programme (ISSP) and to compare these results with the data from the 1993 fielding of much the same set of questions. The analysis is based on a representative sample survey of 1257 adults interviewed between December 2001 and February 2002.

Despite the considerable turbulence and change in environmentalism between 1993 and 2002, particularly in terms of environmental politics, what is possibly most striking about the analysis of the environmental surveys is that change in response patterns is often quite small.

Political discourses about the environment have evolved significantly in the past ten years, particularly through the advent of the politics of sustainable development as embodied in the ecological modernisation paradigm. Sustainable development has become the dominant language of political talk about the environment, and is also a key influence on policy formation and institutional change. Sustainable development encapsulates the paradigm of ecological modernisation, in which environmental and economic goals are seen as aligned, and indeed environmental protection is seen as essential to continued economic growth. A question for this analysis is whether this change in political discourse is matched by changes in types of attitudes and concern expressed by respondents to a national survey.

Attitudes to the environment, science and nature

Certainly, there are discernible attitudinal shifts towards two components of the ecological modernisation discourse; faith in scientific decision making, and rejection of an environmental protection – economic growth dichotomy. Support for both of these themes is growing, as revealed in several related questions. However, in some cases those who do not see an environment/economy opposition might in fact simply expressing a low regard for environmental prioritisation.

Personal efficacy and motivation

In 2002, more people accept that it is not too difficult for them to 'do something about the environment', and a majority (albeit slightly smaller than in 1993) claim to do what is right for the environment 'even when it costs more money or takes more time.'

There is also an increase in the number of people claiming willingness to pay for environmental protection, although it is notable that more people are willing to pay higher prices than are willing to pay higher taxes. This may be because of an aversion to tax generally and a preference to control payment for the environment through consumer choices. It may also reveal a tendency to respond more positively to questions about behaviour that is more remote or abstract, which is the case with unspecified higher prices as opposed to the more concrete question of higher tax. However, it is notable that between 1993 and 2002 there is more growth in positive responses to the willingness to pay higher tax item than the higher prices item.

Environmental and scientific knowledge

In both 1993 and 2002, responses to scientific knowledge questions reveal a generally low level of such knowledge. In addition, virtually no change in performance is observed over time. However, there is some indication from responses that people understand the important causal links between their own actions and the environmental impacts, which is obviously more important than an understanding of the scientific details. There is also evidence that some of the items are not taken as simple factual questions, but questions of personal values. Specifically, among those expressing formal religious beliefs, negative responses to the question about humans having evolved from animals are much higher.

Specific environmental concern

Among the environmental issues of concern to respondents, the impact of nuclear power plants remains the highest, followed by pollution of rivers and lakes and then industrial pollution. These three were the issues of highest overall concern in both 1993 and 2002. However, the most change is seen in items relating to global environmental impacts; concern about air pollution from cars 'for the environment' and the rise in the world's temperature (climate change) exhibit the most positive shifts over time.

There is a strong shift away from expressions of extreme concern between 1993 and 2002, but no change in the overall levels of concern, when moderate and extreme concern are examined together. Environmental concern, it seems, is becoming embedded in day to day life and normal politics, and is less in the domain of radical or extreme political views.

Analysis suggests that those with more knowledge of the issues tend to express greater environmental concern and commitment.

Responsibility and action

Respondents' views on responsibility and regulation, especially regarding the role of business, are strongly at odds with the ecological modernisation discourse of self-regulation and a pro-business stance. Respondents see 'people in general' as doing most to protect the environment, followed by government and then lastly by business and industry. This pattern is also seen in the very low level of support for business to 'decide for themselves' about environmental protection, and very high support for a regulatory approach. Laws are also supported for 'ordinary people', although not to quite the same extent. For both groups, support for voluntary approaches has fallen over time.

Similar patterns of perceived trustworthiness are seen in responses about who to trust as sources of information on the environment. Universities fare best, business is seen as least trustworthy, followed by newspapers and then government departments.

Environmental behaviour

One area where changing context has had the most impact on the survey results is that of recycling behaviour. There is a dramatic increase in reported recycling, particular away from those reporting that it is not an option for them, as would be expected from the increased availability of facilities over the past decade. However,

a similar trend is not seen in relation to cutting back on driving 'for environmental reasons', despite the raised profile of car usage and its impacts in recent years. In terms of political behaviour, formal activism of any kind remains rare.

Socio-demographic patterns

All of these response patterns for both attitudinal and behavioural questions can be examined in terms of the influence of socio-demographic variables, such as age, gender, income and social class. Overall, there is some explanatory power in the set of socio-demographic variables. Both concern and commitment levels generally rise with education levels. Patterns by age are more complex, with the highest expressed concern and commitment occurring in the mid-range categories, and with the youngest age group (18-25) exhibiting among the lowest levels of interest in the issues. Social class is significantly related to many responses, as is respondents' occupational category. In particular, professionals tend to score significantly higher than average in environmental concern and commitment measures and generally higher social classes express more environmental commitment. However, a caveat here is that some measures such as willingness to pay or recycling habits depend on structural factors such as income or access to facilities. The importance of identity related socio-demographic variables, such occupation type, class and education, suggests that there is a significant cultural, or self-identity related dimension to environmental attitudes.

Conclusions

There is some evidence to suggest that environmentalism is becoming a more mainstream, modern and normal paradigm of concern in Ireland. Certainly, in the 2002 responses there is less extreme environmental concern than in 1993, and less challenge to dominant economic or scientific paradigms. However, people are certainly concerned about the environment, and are strongly supportive of government led responses, through regulation and even through higher prices or taxes where necessary. There is much less support for the perceived polarity between economic growth and environmental protection as political imperatives. The danger remains, however, that if concern becomes more normal and less extreme, that some of the urgency will be lost.

Those that do express willingness to act environmentally tend to be richer and more educated. However, expressed concern does not entirely follow the same pattern, suggesting that environmentalism is not only the domain of more empowered and richer sections of society, rather that certain environmental responses, controlled by say easy access to recycling facilities or high levels of personal mobility or disposable income, are not equally available to all.

Detailed scientific knowledge does not seem to be a significant barrier to environmental support or behaviour. While knowledge of the scientific details of environmental issues is often weak, people seem to understand the implications of their actions and their own personal place in the causality. There is, however, possibly a tendency to express general, abstract, environmental concern or support that does not necessarily translate into real personal motivation.

The data analysed here suggests that very many people have a strong interest in and commitment to environmental protection. However, questions on knowledge, priorities and specific concerns suggest that people have many different understandings of what the environment means. Also, socio-demographic analysis indicates that these responses are influenced by factors such as education level and

occupation type. Thus it is clear that there are cultural and social dimensions to how people see the environment and their place in it. An approach to environmental management that relied on a more subtle and flexible definition of people and their environmental motivation could only improve the connection between people's attitudes and behaviour and their wider environmental impacts. Such an approach must start from a better understanding of these issues than is currently present. These themes are the subject of further research, both qualitative and quantitative, as part of the Research Programme on Environmental Attitudes Values and Behaviour in Ireland (2002 – 2004).

1. Introduction

This report is the first major output of the *Research Programme on Environmental Attitudes, Values and Behaviour in Ireland,* a joint project of the Departments of Sociology of University College Dublin and Trinity College, Dublin, and the Social Science Research Centre at UCD. The programme, running from January 2002 until August 2004, is an exploration of the values, beliefs and behaviour of the Irish population in relation to the environment. It is located within the socio-environmental project area of the Environment RTDI Programme Phase 2, funded by the Environmental Protection Agency.

The research programme examines, using both quantitative and qualitative methods, environmental attitudes, values and behaviour in Ireland. The quantitative programme has at its core a national survey fielded in late 2001 and early 2002. The environment questions for this survey were based on the International Social Survey Programme's (ISSP) module on the environment, thus allowing the Irish data to be compared cross-nationally. In addition, many of the same questions were fielded in Ireland in 1993, in an earlier ISSP environmental module. This allows analysis of changing environmental values and behaviour over time.

The qualitative programme of research explores two themes. One concerns the environmental discourses articulated by the public and by environmental 'experts'. It is informed by the quantitative analysis, and explores in greater depth environmental discourses as articulated by 20 focus groups drawn from many parts of society. This research will identify a range of environmental discourses and their social and cultural sources, how they are articulated and argued for, and how they are contested. The second part of the qualitative programme, on environmental activism, will explore the experiential paths through which individuals or groups have come to change their practices and/or lifestyles because of environmental concerns. This research will be undertaken using unstructured interviews.

This report is the first of five reports which the research team will present to the EPA. The analysis and reports will be completed over the next two years, with the programmes reaching completion in August 2004. The research reports are as follows:

Quantitative Research Programme Reports
Trends in Irish Environmental Attitudes Between 1993 and 2002
Cultural Sources of Support on which Environmental Attitudes and Behaviour Draw
Cross-National Perspectives on Environmental Issues

Qualitative Research Programme Reports
Environmental Discourses in Ireland
Environmental Activism in Ireland

1993 and 2002 Survey Data

As noted above this survey on the environment was developed by the International Social Survey Programme (ISSP) for its 2000 annual survey. The ISSP is a continuing annual programme of cross-national collaboration bringing together existing national social science research programmes. From four founding members in 1983, the ISSP now has 34 members around the world. Each research

organisation funds its own costs and there are no central funds. The Social Science Research Centre, University College Dublin is the Irish member of the ISSP.

Irish members of ISSP were actively involved in the late 1990s in the design and the development of the environment module. Resources became available in Ireland to field the environment module when, following a successful bid based on an international review, it was accepted for inclusion in the first Irish Social and Political Attitudes Survey (ISPAS) in 2000[1].

The survey was fielded by the Economic and Social Research Institute (ESRI) on behalf of ISPAS over the period December 2001 to February 2002. The survey included a core module tapping social, political and cultural attitudes and behaviour, and demographic data, as well as four additional modules each dealing with a particular theme, including one on the environment. Details of the sample are given in Appendix 1. In all 1257 completed questionnaires for the module were gathered.

The ISSP module, which forms the core of the environmental module of ISPAS, includes 23 questions – a total of 63 items covering a wide array of attitudes, perceptions, beliefs and behaviours relating to the environment and to environmental risks (see Appendix 2 for the environment questionnaire). The survey also includes two questions designated as 'optional' in the ISSP survey. One relates to nuclear power stations, the second, comprising eight items, addresses cultural biases and will be central in exploring the Cultural Theory perspective in the second project report drawing on the survey data. A number of ISSP member countries have also fielded these questions. Of the items in the 2002 environment module, 43 were also asked in the 1993 survey fielded in Ireland, creating the opportunity for the comparison over time that is the central theme of this report.

A small number of additional questions, including four items on waste generation and waste disposal, formulated by the research team, were fielded in the drop-off part of the survey. In this a set of questions was left with the respondent at the end of the main interview for self-completion and postal return. (These questions are presented briefly in Appendix 5 and will be more fully analysed in subsequent reports).

Outline of the Report

Comparative analysis of the two data sets is organised in this report according to seven sub-themes in the questionnaire. These include attitudes to nature and to science and the economy; respondents' concerns about specific environmental issues such as pollution and nuclear power plants; their personal sense of efficacy to bring about environmental changes; their sense of responsibility for the environment and involvement in environmentally friendly actions such as recycling and limiting car driving; and their attitudes to environmental regulation and willingness to pay higher taxes and prices to protect the environment.

Each chapter compares the responses to the questionnaire fielded in 2002 to those elicited in 1993. This is followed by a more detailed analysis of responses to the 2002 survey, which are also analysed in relation to socio-demographic variables. Much of this latter analysis is presented in Chapter 9, when two scales, one measuring general environmental concern and the second environmental

[1] ISPAS is part of a major programme of research on Irish social and political attitudes conducted jointly by University College Dublin (Institute for the Study of Social Change) and Trinity College Dublin. The research programme is supported by a grant from the Higher Education Authority under PRTLI-1 and PRTLI-3.

commitment, are examined in relation to a range of socio-demographic variables including gender, age, education, income and social class.

Much has changed contextually, physically and politically, between 1993 and 2002 to influence responses to these questions. In particular, discourses of the environment, how it is thought about and talked about, and how it is addressed politically and institutionally, have evolved considerably over the decade. Thus, the first step in the analysis is to set out this background of change in order to identify some of the main influences on respondents as they expressed their views in 2002.

2. The Context of Change, 1993-2002

In 1993 the Environmental Protection Agency was formed by the Irish Government, the first commercial wind farm in Ireland was built, and the government's first strategy on climate change abatement was published (Department of Environment and Local Government (DELG), 2002). An important year then for environmentalism in Ireland. Environmental controversy was certainly an established concept by then, with Carnsore Point, Merrell Dow, Sandoz and many other high profile cases (Tovey and Share, 2000; Allen and Jones, 1990). And yet so much has happened since then, so many changes have taken place. Clearly, these changes should be borne in mind in any discussion of evolving attitudes and behaviour among Irish people. This section attempts to set out the key developments likely to have influenced changes in questionnaire responses, concentrating largely on *discourses* of the environment; how it is spoken about, how it is framed and juxtaposed with other policy and contextual elements, and how it does or doesn't impinge on the daily lives of respondents to the questionnaire.

Before moving on to specifics of environmental discourse, it is worth a few introductory comments on wider contextual issues. Ireland has changed considerably in the last eight to ten years. Outside of specific environmental discourses, many changes can be seen to be relevant to environmental contexts and views, and deserve to be kept in mind in an analysis of attitude and behaviour change over the decade.

Change in Ireland – A process of modernisation?

Much of the commentary on change in Ireland over recent decades, be it social, political, cultural or economic, shares the common theme of a picture of modernisation. In this model, the economic success of the 1990s was the reward for a process of modernisation over the previous two or three decades, and the social changes were the culmination of the period of progress (see for example Fitzgerald and Girvin, 2000). The 1990s saw a maturing of Irish society where the volatility and economic insecurity of previous decades settled into a society characterised by success and wealth.

Fitzgerald and Girvin (2000: 269) see the economic success of the 1990s as the culmination of a modernisation project driven by three main components: consensus on economic management, i.e. partnership; social and constitutional change; and membership of the European Union. If this analysis is correct, then one field in which such a maturity should surely be visible is attitudes towards the environment. Many models of environmental awareness and concern emphasise the importance of, among other things, economic stability, education, and reflexivity (see for example Beck, 1992; Yearley, 1995). The modernisation version of Irish social change sees these elements present in abundance in the 1990s.

A wide range of themes could be considered, but the discussion here will concentrate on a number of the most relevant ones: the changing economy; shifts in authority and trust, patterns of urban/rural demography and culture; governance and partnership; and on recent contextual issues of particular relevance. This is by no means a comprehensive list of all possible influences on the survey results, but will hopefully give a broad sense of the societal changes that are of most interest to the themes of the survey.

The Irish economy

The story of Ireland in the 1990s is the story of economic growth. Between 1990 and 1998, average GDP growth was far above both the EU and OECD averages, and by the end of the decade Ireland had risen above the EU average GDP per capita (EPA, 2001: 12). At the same time, unemployment dropped to the lowest levels in the history of the state (Ellis and Kim, 2001: 355). However, this growth did not necessarily impinge commensurately on poverty and inequality, and inequality remained a strong theme of discussion, especially towards the end of the decade as it became increasingly apparent that not all had benefited from the 'celtic tiger' years.

Growth in overall wealth fuelled a parallel growth in consumption of goods, services and energy. Consumer spending, car ownership, foreign holidays, and many other indicators of increased general wealth all rose sharply. At the same time, households were getting larger in number and smaller in size, with obvious implications in both social and environmental terms, from atomising societal networks to the increased energy and material demands of one person households.

Such patterns are merely peripheral indicators of major cultural change regarding wealth and consumption, in a process of what many commentators have seen as the 'catching up' of Ireland to its Western European neighbours in terms of modern, secular, consumerist, global culture, be it a positive or negative development (see for example Clinch, et al, 2002). These changes will impinge in many places in the survey data, from attitudes toward economic growth and jobs as priorities, to willingness to pay higher prices or taxes for environmental protection. Do rapidly changing economic indicators also signal wider changes in values and priorities? Or are these values and priorities, and the place of the environment within them, much the same as ten years ago despite the economic changes?

The place of authority – values, politics and religion

In the context of attitudes towards nature and science, the position of religion is clearly relevant, although it would be narrow to limit this to formal religion. Views of nature, of its stewardship, of the place of other species, are all heavily influenced by official church doctrine, but also by wider forms of spirituality. Indeed nature is a strong theme in many non-formal religious beliefs, to the extent that certain green or deep ecology movements are often seen as cosmologies or religions in themselves (McDonagh, 1986).

Clearly any analysis of social change in Ireland in the 1990s must make mention of the shifting place of the catholic church. It was a decade which saw a significant change in the role of the catholic church in Irish life, a decline in its influence and a decline in its place in the culture (Inglis, 1998). However, while the trend of the last decade has been a move away from formal religious affiliation and practice, the same trend has not been seen in stated religious belief in itself (Fahey, 2002).

The themes of authority and trust are also at the centre of changes in political participation and attitudes. There is evidence to suggest that Irish people, in comparison with most of the EU, tend to favour a political culture that is relatively authoritarian (see Coakley, 1999). The core value of democracy is strongly favoured, but through a relatively distant model that allows a considerable degree of delegation of decision making to politicians and officials. Surveys have shown a consistent

pattern of considerably higher satisfaction with the quality of democracy in the State compared to the EU average (Coakley, 1999: 57).

Through the 1980s and 1990s there is a discernable pattern of increased volatility in voting patterns, and a notable decline in general election turnout in the 1990s compared with more consistent patterns of the 1980s (see Coakley & Gallagher, 1999). Presumably this trend is not unrelated to the noticeable pattern of the merging of policies across parties, with coalitions seemingly possible across the entire range of parties (Fitzgerald and Girvin, 2000: 280). In particular, the 1990s saw a decline in the politics of the left, with nearly all main parties seeking to positions themselves in the centre of the spectrum.

In recent times, the rejection of the first referendum on ratification of the Nice Treaty represents a significant landmark in political participation. From a background of resounding ratifications of all previous EU-related treaties, and in the context of strong political support of the treaty from all major political parties, the referendum, was rejected. It is not unreasonable to suggest that this signals a growing scepticism towards and mistrust of political leaders. The second half of the decade saw many dramatic revelations about corruption in politics, finally opening up an issue that had been festering for many years. Tribunals, media exposes and claims and counter-claims meant that accusations of corruption among politicians and business persons were an almost constant topic for media and social discussion.

Urban and rural shifts

Ireland is becoming continually more urbanised, in a pattern that has been continuing for several decades now. Despite moderate national population growth, urban population growth remains strong (Ellis & Kim, 2001). This pattern clearly has many obvious direct environmental impacts, from the increased 'ecological footprint' of cities over dispersed communities, to increases in commuting and land coverage. These elements have significant social implications too. There is also a gender dimension to rural change, where males are more likely to remain in rural areas and females comprise the majority of urban migrants (Ni Laoire, 2001).

This population shift is driven at least in part by changes in agriculture. The number employed in the farming sector continues to drop, particularly the number of one-person farms. Agriculture, forestry and fisheries now provide about 7% of national employment (Source: CSO, 2002). Farming has become more dependent on EU subsidies, and is probably less secure than ever. But the reasons for supporting the sector go far beyond basic economics, and political commitment to farming remains strong, as does the political power of the sector itself.

The perceived urban/rural divide in Irish society, in particular the dichotomy between farmers and urbanites, remains a current theme of debate. What exactly 'rural' means remains a highly contested issue in Irish society. Is it unspoilt wilderness or productive farms? Is it densely populated local villages or sparsely populated open landscapes? The debate over the place of farming in Ireland continues, with farmers often portrayed as either the major cause of environmental damage or the custodians of Irish natural heritage.

Tovey (1993) sees this tension as very much part of the elite-driven modernisation project, with wide and significant interrelations with Irish environmentalism, environmental issues being one of the emblems used by urban elites to push a modernisation agenda. Given the difficulty in defining rurality, and in categorising

much of Ireland as either purely urban or rural, the notion of a dichotomy is easily, and often, overstated. However, recent referendums on social issues such as divorce and abortion have shown strong patterns of divergence between 'rural' and 'urban' constituencies.

Many questions in the survey ask about attitudes towards 'the environment', without pursuing how people define this term. Thus it is important to keep in mind how different conceptualisations of the environment may be among respondents. A key issue is how nature and rurality are seen, and this remains a rapidly changing and hotly contested subject. No agreed definition exists of concepts such as the environment, the natural world, or even what comes under the heading of 'environmental problems'. Part of the task of understanding people's environmental values must be to pursue these issues further. This is one of the main objectives of the qualitative strand of the *Research Programme on Environmental Attitudes, Values and Behaviour in Ireland*, of which this report represents the first main output.

Partnership and governance

At a national level, partnership has been central to the modus operandi of industrial and social policy over the last decade and, as has been mentioned, is often cited as one of the main contributors to recent economic success. Partnership has changed the way national governance operates and also the way in which it is generally perceived. Among other impacts, a broader set of actors are seen to be at the policy making table, and a set of issues broader than pure economics are seen being discussed in what were previously simply national pay agreements. This is important not only for its direct impact on governance, but also its influence on attitudes relating to responsibility, involvement and ownership of policy issues.

As well as the impacts of partnership on governance at national level, there have been many knock on effects at more local levels in institutional arrangements and decision making practices. In community development, for instance, the partnership model has entirely reshaped practices, with partnership-based structures such as local area based partnerships and many others very much the norm. Local government has also seen dramatic changes towards partnership and participation, with new structures such as the City/County Development Boards and Strategic Policy Committees emerging from local government reform in the 1990s.

These changes in institutional arrangements and in thinking towards participation and partnership have fed into the current popularity among decision makers of engaging in consultation with the public. Consultation has now become very common, on everything from the deregulated electricity market to school bus safety
It is now routine for policy development to include at least a mild consultation element, say an invitation for submissions on a draft document followed by a process of taking these submissions into account in some undefined way, to quite strong processes of community involvement and opportunities for direct participation. Of course these attempts are not without their critics, and very few commentators argue that any experiments in consultation to date have really even come close to getting it right. At heart, a system very comfortable with the representative democracy model is being challenged to move towards more direct models of democracy, and this is a very big process (Skillington, 1997). Instant success would be surprising to say the least. However, the relevant point here is the change in expectations of involvement among people. Even weak models of consultation and inclusion will tend to make decision making less remote and will foster less reliance on (or at least faith in)

expert models of governance, and could contribute to personal senses of responsibility and involvement.

Recent contextual issues

The questionnaire under analysis here was administered in the field during late 2001 and early 2002. A number of issues current at that time which might have had an impact on responses are worth mentioning. The September 11th terrorist attacks, subsequent military action, and related themes of security, economic uncertainty, and discussion of possible further attacks on sites such as Sellafield, were all fresh in people's minds at the time of this survey, and could have had an impact in certain parts of the questionnaire. The broader debate about the economic slowdown in Ireland was also current, and might have impacted on aspects relating to the relative prioritisation of economic growth and environmental protections, willingness to pay higher taxes, and other such themes. In the same vein, discussion of, and protest against, globalisation, may have been in some respondents' minds.

There was also much in the media at the time about Ireland's waste crisis, including illegal dumps, siting of new landfills or incinerators, and waste charges. Other local controversies about issues such as mobile telephone masts or locations of new roads, also could have influenced results. In addition, discussion of, and protests about, globalisation was much in the news. The environmental link to the globalising economics debate and the connection between social, economic and environmental change features strongly in these discussions. Another significant theme of relevance was the range of crises and concerns in food and agriculture, from the slightly older themes of BSE, salmonella and genetically modified organisms, to the very current and contentious issue of foot and mouth disease. All of these issues might have been in the minds of respondents when considering relevant questions, and should be borne in mind as important contextual influences.

This discussion has given a sense of the range of contextual issues that will have impinged on respondents over the period between the two surveys, and that thus must be considered in an analysis of changing responses. Beyond this broad pattern of changing context, much has occurred in the specific area of environmental issues and discourse. The following sections discusses this specific area of change, the most important for setting the scene for the data set under analysis.

The developing discourse of the environment

In considering the changing context for people responding to survey questions on the environment, a key element is how talk, action and policy about the environment changed over the period, how the issues were perceived or framed, what kinds of ways of thinking about the environment and its protection were prevalent, and how these shifted over time. Certainly, concern about the environment existed long before the 1990s, and had been building in significance and penetration. In Ireland, there had been several high profile controversies in the 1980s, such as those surrounding the building of chemical factories and other such developments (see Allen and Jones, 1990). By the early 1990s, concern about environmental degradation had wide currency; it was a 'hot topic'.

From this starting point, two important trends were discernible in the 1990s for environmental issues:

- The significant increase in awareness, talk and policy on environmental topics

- The move from environment versus jobs and economy, and pollution as an isolated, abstract problem, to a more integrated view, as extolled in the concept of sustainable development

1992 to 2002 has been the decade of sustainable development if only for being the decade of the Rio Conference and its influences, leading up to Rio+10 in Johannesburg in August 2002. The extensive talk of environment and development issues surrounding the Johannesburg event is outside the scope of this discussion, coming several months after the fielding of the questionnaire, but the impacts of the Rio/Johannesburg agenda over the decade have not been insignificant.

The first impact was to put the term, and concept of, sustainable development firmly into the language of policy. The words had been around for some years, but it was in 1992 that it started to acquire mainstream political currency. Rio resulted formally in a number of conventions and agreements – UN Framework Convention on Climate Change (UNFCCC), Agenda 21, Forest Principles and the Convention on Biological Diversity. The impacts of some of the conventions should not be underestimated, particularly those that have translated into firm EU commitments and hence firm Irish commitments. UNFCC and the targets of Kyoto are a good example; climate change has become probably the key driver of Irish energy policy in recent years because of the commitments made at an international level.

In Ireland, sustainable development as a policy theme grew strongly in the 1990s, culminating with the publication in 1997 of *Sustainable Development – A Strategy for Ireland* (DoE, 1997, see below for further discussion), plus a range of other policies that draw heavily of the sustainable development language, including the *National Climate Change Strategy* (2000), the *Green Paper on Sustainable Energy* (1999), *The Planning and Development Act* (2000), and several others. Even policies with much less direct environmental connections, such as *The Programme for Prosperity and Fairness*, make significant mention of sustainable development, though whether these sorts of references are substantially more than rhetoric remains a matter of debate.

Ecological modernisation in Ireland

And as well noting the growth in the frequency of such terms and discussions across a range of areas, the institutional effects of the sustainable development concept are also notable. In terms of political and institutional response to environmental challenges, the set of responses encapsulated by the sustainable development concept are often termed ecological modernisation. This is a reformist, regulatory discourse, based on scientifically developed technologies and managerialist controls, that subscribes strongly to the proposed synergy between environmental protection and economic growth, and the positive-sum game it offers. It further argues that economic development can be fostered through stringent government environmental policies which ensure that the environment is no longer considered as 'external' to economic development, but given detailed consideration in decisions regarding economic growth – through for example Environmental Impact Assessments, and in product development. Pollution is seen as a matter of inefficiency. Environmental controls on pollution are seen as encouraging technical innovation and diffusion of new cleaner technologies (clean cars, safe incinerators, green energy) and, should pollution continue, the polluter should pay. Environmental Impact Assessment (EIA), Integrated Pollution Prevention and Control (IPPC), and

the Rural Environmental Protection Scheme (REPS) are all core policy elements of the ecological modernisation approach in the EU. The paradigm is reforming but not radically so – it does not fundamentally challenge current political and economic institutions, but calls for their adaptation to new priorities through integration and realignment.

As noted earlier, Ireland's economic development in the 1990s has been linked to, among other things, membership of the European Union. Ireland's move towards ecological modernisation is substantially driven by EU developments – Irish implementation of EIA, IPPC and REPS were all brought about through EU directives. But whatever their origins, these and many other policy developments have undoubtedly transformed Irish environmental regulatory approaches in the past decade. And there have been many institutional changes too, ranging from some of the cross-departmental policy developments mentioned above, to substantial reform of local government.

However, some analysts argue that the Irish commitment to sustainable development is not as strong as would be suggested by the proliferation of policy talk on the subject. Taylor has argued that the goal of environmental policy is management, not protection, and that pollution prevention is subservient to economic growth goals (Taylor, 1998b). Tovey argues that much Irish environmentalism is elitist, expert oriented and disempowering, and is part of a broader societal split fighting over the modernity project discussed above. Most recently, in advance of the Johannesburg World Summit, a group of environmental and community groups came together to produce a publication called *Telling it like it is* (Earth Summit Ireland, 2002), in which what the group sees as the failures of Irish environmental policy, implementation and enforcement are documented. The core of the argument, presented through a set of case studies highlighting environmental damage or management failure, is that any progress in environmental policy has been both patchy and weakly applied, so that the extent of ongoing damage remains larger than any gains. If this is indeed the case, then the central element of ecological modernisation, that efficient environmental protection become integral to all aspects of the economy and society, has not taken hold in Ireland.

The three strands of the ecological modernisation paradigm are environmental protection as efficiency, with economic growth and environmental goals aligned; environmental management as a technical project, with technical expertise at the centre of most solutions; and recognition of the opportunities created by environmental protection, through both enhanced efficiencies and new business growth areas. All of these themes can be seen in the Irish political and institutional response to environmental imperatives of the 1990s. The source policy document on the subject, *Sustainable Development – A Strategy for Ireland* (DoE, 1997), published in April 1997, states in its opening comments:

> *Continued economic growth is essential to meet people's legitimate ambitions for a better life and to provide the resources for implementing environmental protection measures. But we should not tolerate development that is inefficient, that is excessive in its consumption of natural resources or that unduly pressurises the environment. (DoE, 1997: foreword)*

As is often the case, arguing for the coalescence of economic and environmental goals can be read as an excuse for keeping old economic priorities (see Broderick 1999 for example), but one must at least admit that environmental protection has moved up the priority scale, and the interaction between environmental quality and

economic growth is being recognised. Also, as mentioned above, there has been something of a proliferation of policies and laws where the horizontal integration of environmental goals into broader policy areas is a key component. This is a significant element of the ecological modernisation paradigm.

The Irish approach to environmental protection probably does tend towards technical management, but it is less clear that this is a recent trend associated with ecological modernisation as opposed to an established practice more closely related to a comfort with authority and expert-oriented systems. It is also clear that as a knowledge oriented economy, with a particularly strong service sector, the link between environmental priorities and business opportunities associated with such a knowledge oriented approach have not gone unnoticed. Knowledge and services oriented priorities, of which environmental management and development in terms of efficiency and quality form part, are good for an economy based on knowledge and services sectors (see Yearley, 1995). However, whether all this describes a picture of significant orientation towards ecological modernisation remains a difficult question to answer.

Institutional change

As well as shifts in language and policy discussions, changes over the period in institutional arrangements and responses need to be considered. The first landmark of the period in question is the establishment of the EPA, really only in its infancy at the time of the 1993 survey. This was a major step, with a substantial and credible institution in place to manage environmental protection (not without its critics of course - see Taylor, 1998b). In government more widely, some progress has been made on incorporating sustainable development thinking, and in doing so in an integrated manner. A key theme of the Sustainable Development strategy mentioned above was integration, and "bringing environment to the heart of sectoral performance" (DoE, 1997: 4). There are some signs of this being taken up, with cross department committees on, for instance, climate change, and also a Green Tax Group under the Tax Strategy Group of the Department of Finance. But it is probably too early in the process to say how strong this shift towards horizontal integration is. Outside of central government per se, Comhar (the 'National Sustainable Development Partnership') has been established as the national consultative forum, directly modelling the wider partnership model, but again it is probably too early to judge its success.

In local authorities, there have been some significant changes in the last four years or so, certainly influenced by the agenda of integration and public inclusion, as well as the environmental goals themselves. First came Local Agenda 21, after the Rio Summit of 1992, designed to bring sustainable development into all areas of local government, and also important for its recognition of the economic and social as well as the environmental components of the concept. But in fact it does not seem to have had a major influence in practice; less than a third of Irish local authorities have adopted a Local Agenda 21 plan, and even in those cases it tends to be somewhat isolated (say in the form of an environmental education officer), and has not caused much institutional change.

To a degree Local Agenda 21 was overtaken by events in the form of wider local government reform, which has been more significant through initiatives that overlap in goals and impacts (but are less directly linked to the sustainable development theme). One development is that of area based teams, particularly in Dublin City Council. These are teams set up to look after particular geographical areas (usually regeneration projects) in a cross-disciplinary and cross service manner. These area

based teams are an important innovation, with immediate impact. Changes that may be even bigger in the long term are City/County Development Boards (CDBs) and Strategic Policy Committees (SPCs), where strategic thinking is given to forums with specific involvement of community representatives as well as elected and executive officials.

There are also a number of examples of broader thinking in local government, through policies such as the Regional Planning Guidelines for Greater Dublin, and the Retail Planning Guidelines. All of this adds to evidence of moves in the right direction, although it is arguable as to how real, substantial institutional change has taken place in practice, and as to how wide awareness of all of this is among the general public.

Local controversies, local democracy

One development in Irish environmentalism in the 1990s has been the proliferation of local controversies that have mobilised communities into environmental activism. This bottom up mobilisation has occurred through proposed developments such as landfill sites or mobile telephone masts, where communities with little previous environmental interest have become active in the face of a perceived threat. Obviously these active communities are often no more than very specific protest actions that recede once the threat is lifted (or the battle lost), but probably far more often, remnants of the mobilisation remain, through enhanced sense of community, established structures such as strong residents' groups, and enhanced environmental awareness and commitment.

This is certainly not new, in fact activism stimulated by specific threats has been a strong part of environmentalism since earlier controversies such as Carnsore Point, Wood Quay and many others. But it is fair to say that this became far more prevalent than ever in the 1990s, and this is important for two reasons:

- In the context of the distinction between top down and bottom up forms of environmental concern (see Tovey, 1993), this pattern suggests a shift away from more elitist, expert oriented environmental concern, towards 'populist', locally focussed interest and activism

- With local democracy already being pushed up the agenda through partnership and wider community development activity, and through local government reform, interest in local participation and perceived democratic deficits in environmental decision making is heightened by specific controversies that mobilise previously uninvolved communities and individuals.

First, what are the institutional developments towards local democracy and wider participation in environmental decisions? Most have been mentioned, on a national level Comhar could fill a very important role, locally it is developments such as the CDBs and SPCs, as well as Local Agenda 21 activity, that will probably prove to be most significant. These developments certainly promote wider inclusion, and allow a little more strategic thinking across a wide platform. However, most of these new structures and initiatives still tend to be based on elected officials or at least formal representatives from partnership elements, and thus do not necessarily widen out participation to include the wider public. In other words, representative democracy is still favoured over direct democracy. On the other hand, there is local involvement of

community groups, one third of all SPCs for instance, and so involvement is certainly wider than before, assuming these bodies manage to genuinely influence decision making and planning in the local authorities, and also that they represent significant constituencies.

Looking from the perspective of environmental protests, lack of consultation regarding the usage of local areas has led to considerable protest in the past and continues to do so. These controversies are thus bigger than the specific local issue, which is often an emblem for wider disaffection on how the decisions are made. Baker (1990), in her study of environmental movements in Ireland in the 1970s and 1980s argued that what was being contested were alternative visions of the Irish nation and its economic development, in particular a questioning of state-sponsored dependent development and its environmental consequences. The emblems were the specific controversies over proposed factories. The wider issue is how difficult local groups often found accessing decision making and making their voices heard. This theme was probably much stronger in the 1990s than in the previous decades. Recent topics have included waste planning and waste charges, roads, and housing development. The controversy was extensive enough to provoke a degree of backlash against community participation to be seen in the last couple of years, with more organisations and officials blaming 'objectors' for delays and rising costs, and recent planning legislation making interventions and appeals more difficult and more costly.

Structural and policy change

In addition to the major changes in environmental discourse in the past decade, there have been huge structural changes that have effected the context in which environmental behaviour happens and that influence attitudes and awareness. These changes include the many policy and legislative changes, some of which have been mentioned already, and also many physical changes that strongly shape individuals' perception of and potential impact upon their environment.

Physical manifestations

Physical changes have occurred in Ireland that impact on how people see their environment on a daily basis. The landscape has changed, with new roads, many new houses and housing estates, mobile telephone masts, and many other such new features that bring the impacts of environmentally related policy and planning more into focus in people's daily lives. There are also changes such as greatly increased congestion, pushing car travel and its impacts up the agenda.

As well as these kinds of changes that influence talk and thinking about personal behaviour and the environment, there are more direct impacts on people's behaviour and the potential impact of this behaviour. For instance, recycling is much easier now than it was ten years ago due the large increase in availability of recycling depots, bottle banks and so on. In the same way, some parts of the country have improved public transport facilities. Within the home, technologies such as energy efficient appliances and light bulbs reduce the impacts of day to day behaviour, but whether this impacts on attitudes is a more difficult question.

There have also been technology changes in areas such as renewable energy, that do not connect so directly to day to day individual behaviour but impact on the wider context. At the same time new technologies such as genetically modified foods have

yet to have their full impact on personal choice and behaviour, but have certainly played a part in developing awareness and attitudes.

Policy change

Many of the main policy changes relating to sustainable development have been mentioned already. As has been mentioned, most were driven by EU directives, and have tended to follow the ecological modernisation approach to the environment. At the same time, it must be noted that Ireland has many critics regarding its record of proper implementation of environmental directives. Nevertheless, it is certainly the case that the environment is a more prominent policy theme in Ireland than ever before. Again, this must be assumed to have had at least some impact on consciousness among the public. Certain specific policies can be assumed to have had quite a large impact in their relative fields, such as REPS among farmers, or IPPC in the industrial sector. The area of planning is possibly one that touches most people either directly or through media commentary, and controversies around rural planning, objections to roads and other developments, and new, possibly more complicated rules for planning applicants and objectors, have kept the themes quite current for several years now.

Change in activism and media coverage

Environmental issues have become part of the mainstream in daily news coverage, anything from incidents such as flooding, oil spills or fish kills, to protests of hearings about landfills, electricity pylons or road building. Also, there is always space in the media for newly reported scientific findings relating to environmental concerns. The tendency of news coverage towards events and drama means that science coverage is mainly dramatic stories either about great discoveries or great disasters (Nelkin, 1995: 4). But scientists are not the only 'issue entrepreneurs' (Hannigan, 1995) for environmental stories. The media has become an important public sphere platform in the such debates, and even small local groups know the importance they must place on the PR elements of their campaign.

The environment features in daily newspapers now more than ever. The regularity of environmental reporting can be assumed to contribute to the 'normalisation' of environmentalism in that it is much more part of daily talk than ten years ago. Further, not only is the extent of coverage greater, but the content tends for the most part towards local issues such as planning and development or local pollution stories.

In terms of environmental activism, probably the most notable development of the past decade has been the rise of The Green Party. From the election of the first ever Green Party T.D. in 1989, the party has now become a well established political party with five T.D.s and 12 local councillors. Undoubtedly the party has contributed to the raised profile of environmental issues in national politics, and can also be a seen as an indicator of the issue's development in policy profile terms.

The past decade has seen some shifts among the NGOs interested in environmental issues, but no major changes in terms of their profile or level of support. Probably the most prominent environmental group is An Taisce, which has been in the news quite frequently in recent times, particularly in relation to rural planning concerns. The controversy in this area possibly reinforces Tovey's typology of 'official' and 'populist' environmentalism, at least in the sense that many seem to be trying to portray the rural planning controversy as a story of urban elites with abstract concerns versus local rural people interested in local holistic development. The

alternative view, that of An Taisce, is of people with broader, long term views against local business cliques or financially driven individuals seeking to capitalise on land prices for housing. Either way, a 'them' and 'us' framing brings tensions over definitions of environmental priorities to the fore.

However, activism means much more than NGOs, and one striking trend of the 1990s has been the spawning of local groups around specific controversies or concerns. Indeed, local mobilisation around specific local concerns has probably become the dominant mode of environmentalism in recent years. This trend has extended the reach of environmentalism, and also expanded the definition of environmental concern. For many people touched by local controversies, the environment has become more a part of their daily lives, and new, tangible, connections have been made. At the same time, the increasing currency of environmental politics at a high level, particularly around large scale, even global, issues, might lead to a reinforcement of the gap between the 'top-down' and the 'bottom-up' versions of environmentalism. More than anything, this issue highlights the importance of considering people's diverse understandings of concepts such as the environment and environmental concern. There are no universal definitions for these, and any attempts to understand people's priorities and concerns, and the roots of their behavioural choices, must start from this point.

Conclusions

This chapter has set out some of the many contextual factors that form part of backdrop for an analysis of attitude and behavioural patterns of change over the period 1993 to 2002. The range covered is far from exhaustive; the aim is not to identify every single point of relevance but rather to give a sense of the key issues and the overall extent of change that has occurred. The 1990s has been the most dynamic decade ever for environmental discourse, with so much change in policy, talk and structural context. To this must be added the dramatic social and economic changes happening in Ireland over the same period.

While environmental concern was considerable and was a high profile issue in 1993, many ideas, issues, and even terminology, associated with environmentalism that are common currency today barely even existed then. Thus the pattern is of changing understandings of the environment and changing context in which the environment is seen or addressed as a political issue. The rest of this report tries to measure the impacts of these processes on the views, knowledge and behaviour on individuals, through their responses to the ISSP environmental questionnaire. International research indicates strongly that significant attitudinal change is not a rapid process (see for example Kilbourne *et al*, 2001). However, if responses in the survey have even started to move in the directions of changes in the context in which they are asked, the results will be notable and will have important implications for the social and policy dimensions of environmental protection in Ireland.

3. Attitudes to the Environment, Science and Nature

This chapter is about attitudes towards societal priorities and processes, and where environmental concern fits in these. Included in this range are perceptions of nature and broader cosmology, so that values towards the environment and nature can be considered in this context. As well as values in this sense, the questions look at political values in terms of ways of making decisions, particularly regarding the role of science in this, and the prioritisation of economic issues. The following items will be examined in this chapter:

E3 **How much do you agree or disagree with each of the following statements?**

Strongly Agree; Agree; Neither agree nor disagree; Disagree; Strongly Disagree; Can't choose

1. We believe too often in science, and not enough in feelings and faith
2. Overall, modern science does more harm than good
3. Modern science will solve our environmental problems with little change to our way of life
4. We worry too much about the future of the environment and not enough about prices and jobs today
5. Almost everything we do in modern life harms the environment
6. People worry too much about human progress harming the environment
7. In order to protect the environment Ireland needs economic growth
8. It is right to use animals for medical testing if it might save human lives
9. Economic growth always harms the environment
10. The earth simply cannot continue to support population growth at its present rate

E14 **How much do you agree or disagree with each of these statements?**

…..

3. Economic progress in Ireland will slow down unless we look after the environment better

E4 **Please tick one box to show which statement is closest to <u>your</u> views.**

Nature is sacred because it is created by God

Nature is spiritual or sacred in itself

Nature is important, but not spiritual or sacred

Can't choose

E20 **Please tick one box below to show which statement comes closest to expressing what you believe about God**

1. I don't believe in God
2. I don't know whether there is a God and I don't believe there is any way to find out
3. I don't believe in a personal God, but I do believe in a Higher Power of some kind
4. I find myself believing in God some of the time but not at others
5. While I have doubts, I feel that I do believe in God
6. I know God really exists and I have no doubts about it
7. Can't choose

Analysis of change over time

Environment, economics and science

Questions E3 and E14-3 above probe general attitudes about the environment in modern life, prioritisation of environment versus economic growth, and the role of science. They reveal views on modernity and on different types of environmentalism – be it a more traditional, romantic view of environmentalism, or the newer ecomodernist type, where environmental regard can be seen in conjunction with a faith in science and in economic growth. How to prioritise environmental protection in relation to economic goals has always been a key topic for environmental policy making, although there is always the risk of reproducing the supposed dichotomy between the two imperatives in the questions themselves. For this reason items E3-7 and E14-3 allow people to express the view that there is no conflict between economic growth and environmental protection, in fact that the two are mutually dependent, and so the question of where to place priority is not important.

Comparison with 1993 is not possible in all cases; Questions E3-10 and E14-3 were not asked in the earlier survey (a number of 1993 items were also dropped from the 2002 questionnaire).

Overall, a drift towards pro-science attitudes can be seen in 2002 versus 1993. But there is also a drift towards environmental concern, or at least acknowledgement of the issue of environmental concern, and less of a tendency to prioritise economic growth over environmental protection. It would seem that the traditionally perceived dichotomy between economic growth and environmental protection has lost some currency since 1993. Table 3.1 shows the trends for the three questions investigating views on the place of science in decision making[1]. Traditionally, there has been a scepticism about over-reliance on scientific views and ways of thinking. While concern about science remains significant, it is less marked in 2002 than in 1993:

Table 3.1 Attitudes towards science

Statement	**Percentage answering 'strongly agree' or 'agree'**	
	2002	*1993*
E3-1 We believe too often in science and not enough in feelings and faith	51.1	63.9
E3-2 Overall, modern science does more harm than good	20.5	37.0
E3-3 Modern science will solve our environmental problems with little change to our way of life	21.2	25.1
N	1243	917

Clearly then, perceptions of science have improved over the period in the sense that there isn't active rejection of its position. It would, however, be dangerous to interpret this shift as an endorsement of more reliance on science in societal decision making. It is notable that the shift seen in the above questions does not follow through to the

[1] Full details of responses to all questions in the 2002 survey are to be found in Appendix 3

statement ‘modern science will solve our environmental problems with little change to our way of life’, where the percentage agreeing falls slightly. In other words, people seem to be less negative about the place of science in society, but do not necessarily have any more faith in its ability to solve problems. However, the pattern in this third question may be influenced by the wording of ‘little change to our way of life’, and a growing recognition that environmental imperatives will imply at least some lifestyle changes.

As discussed in Chapter 2, the positioning of environmental protection and economic growth as contradictory goals was a stronger theme in the early 1990s than by the end of the decade, when concepts such as sustainable development had taken hold. This is reflected in the changing responses to questions about priorities:

Table 3.2 Attitudes towards environment and economy

Statement	Percentage answering ‘strongly agree’ or ‘agree’	
	2002	*1993*
E3-4. We worry too much about the future of the environment and not enough about prices and jobs today	27.4	54.5
E3-7. In order to protect the environment Ireland needs economic growth	47.2	63.1
E3-9. Economic growth always harms the environment	21.1	31.1
E14-3. Economic progress in Ireland will slow down unless we look after the environment better	51.2	n/a
N	1237	919

The most striking change among the above set is in the first question, where the relative prioritisation of the environment and ‘jobs and growth’ are placed in direct opposition. The prioritisation of economic growth is considerably less in both this and the second question in this group. At the same time, the fact that the shift in the third of these questions is smaller supports the idea that at least part of the shift is a rejection of the dichotomy between the two goals as opposed to a simple reversal of priorities. Further, in 2002, just over half the respondents agreed with the statement that ‘economic progress in Ireland will slow down unless we look after the environment better’ (not asked in 1993), suggesting that the mutually positive connection between growth and the environment as suggested in sustainable development has indeed taken root.

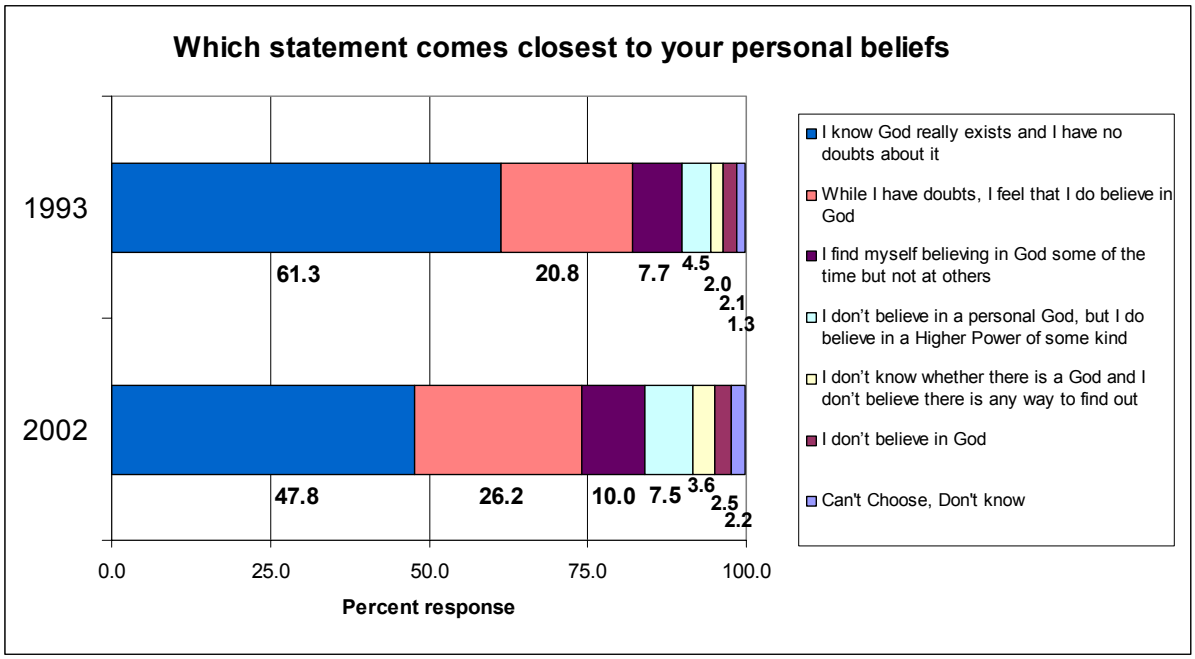
Spirituality and religion

Changes in responses relating to religious attitudes are not nearly as dramatic, but some interesting shifts are to be observed. Question E4 is intended to examine people’s motivation for environmental concern – be it based on religious or sacred beliefs or on a more secular world view. However, the question wording is problematic due to the language used; there is some concern that the wording of the second statement in particular, that nature is ‘spiritual or sacred in itself’ might not achieve its aim of appealing to those with strong pro-nature, but secular, beliefs, due to the religious connotations of the words spiritual and sacred. The responses show no dramatic changes between 1993 and 2002 except, as with many questions in 2002, there is a notable increase in don’t know responses[2].

[2] See Table A3.4, Appendix 3

A second question addressing spiritual attitudes does so in a more direct way. Question E20 asks for respondents' religious views though a series of alternative statements:

Figure 3.1 Personal beliefs about God



N=1249 (2002); 942(1993)

There is a strong drop in 2002 in the numbers saying 'I know God really exists and I have no doubts about it', but it is notable that the shift away from this response leads to increases spread across all the other possible answers quite evenly.

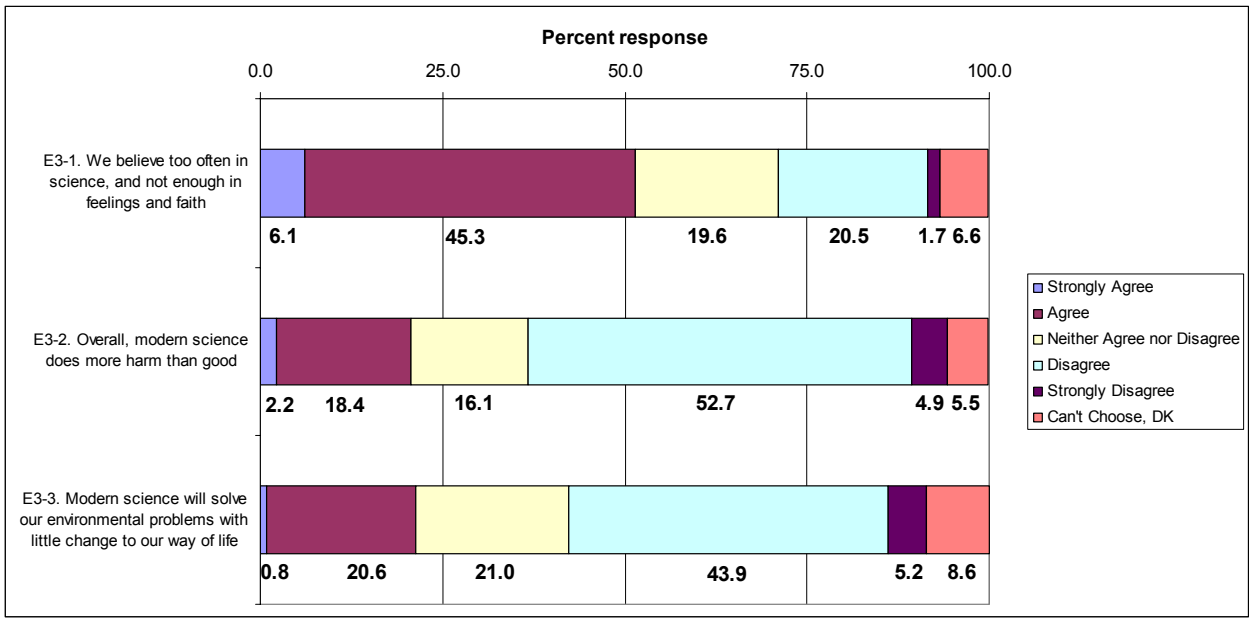
Summary of change between 1993 and 2002

- Respondents are more comfortable with the role of science in decision making
- Perception of a dichotomy between environmental and economic goals has diminished significantly
- Formal religious belief has declined somewhat

Further analysis of 2002 responses

Responses in 2002 to the questions relating to science reveal a significant degree of discomfort with the role of science in society, albeit to a lesser extent than 1993. The following figure details the responses in 2002:

Figure 3.2 Attitudes towards science



N=1243

Factor analysis indicates that E3-1 (Believe in science too often) and E3-2 (Science does more harm than good) fit well together in terms of response patterns, but not so well with E3-3 (Science will solve environmental problems)[3]. This latter question correlates more closely with the questions that ask about prioritising economic growth – those that tend to prioritise growth also tend to say that science will solve environmental problems. On the other hand, there is a significant (but not particularly strong) relationship between a tendency to express belief in God (Question E20) and to agree with the statements E3-1 and E3-2. It would seem then that there is statistical support for the notion that E3-1 and E3-2 are taken as the 'philosophical' statements about the role of science in society, as mentioned above, and E3 is taken as a more 'practical' matter as to science's ability to solve specific problems[4].

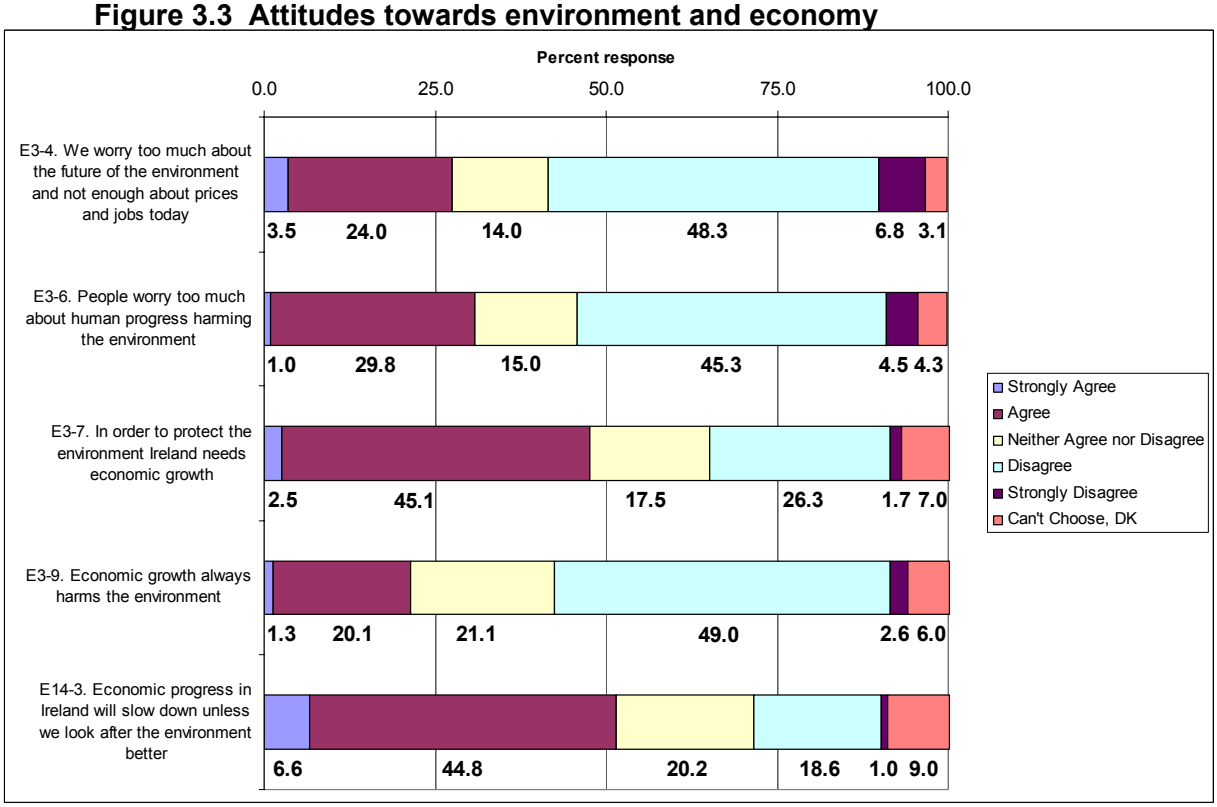
It seems possible to distinguish 'philosophical' from 'practical' attitudes towards science; many people express discomfort on a philosophical level with our dependence on science for decision making, but might still consider it to be of practical benefit.

2002 responses to those questions relating to the relationship between the environment and economic policy goals are as follows:

[3] See Table A4.1, Appendix 4

[4] A third component is seen in the factor analysis (Component 2 in Table A4.1), that contains some of the items that are more difficult to categorise in these terms, such as the item about population growth and the statement 'everything we do in modern life harms the environment'. This component is not used in the analysis discussed here.

Figure 3.3 Attitudes towards environment and economy

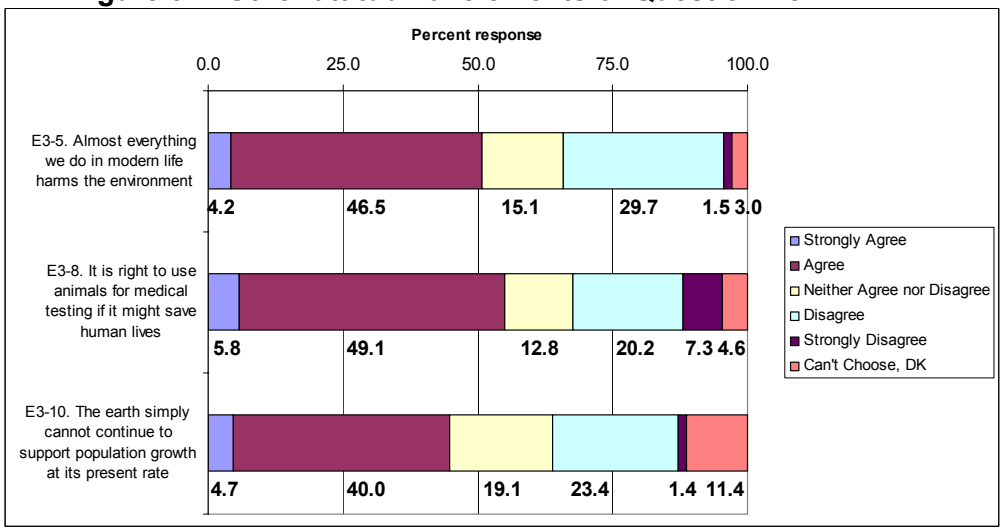


N=1242

In these questions, the tendency is to reject the prioritisation of economic goals to the detriment of environmental protection. However, as mentioned earlier, the last two items in particular suggest that this reflects an attitude that economic and environmental goals can be aligned rather than are inevitably in opposition. In general, it is thought possible to protect the environment within an economic growth paradigm, or even that such a paradigm is necessary for environmental protection.

Other questions in the E3 set touch on environmental outlook and also on the specific question of animal testing:

Figure 3.4 Other attitudinal elements of Question E3



N=1244

E3-5 shows a tendency to agree that modern life harms the environment, although it is difficult to know whether to read this as environmental concern or resignation, or even cynicism. There is majority support for animal testing 'if it might save human lives', but a significant proportion of reservation. Outlooks on population growth tend slightly towards the pessimistic.

Statistical analysis of the response patterns among these questions reveals two identifiable groups of questions; particular responses to E3-4 (people worry too much about future environment) tend to match those to E3-6 (people worry too much about progress harming the environment) and E3-7 (protect the environment by economic growth). On the other hand, E3-5 (everything we do in modern life harms the environment) tends to align with E3-9 (economic growth harms the environment) and E3-10 (Earth cannot support present population growth)[5]. The first group would seem to form a set that tests the issue of whether growth invariably harms the environment, whereas the second might tap into environmental pessimism more broadly. Again this suggests that the key question is no longer that of 'growth versus the environment', but rather environmental concern or pessimism in themselves, with economic growth not necessarily seen as the root cause.

Socio-demographic trends in attitudes

Inasmuch as trends in attitudinal responses can be seen in the data, the following general statements can be made:

Older people are more likely to[6]:

- have more reservations about science in society,
- prioritise environmental protection less,
- prioritise economic growth over environmental protection,
- express belief in God, and in a God-based view of nature

Respondents from higher income households tend to:

- express less prioritisation of economic growth over environmental protection,
- express less formally religious belief or nature-is-sacred orientations.

However, in all cases, such socio-demographic variables explain only a small proportion of the variance in responses and do not seem to be the key independent variables. Further discussion of the influence of socio-demographic variables on response patterns can be found in Chapter 9.

[5] See Table A4.1, Appendix 4

[6] See Appendix 4 for detailed tables

4. Personal Efficacy and Motivation, Willingness to Pay

An important element of environmental behaviour is the respondent's professed willingness to take individual action, even at a personal cost of time or money. Related questions include those that ask whether the respondent sees such action as merited or even possible. Clearly, an individual's sense of willingness or ability to act for the environment in a meaningful way is very important for policies relating to consumer behaviour and in building support for wider policy changes to protect the environment.

E5 **How willing would you be:**

Very Willing; Fairly Willing; Neither willing nor Unwilling; Fairly Willing; Very Willing; Can't Choose

1. to pay much higher prices in order to protect the environment?
2. to pay much higher taxes in order to protect the environment?
3. to accept cuts in your standard of living in order to protect the environment?

E6 **How much do you agree or disagree with each of these statements?**

Strongly Agree; Agree; Neither agree nor disagree; Disagree; Strongly Disagree; Can't choose

1. It is just too difficult for someone like me to do much about the environment
2. I do what is right for the environment, even when it costs more money or takes more time
3. There are more important things to do in life than protect the environment
4. There is no point in doing what I can for the environment unless others do the same
5. Many of the claims about environmental threats are exaggerated

Analysis of change over time

One useful, and often utilised, approach to measuring personal commitment is to ask what are known as willingness to pay questions, and three such questions are asked here (E5). Such questions are not without their difficulties, however. There is a danger that such questions can reinforce the belief that environmental protection always requires financial penalty, and do not allow respondents to challenge this. There is also the limitation that willingness to pay responses may depend on disposable income as much as on environmental commitment per se.

As would be expected in the changed economic climate, an increased willingness to pay for environmental protection can be observed in the 2002 responses. However, the pattern among the questions is not straightforward. In both surveys, there is considerably more expressed willingness to pay higher prices than to pay higher taxes. Whether this indicates a desire for individual control or a more straightforward objection to taxation, is not entirely clear. Willingness to pay higher prices may also be seen as a more distant, i.e. unlikely to be tested, commitment. The fact that responses to the third question, on cuts to standard of living, match the taxation question much more than the prices question, does suggest that the pattern reflects a weakness in the commitment.

Table 4.1 Willingness to pay responses

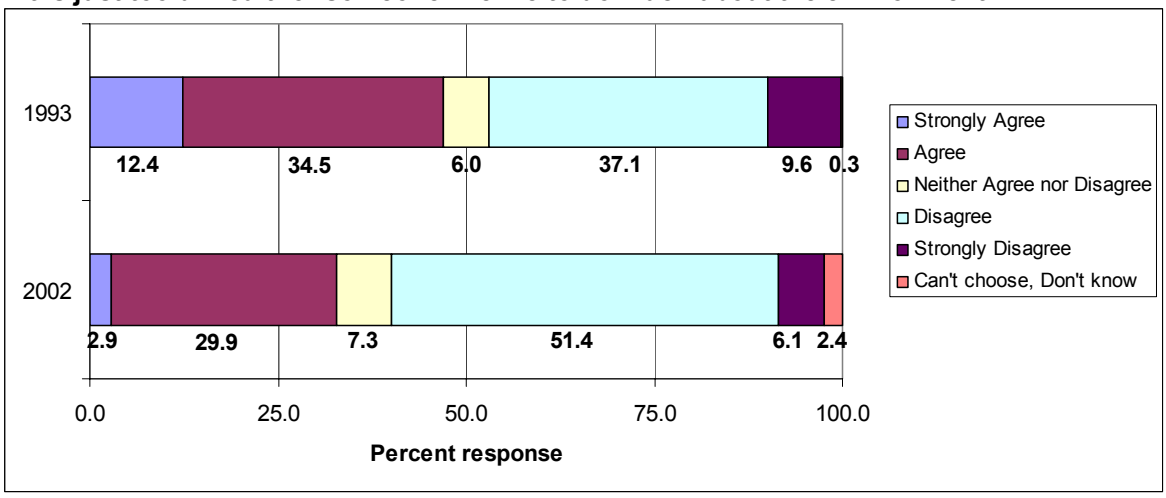
		Very willing	Fairly willing	Neither willing nor unwilling	Fairly unwilling	Very unwilling	Can't Choose, DK	N
E5 How willing would you be:		Percentage Responses						
1. to pay much higher prices in order to protect the environment?	2002	6.3	44.9	13.9	19.8	11.2	3.9	1246
	1993	8.3	41.1	10.4	18.9	20.3	0.9	947
2. to pay much higher taxes in order to protect the environment?	2002	4.1	28.4	13.7	29.7	19.5	4.6	1239
	1993	3.4	20.2	7.9	24.3	42.9	1.0	946
3. to accept cuts in your standard of living in order to protect the environment?	2002	4.2	29.7	16.2	27.0	19.5	3.5	1240
	1993	4.5	24.6	10.6	23.2	35.8	1.3	944

Across the two surveys, there is a discernible shift towards willingness to pay higher taxes, which could be taken as a pro-environmental trend, or might simply reflect less animosity towards taxation in a context of lower income taxes and a better economic climate in 2002 than in 1993. The willingness to accept standard of living cuts item also shows a positive trend, albeit smaller. Table 4.1 also shows that there is relatively little change in the willingness to pay higher prices item between 1993 and 2002, except a move away from the 'very unwilling' response, towards the more neutral statements.

In addition to the willingness to pay items, a number of questions probe personal motivations or sense of efficacy in acting environmentally. It is to be assumed that these questions are interpreted as referring to personal actions such as recycling, purchase decisions, domestic energy practices, possibly to transport habits. People are then probably answering these questions as whether or not they feel they are 'doing their bit' for the environment, though if they respond negatively, they may also be expressing the view that individuals are powerless to make a real difference.

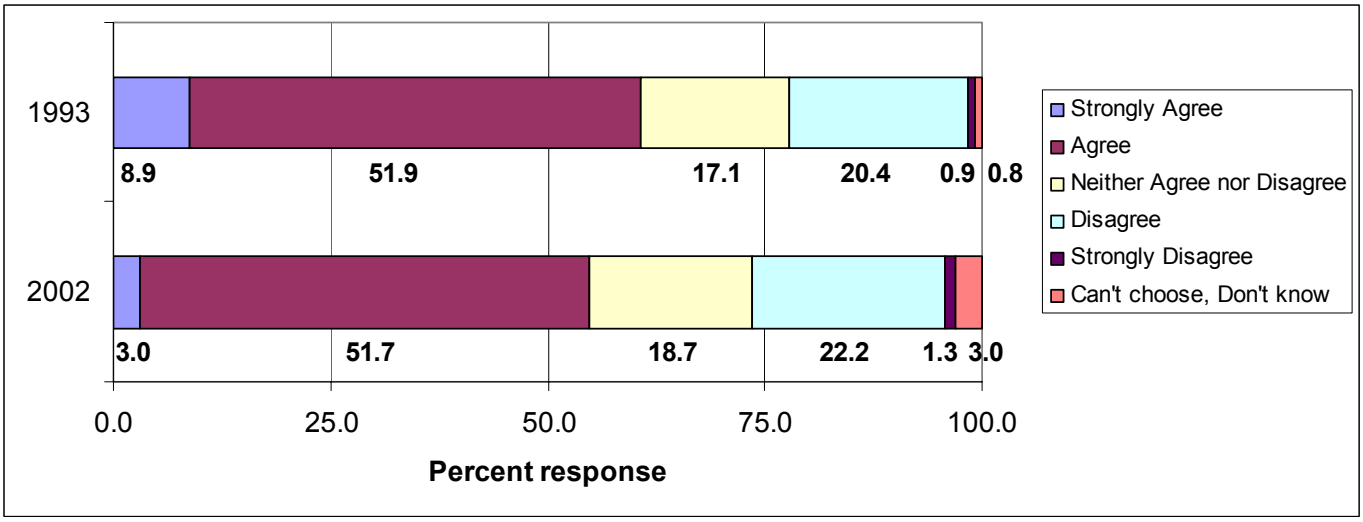
Only two of the E6 items on personal commitment were asked in the 1993 survey:

Figure 4.1 Question E6-1, 2002 and 1993
It is just too difficult for someone like me to do much about the environment



N=1247 (2002); 951 (1993)

Figure 4.2 Question E6-2, 2002 and 1993
I do what is right for the environment, even when it costs more money or takes more time



N=1245(2002); 944 (1993)

Comparatively, there is a clear shift towards an acceptance of personal efficacy in the first of these. Respondents are considerably less likely to say that it is too difficult for them to do something about the environment. On the other hand, there is very little change in the second item, and what change there is shows a decline in personal commitment. However, agreement with this second item is very strong, and taken together the two items do suggest a move towards taking greater personal responsibility.

Summary of change between 1993 and 2002

- Willingness to pay higher *taxes* for environmental protection has risen, but willingness to pay higher *prices* remains much higher
- There is a notable shift away from extreme unwillingness to pay
- Less people claim it is too difficult for them to do much about the environment

Further analysis of 2002 responses

Willingness to Pay

In general, people tend to express more willingness to pay higher prices than higher taxes (see Table 4.1 above). However, a willingness to pay higher prices does not necessarily equate to a willingness to accept cuts in standards of living. Unsurprisingly, those from wealthier households tend to express a greater willingness to pay for environmental protection, which reveals why willingness to pay is an inadequate choice of measure of environmental concern in itself (see Table A4.4, Appendix 4).

Personal Efficacy

Table 4.2 Question E6, 2002 responses.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Can't Choose, DK
Statement	Percentage responses					
1. It is just too difficult for someone like me to do much about the environment	2.9	29.9	7.3	51.5	6.1	2.4
2. I do what is right for the environment, even when it costs more money or takes more time	3.0	51.7	18.7	22.2	1.3	3.0
3. There are more important things to do in life than protect the environment	2.2	22.4	17.1	49.0	6.6	2.6
4. There is no point in doing what I can for the environment unless others do the same	4.5	41.2	5.5	43.5	3.6	1.5
5. Many of the claims about environmental threats are exaggerated	2.1	24.6	16.0	44.1	7.2	6.2

N=1240

There is a general tendency towards 'pro-environment' responses to these items. In item 1, less than half are willing to absolve themselves of responsibility, and indeed the number claiming to act environmentally 'even when it costs more money or takes more time' (Item 2) is striking.

Item 4 is interesting for the strength of agreement. However, given the positive response to item 2, it seems more likely that when disagreeing with Item 4 people are expressing a fear that they may act but others won't (i.e. what are often called 'free riders'), as opposed to a more straightforward unwillingness to act themselves. This may partly explain the support for a regulatory approach to environmental protection (see Chapter 7 below). The numbers in the 'neither agree nor disagree' and 'don't know' categories are notable for nearly all of the questions.

The trend for the two items fielded in both surveys has been noted above. Far fewer people claim that personal environmental action is too difficult. However, this is not mirrored in the trend for the second item, 'I do what is right for the environment, even when it costs more money or takes more time'. In fact, there is virtually no correlation between the two questions[1]. It is possible that many interpret the second question in terms of practicality; that they can answer yes if they do what they think is

[1] The correlation coefficient is –0.00, with very low significance

reasonable within constraints. It is also likely that this question suffers somewhat from a distortion towards what would be perceived as the 'right' or more positive response; more than many questions it is easy to interpret this as a judgement on personal behaviour. This would help explain the very high positive responses to this question that are not borne out in other behavioural questions discussed in Chapter 8 below.

Measures of environmental concern and commitment are tested against socio-demographic patterns in Chapter 9.

5. Environmental and Scientific Knowledge

An important element of environmental awareness and concern is specific knowledge about environmental issues, causes and effects, and the science behind them. Six questions are asked to test people's knowledge about environmental and scientific issues.

E7 **I am going to read out 6 statements. I would like you to tell me how true you think each is.**

Definitely true; Probably true; Probably not true; Definitely untrue; Don't know

In your opinion, how true is this?

1. 'Antibiotics can kill bacteria but not viruses'
2. 'Human beings developed from earlier species of animals'
3. 'All man-made chemicals can cause cancer if you eat enough of them'
4. 'If someone is exposed to any amount of radioactivity they are certain to die as a result'
5. 'The greenhouse effect (global warming) is caused by a hole in the earth's atmosphere'
6. 'Every time we use coal or oil or gas, we contribute to the greenhouse effect (global warming)'

Analysis of change over time

Education has long been seen as one of the key modernising forces in Irish development (Sheehan, 1979). Increasing numbers of highly qualified people has certainly had a strong influence on society and the economy. A knowledge economy needs knowledgeable workers, and emphasis is often placed on the particular role of scientific knowledge[1]. In addition, knowledge about environmental issues is often seen as the key to environmental behaviour change (see for example Smith, 1996: 1). However, too much emphasis can be placed on respondents' ability to answer specific scientific questions – it is not always necessary to understand the scientific details of an issue to know which behaviour choices are less damaging to the environment. Some of the questions used here to test knowledge are predicated on a certain level of scientific education, and indeed some have a considerable element of implicit value judgement, as will be seen. Thus there is a limit to their usefulness in testing knowledge and contributing to an understanding of awareness and related attitudes. Nonetheless, interesting patterns of knowledge, both changes over time and also patterns among the different questions, can offer valuable insights into respondents' understandings and ways of thinking about many environmental issues.

The first step in analysis is to employ a scoring system to measure people's performance in terms of numbers of correct answers. There are different ways of converting answers to these questions to overall performance scores. The method used here is to award a score of 2 points for correctly saying 'definitely' true or false, 1 point for correctly saying 'probably' true or false, with scores of –1 and –2 for the equivalent wrong answers, and –2 for don't know responses. This is a stricter approach than say, awarding zero points for a don't know answer (where someone at least recognises that they don't know), but is used here as it is considered best to treat wrong answers and don't knows in the same way.

[1] See for example, www.science.ie, the Irish Governments science promotion website. The subtitle of the site is 'Science for a successful Ireland'.

Quiz score results, ranked by average scores, are as follows:

Table 5.1 Mean quiz scores

Question	2002 Mean score	1993 Mean Score
Every time we use coal or oil or gas, we contribute to the greenhouse effect (global warming)	0.86	0.81
Antibiotics can kill bacteria but not viruses	0.51	0.48
Human beings developed from earlier species of animals	0.21	0.15
If someone is exposed to any amount of radioactivity they are certain to die as a result	-0.13	-0.32
All man-made chemicals can cause cancer if you eat enough of them	-0.59	-0.63
The greenhouse effect (global warming) is caused by a hole in the earth's atmosphere	-1.19	-1.23
Overall mean score	**-0.05**	**-0.12**

In this table, a zero score would indicate that on average respondents got as many questions right as wrong, and a positive score indicates more correct answers than incorrect answers. In addition, higher scores indicate more certainty among the respondents about their knowledge.

The overall mean score for 2002 is –0.05, compared with –0.12 for 1993[2]. The only item that has changed noticeably is the question on radiation, the improved result for which causes the overall slight improvement in average score. The reliability (Cronbach's alpha) of the set is 0.53 (0.52 in 1993). This low reliability score indicates a lack of consistent scoring, contributing to the impression of a low level of knowledge on the issues.

It is also useful to examine the score patterns among the questions. It is particularly notable that both the best answered and worst answered questions relate to global warming. There is clearly very widespread confusion between the greenhouse effect and depletion of the ozone layer. However, the item linking global warming to fuel use, thus referring to the tangible relationship between people's actions and global warming, is very well answered, and this is an encouraging finding. In this case, then, the important link to behaviour is well understood.

Summary of change between 1993 and 2002

- Overall performance on the scientific knowledge test items has changed very little
- While there is considerable confusion between the greenhouse effect and the ozone layer, knowledge about the global warming effect of personal energy use is the best scored item.

[2] A larger set of items was asked in 1993. The score quoted here is for the same subset asked in 2002. The mean score for the full, larger set of questions fielded in 1993 was –0.00.

Further analysis of 2002 responses

As noted above, some questions are difficult to analyse as simple measures of factual knowledge, and may incorporate a certain degree of value judgement. This is particularly the case for the item about evolution. Among the 2002 responses, there is a significant correlation of -0.22 between scoring on E7-2 (humans evolved from animals) and strength of belief in God (Question E20). The average score on E7-2 among those stating that "I know God really exists and I have no doubts about it " is much lower than the overall average; –0.17, as opposed to +0.21 for the whole sample. This suggests that this question is testing a value item as much as a knowledge item, and that resistance to the concepts of evolution for religious reasons remains strong.

Correlations between knowledge and attitudes

In order to test whether scientific knowledge of certain environmental issues predicts environmental attitudes, quiz scores can be correlated with some of the key attitudinal questions in the survey. For the 2002 data, mean quiz score, as defined above, correlates significantly and strongly positively with household income (correlation coefficient +0.30) and with educational attainment (correlation coefficient +0.34), and strongly negatively with age (correlation coefficient -0.31). There is also a strong correlation between willingness to pay and quiz scores. There is very little gender pattern to the quiz scores (see Table A4.5, Appendix 4).

As would probably be expected, higher quiz scores are found among those who score higher on environmental concern measures. However, an interesting pattern is seen among some of the science related attitudinal questions discussed in Chapter 3:

Table 5.2 Correlations between quiz scores and attitudes, 2002

Attitudinal Item	Correlation with Quiz score
E3-1 We believe too often in science and not enough in feelings and faith	0.14
E3-2 Overall, modern science does more harm than good	0.25
E3-3 Modern science will solve our environmental problems with little change to our way of life	0.13
E6-5. Many of the claims about environmental threats are exaggerated	0.17

All correlations significant at the 1% level

For the attitudinal items in this table, lower numerical values indicate more agreement, so a positive correlation indicates a link between higher quiz scores and higher *disagreement* with the items. Thus, those who score higher on the quiz are more likely to disagree that we believe in science too often and to disagree that science does more harm than good. This is as expected. However, it is interesting to note that higher performers in the quiz are also more likely to disagree with the statement 'Modern science will solve our environmental problems with little change to our way of life'. As mentioned in Chapter 3, this particular item is confused by the

inclusion of the wording on ‘change to our way of life’. If this is the part of the question that guides responses, then the correlation suggests that those who score higher on the quiz are more willing to accept that environmental protection will involve some changes in lifestyle. This is supported by the correlation with the item saying many claims about the environment are exaggerated, where higher scorers on the quiz are more likely to disagree that claims are exaggerated.

The overall pattern is that higher scores on the quiz correlate with greater environmental concern, which would fit with the hypothesis that forms of environmental concern growing in dominance are those closer to the ecological modernism types, where faith in science and concern for the environment go together.

6. Specific Environmental Concern

Risk is a theme of growing importance and currency in modern life. A number of questions ask about specific environmental issues and seek responses on levels of concern or perceived threats. These can be used to compare the sense of threat within the set, and also to gauge the overall extent of perceived environmental risk.

E8a	In general, how dangerous do you think that air pollution caused by cars is on the environment?
E8b	And how dangerous do you think that air pollution caused by cars is to you and your family?
E9a	In general, do you think that air pollution caused by industry is
E9b	And do you think that pesticides and chemicals used in farming are:
E9c	And do you think that pollution of Ireland's rivers, lakes and streams is
E10a	In general, do you think that a rise in the world's temperature caused by the 'greenhouse effect' (global warming)
E10b	And do you think that modifying the genes of certain crops is
E22	In general, do you think that nuclear power stations are:
	extremely dangerous; very dangerous; somewhat dangerous; not very dangerous; not dangerous at all; Can't choose
E15	How likely do you think that, within the next five years, an accident at a nuclear power station will cause long-term environmental damage across many countries?
	Very likely; Likely; Unlikely; Very Unlikely; Can't choose

Analysis of change over time

In 1993 most of these concern questions were asked twice, once about risk 'to you and your family' and again as risk 'to the environment'. It was found that people did not generally make a distinction between these types of risk and so, for all items except that of car pollution, the distinction was removed and only one version asked. E15 was not asked in 1993.

The following table reports extreme concern, the percentage of respondents who describe an issue as 'extremely dangerous'; and also the overall concern, which is the total percent who answer 'extremely dangerous', 'very dangerous', or 'somewhat dangerous'. The figures are compared across the two data sets:

Table 6.1 Specific environmental concerns

	Extreme concern			*All concern*		
	2002	1993	*Percent change*	2002	1993	*Percent change*
Air pollution by cars for environment	13.5	15.9	*-15.1*	89.3	84.4	*+5.8*
Air pollution by cars for you + family	6.3	13.6	*-53.7*	74.5	76.4	*-2.5*
Air pollution by industry - environment	17.8	26.3	*-32.3*	92.4	92.8	*-0.4*
Pesticides in farming - environment	14.8	23.8	*-37.8*	90.4	90.4	*+0.0*
Pollution river, lake - environment	22.3	36.2	*-38.4*	93.2	94.5	*-1.4*
Rise world's temperature - environment	18.0	25.0	*-28.0*	85.7	84.2	*+1.8*
Modifying genes of crops - environment	15.2	-	-	76.4	-	-
Nuclear power stations - environment	44.6	53.0	*-15.8*	95.1	96.2	*-1.1*

Missing cases removed. N=1244 (2002); 878 (1993)

All questions elicit less extreme concern in 2002 than in 1993, but the total concern levels does not reduce by nearly as much, and in some cases increases. Nuclear power stations remain by far the highest concern in both extreme and overall terms, followed by pollutions of rivers and lakes. It is also notable that industry is seen as a greater cause of concern than farming.

Despite the move towards asking only one version of each question in 2002, it is notable that in E8 (2002) above people seem to consider air pollution from cars as more dangerous to 'the environment' than to 'you and your family'. Between 1993 and 2002, concern about air pollution from cars 'for you and your family' shows the biggest decrease, and records the lowest concern levels, in most extreme and overall terms. Both air pollution from cars 'for the environment' and global warming show slight rises in overall concern, despite drops in extreme concern. This may reflect a growing awareness of global warming and its connection to transport, as opposed to the prior focus on local air pollution and health effects of vehicle emissions.

In both years, despite high levels of expressed concern, the global warming question elicited more don't knows than any other: (6.7% in 2002, with the exception of the new question on genetically modified crops; 13.3%). The political debate on the appropriate response to climate change retains a component of scepticism in the science of the phenomenon, and this may be causing some confusion among people. In general, don't know responses increased in 2002.

As noted, there is a shift away from extreme concern between 1993 and 2002. While overall concern is mostly as high as in 1993 if not higher, extreme concern drops considerably for every item. This might reflect a degree of 'normalisation' of environmental concern, in that the relative newness of awareness in 1993 led to more extreme responses than the calmer responses of 2002. This pattern should not be read as a decrease in general concern about these environmental issues. It may fit with the suggested shift in the type of environmentalism being expressed; ecological modernisation would be expected to elicit considerable concern but in a more moderate form than romantic environmentalism. This is because ecological modernisation suggests that the problems exist but can be tackled, whereas romantic environmentalists may be pessimistic about the chances of improvement and hence may express more extreme concern.

Summary of change between 1993 and 2002

- While levels of extreme concern about specific environmental threats have dropped, levels of overall concern remain quite static
- Nuclear power stations remain by far the highest concern
- A growing concern with global environmental problems can be discerned

Further analysis of 2002 responses

The 2002 concern levels, ranked by level of extreme concern, are as follows:

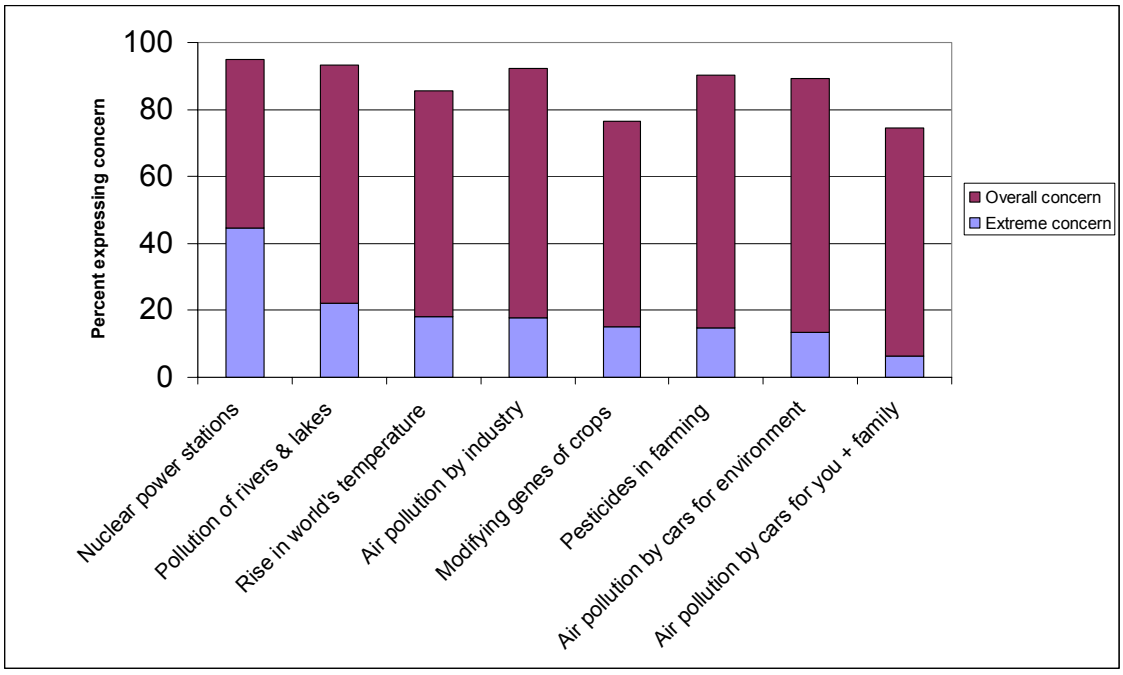
Table 6.2 Specific environmental concerns, 2002

	Extreme concern percentage	Extreme concern ranking	Overall concern percentage	Overall concern ranking	Can't choose, DK
Nuclear power stations - environment	44.6	1	95.1	1	1.8
Pollution river, lake - environment	22.3	2	93.2	2	2.1
Rise world s temperature - environment	18.0	3	85.7	6	6.7
Air pollution by industry - environment	17.8	4	92.4	3	2.6
Modifying genes of crops - environment	15.2	5	76.4	7	13.2
Pesticides in farming - environment	14.8	6	90.4	4	2.3
Air pollution by cars for environment	13.5	7	89.3	5	2.4
Air pollution by cars for you + family	6.3	8	74.5	8	2.8

N=1244

As noted above, nuclear power stations are by far the greatest concern, especially in terms of extreme concern. It is notable that, of all issues, global warming ranks much higher in extreme concern terms than it does in overall terms. The high occurrence of don't knows for genetically modified crops, and also larger than most don't knows for global warming, has been noted. Concern about genetically modified crops is relatively low in both extreme and overall terms, but this must be assessed along with the apparent confusion as seen in the don't know responses.

Figure 6.1 Specific environmental concerns 2002
Ranked by level of extreme concern



Analysis reveals virtually no correlation between these specific concern questions and demographic variables. A small pattern can be seen where more educated people tend to express slightly more concern, but apart from that there are no observable patterns with age, income or gender.

Almost two thirds of people consider a major nuclear accident likely or very likely in the next five years (this question was not asked in 1993):

Table 6.3 Likelihood of a nuclear accident, 2002

Response	Percent
Very likely	20.9
Likely	45.3
Unlikely	19.5
Very unlikely	5.2
Can't Choose	9.1
N	1245

E15 How likely do you think that, within the next five years, an accident at a nuclear power station will cause long-term environmental damage across many countries?

These responses reveal the high level of concern about nuclear power stations, and reflects the continuing high profile of Sellafield as an environmental concern in Ireland. Concern about a possible major accident would have been further heightened by the recent occurrence of the World Trade Centre attack in New York, and the ongoing discussion of possible further incidents at other locations.

Although the specific concern questions discussed here show little correlation to socio-demographic variables, there are notable socio-demographic patterns to general attitudinal responses about environmental prioritisation and concern. This is explored in Chapter 9 through a constructed scale to measure general concern against key socio-demographic variables.

7. Responsibility and Action

This section considers who, among ordinary people, business and industry, and government, bears responsibility for the environment. There are also items that allow a comparison between Ireland and other countries in terms of performance and responsibility, and consider the need for international agreements.

E11 Which of the following is closer to your views:

E11a
Government should let **ordinary people** decide for themselves how to protect the environment, even if it means they don't always do the right thing
OR
Government should pass laws to make **ordinary people** protect the environment, even if it interferes with people's rights to make their own decisions

E11b
Government should let **businesses** decide for themselves how to protect the environment, even if it means they don't always do the right thing
OR
Government should pass laws to make **businesses** protect the environment, even if it interferes with businesses' rights to make their own decisions

E13 Which of these two groups is making more effort to look after the environment

E13a	Business and industry;	People in general;	Both equally
E13b	Government;	Business and industry;	Both equally
E13c	People in general;	Government;	Both equally

E16 How much trust do you have in each of the following groups to give you correct information about causes of pollution?

A great deal of trust; Quite a lot of trust; Not much trust; Hardly any trust; Can't choose

1. Business and industry
2. Environmental groups
3. Government departments
4. Newspapers
5. Radio or TV programmes
6. University research centres

E12 Some countries are doing more to protect the world environment than other countries are. In general, do you think that Ireland is doing:

... more than enough
... about the right amount
... or, too little?

E14 How much do you agree or disagree with each of these statements?

Strongly Agree; Agree; Neither agree nor disagree; Disagree; Strongly Disagree; Can't choose

1. For environmental problems, there should be international agreements that Ireland and other countries should be made to follow
2. Poorer countries should be expected to make less effort than richer countries to protect the environment

Analysis of change over time

If, as discussed in Chapter 2, one can argue for a growing disconnection of many people from politics and political leaders, this clearly has relevance for some of the themes investigated in the survey around roles for regulation, taxation, and of course, trust. These questions examine this, and also examine attitudes towards the business community in the same context. Only limited analysis of change is possible in this section, as many questions are new to the 2002 survey. E13, E14 and E16

were not asked in 1993, and E12 was asked in a different manner. Only E11 appears on both questionnaires.

Table 7.1 Question E11, 2002 and 1993
Government should allow ordinary people/businesses to decide for themselves or pass laws

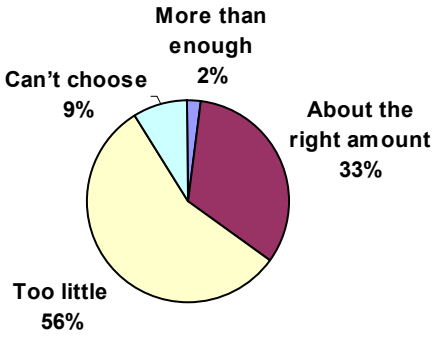
		Decide themselves	Pass laws	Can't Choose	N
E11a Ordinary people	*2002*	16.5	71.6	11.2	1244
	1993	24.3	71.6	4.1	918
E11b Businesses	*2002*	6.7	84.4	7.7	1238
	1993	9.1	87.7	3.1	926

Small missing percentages not reported

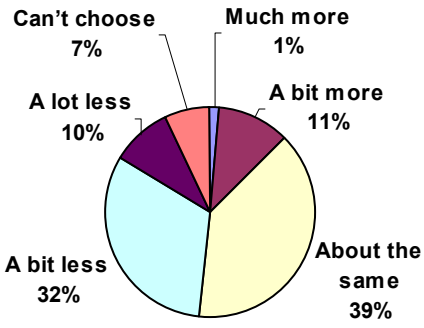
There is notably strong support for the passing of laws for both individuals and businesses, and business seems to be trusted less than ordinary people in terms of their environmental behaviour. Little change is seen across the two surveys; apart from an increase in can't choose responses, and somewhat fewer respondents approving of ordinary people deciding for themselves. For the *ordinary people* element, all of the shift away from 'decide themselves' is towards 'don't know'. Despite the growing preponderance of a discourse of voluntary approaches to environmental protection, support remains low for such approaches, especially for the self-regulation of business.

Question E12 asks respondents how they feel Ireland's environmental performance compares with other countries. In 1993 the wording of this was somewhat different, asking for a comparison only with other countries in the EU. Also, the range of possible answers was smaller in 2002. However, it is nonetheless worth making some observations on the two sets of responses. In 1993, 42% felt Ireland was doing 'a bit less' or 'a lot less' than other EU states. In 2002, 56% felt Ireland was doing 'too little' by international comparison:

Figure 7.1 Ireland's performance by international comparison



2002 (International Comparison)



1993 (EU Comparison)

Despite the changed codes, it is possible to detect a trend away from the view that Ireland is performing better than or as well as other countries and towards the view

that Irish performance is relatively poor. It is to be assumed that even in 2002 when the question referred to a broad international comparison, most respondents probably had the rest of the EU in mind when answering. Around the time of the 2002 survey, there were several cases underway alleging Ireland's inadequate implementation of EU environmental directives, and this may have influenced results. Overall, though, the responses here can probably be seen as fitting with the trend to accept the need for more environmental regulation; respondents are acknowledging that Ireland lags somewhat behind and are expressing the desire, and willingness, to catch up.

Summary of change between 1993 and 2002

- There is strong support for passing of environmental laws to govern behaviour, especially in relation to business, and this is quite steady over time
- The perception that Ireland performs as well as other countries in environmental protection has lessened between 1993 and 2002

Further analysis of 2002 responses

Actors within Ireland

Table 7.2 Question E13, 2002 responses

Which of these two groups is making more effort to look after the environment:

E13a	Business and industry;	People in general;	Both equally
E13b	Government;	Business and industry;	Both equally
E13c	People in general;	Government;	Both equally

	Percent Responses		
	Business vs. People	*Government vs. Business*	*People vs. Government*
Business and industry	9.7	9.7	-
People in general	52.7	-	37.1
Government	-	41.5	21.1
Both equally	21.7	26.1	25.9
Can't choose	15.2	21.9	14.9

N=1241

As also seen in Table 7.1 above, Table 7.2 reveals a low regard for industry's environmental performance. 'People in general' are seen as doing more for the environment when compared both to business and industry and to government. Also, selection of 'people in general' is much higher when compared to business than when compared to government. The *can't choose* responses are quite high in all of

these items, and the fact that they are highest in the government vs. business comparison might indicate broad scepticism of the performance of both groups.

It is worth noting that, while exactly the same number of people, 120, choose 'Business and industry' over both 'People in general' and 'Government', they are mostly not the same group; only 30 respondents in the sample choose 'Business and industry' twice. Thus the pattern is more subtle than a dichotomy between a pro-business minority and the more sceptical majority. Furthermore, even among this group of 30 respondents who select business in both cases, 80% still favour the passing of laws in question E11b above, only a very slight decline on the overall sample response. While the generally high levels of support for regulatory approaches is consistent with the ecological modernisation type of environmental concern, scepticism about industry's performance and the lack of support for a business led response are less in keeping with this paradigm. This once again indicates the complexity of the patterns of concern among respondents.

A Question of Trust

Table 7.3 Question E16, 2002 responses

How much trust do you have in each of the following groups to give you correct information about causes of pollution?

	Business and industry	*Environmental groups*	*Government departments*	*Newspapers*	*Radio or TV programmes*	*University research centres*
A great deal of trust	1.36	19.47	3.19	4.23	6.62	28.01
Quite a lot of trust	5.51	41.42	21.63	20.11	32.24	41.98
Some trust	37.19	28.97	46.69	44.21	45.17	21.95
Not much trust	33.60	4.79	17.80	19.63	9.82	3.03
Hardly any trust	18.36	1.92	7.66	9.10	3.51	1.60
Can't choose	3.67	2.87	2.71	2.31	2.31	3.19
Mean score	3.73	2.37	3.13	3.16	2.78	2.18

Lower mean scores indicate higher levels of trust. N=1246. Small percentages of missing cases not reported.

As is seen in the above questions, business and industry elicits the least trust as a category. 'University research centres' (probably interpreted by respondents as universities in the more general sense), are trusted most, followed by environmental groups, then radio or television, government departments and newspapers. Surveys internationally have found that among the media, television tends to be trusted most as a source and newspapers least (Comstock and Scharrer, 1999: 137).

International Responsibility

Table 7.4 Question E12, 2002 responses

Some countries are doing more to protect the world environment than other countries are. In general, do you think that Ireland is doing:

... more than enough
... about the right amount
... or, too little?

Response	Percent
More than enough	2.2
About the right amount	32.9
Too little	56.1
Can't choose	8.9
N	1247

A small majority of respondents view the country as doing too little by international comparison, and very few people say that Ireland is doing more than enough. It is not entirely certain here whether 'Ireland' or the 'country' refers to the government, to people in general or to both. However, other trends in the data showing support for government or national action (not necessarily individual action) and showing higher regard for the performance of people over government, as just discussed, would suggest that the 'country' is interpreted here more as the government than as the people. As mentioned above, it is likely that most respondents are making a comparison against other EU member states more than the broader international community.

Table 7.5 Question E14, 2002 responses

How much do you agree or disagree with each of these statements?

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Can't Choose, DK	N
Statement	**Percent Responses**						
1. For environmental problems, there should be international agreements that Ireland and other countries should be made to follow	22.5	61.1	6.3	5.1	0.1	4.7	1244
2. Poorer countries should be expected to make less effort than richer countries to protect the environment	2.6	27.5	11.0	48.1	6.6	4.1	1238

International agreements are strongly supported, but not the idea that that poorer countries should be expected to do less. Support for international responses fits with the pattern of seeing Ireland as a relatively weak performer internationally, as discussed above.

The highest profile international agreement in recent years has been on climate change, through the Kyoto Protocol. The EU has tried to position itself as taking the lead in this agreement, and climate change abatement has been one of the most discussed environmental issue in Ireland, at least at a political level. One theme of the international debate on Kyoto has been the argument put forward by the USA and others, that an agreement must extend beyond the current range of richer nations to include the many developing nations with rapidly growing energy demand. It is unlikely that the detail of this argument is influencing responses here, and so it remains difficult to explain the strong rejection of the notion that poorer countries may be expected to do less in environmental protection effort, given the far greater negative environmental impacts of richer countries.

8. Environmental Behaviour

Earlier chapters looked at respondents' claims as to how willing they are to act in favour of the environment, to pay extra or make other sacrifices, and how efficacious they see themselves as individual actors. Individual behaviour can of course be more directly probed through questions specifically asking about current patterns of action. Questions are divided into those probing consumer behaviour - recycling and driving habits - and political behaviour, such as membership of an environmental group or reported signing of petitions or participation in protests.

E17a How often do you make a special effort to sort glass or tins or plastic or newspapers and so on for recycling?

Always; Often; Sometimes; Never; Recycling not available where I live

E17b And how often do you cut back on driving a car for environmental reasons?

Always; Often; Sometimes; Never; I do not have or cannot drive a car

E18 Are you a member of any group whose main aim is to preserve or protect the environment?

YES; NO

E19 In the last five years, have you

1. signed a petition about an environmental issue?
2. given money to an environmental group?
3. taken part in a protest or demonstration about an environmental issue?

Yes I have; No I have not

Analysis of change over time

More than most questions, structural contextual factors have changed considerably to influence consumer behaviour. In 1993, availability of recycling facilities was almost negligible compared to 2002. Also, regarding transport, the congestion and consequent high profile of transport issues we now consider perfectly normal were relatively new (but were present) in 1993.

Table 8.1 Consumer environmental behaviour

		Always	Often	Sometimes	Never	Not applicable*	*N*
Recycling	*2002*	26.2	22.3	26.3	17.5	7.1	*1245*
	1993	14.4	14.2	17.9	26.3	27.2	*957*
Cut back on driving for environmental reasons	*2002*	1.5	5.7	18.1	53.2	20.7	*1243*
	1993	0.8	1.6	11.2	52.6	33.6	*957*

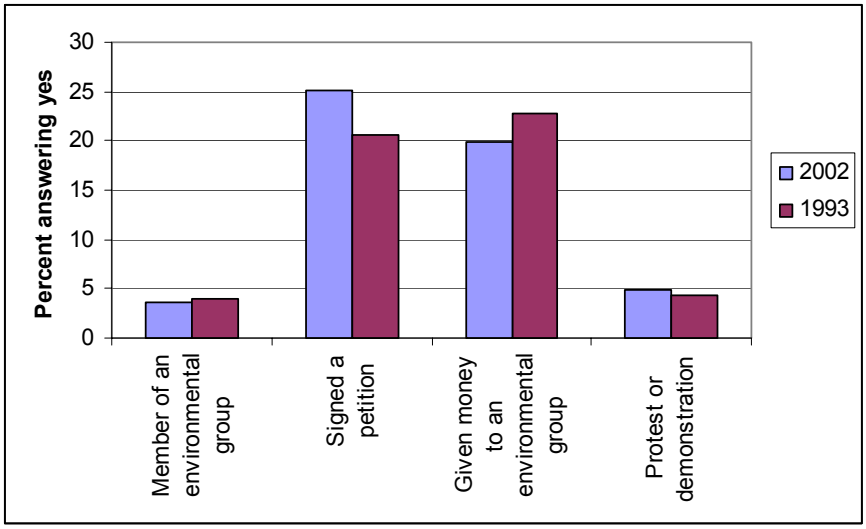
* Not applicable refers to 'Recycling not available where I live' for the recycling question and to 'I do not have or cannot drive a car' for the driving question

The increase in the availability of recycling is reflected in the shift away from the 'never' and 'not applicable' responses, to 'always', 'often' and 'sometimes'. There is also a notable, if smaller, shift towards environmental behaviour in cutting back on driving, although this is a difficult question to interpret. The significant decrease in the 'not applicable' percentage here reflects increased car ownership over the period.

Recycling behaviour is much more strongly established than cutting back on driving for specifically environmental reasons.

Political behaviour shows much less dramatic change than the consumer behaviour items:

Figure 8.1 Political environmental behaviour



Membership of an environmental group remains very low, as does reported participation in a protest or demonstrations. Giving money to an environmental group has decreased slightly in frequency, whereas signing a petition has increased slightly.

These questions must be considered in the context of types of environmentalism prevalent in Ireland. As noted in Chapter 2, one can distinguish broadly between a more top-down, science-oriented environmentalism and a more bottom up, local-issue focused type. One might expect petitions to be more associated with the latter type, and formal membership of an environmental group (i.e. one identifying itself specifically as an environmental group) more associated with the former. 25% reporting signing a petition in the past five years represents a fairly high level of environmental involvement, even if it may be at a very peripheral level. However, the data does not reveal any strong trends over time towards environmental activism of any kind.

Summary of change between 1993 and 2002

- Reported recycling behaviour has increased significantly, reflecting increased accessibility of facilities
- Cutting back on driving specifically for environmental reasons remains very low
- Environmental activism, through channels such as group membership, protests, or signing petitions, remains low

Further analysis of 2002 responses

Formal membership of an environmental group is very low (46 persons in the sample), as is the reporting of having taken part in a protest of demonstration. However, more passive or occasional forms of activism, signing a petition or giving money to an environmental group, show higher positive response rates. Cross-correlations show that people tend to answer questions fairly consistently and those that report one positive environmental behaviour are more likely to report others also (see Table A4.6, Appendix 4).

Recycling shows a significant gender effect – women are more likely to recycle than men (31% of women always sort for recycling as against 21% of men). Men are very slightly more likely to report cutting back on driving, but none of the political behaviour questions show a gender pattern. Some do show an age pattern; older people are less likely to have signed a petition or given money to an environmental group (see Table A4.6, Appendix 4). Other socio-demographic patterns of behaviour are examined through an environmental commitment scale in Chapter 9.

It is worth examining what influence membership of an environmental organisation has on other aspects of environmental behaviour. Among those who are member of an environmental group[3]:

- 69% say they always or often recycle
- 24% say they always or often cut back on driving
- 67% say they have signed a petition in the last five years
- 58% say they have given money to a group in the last five years
- 22% say they have taken part in a demonstration in the last five years

So the incidence of environmental behaviour among group members is considerably higher than the overall sample average in all cases, but it is noticeable nonetheless that for the most "active" items, cutting back on driving and taking part in a demonstration, the level of reported behaviour is still quite low.

[3] This analysis is based on a low number of cases, 46 in total.

9. Analysis of Socio-demographic Patterns

The previous sections make occasional mention of some of the patterns to be observed in the responses according to socio-demographic variables such as age, gender, income and education. In general, patterns are discernible by these variables, but only explaining a small proportion of response variation. This is in keeping with the international literature in that typically only 10% to 15%, at most, of variation is explained statistically by a group of socio-demographic variables (see for example Dietz *et al*, 1998; Jones and Dunlap, 1992).

This chapter extends the discussion on socio-demographic patterns by developing two scales constructed from sets of attitudinal and behavioural questions. One scale taps into expressed concern for, or worry about, the environment, and the second addresses commitment to take personal action.

Examining trends through scales

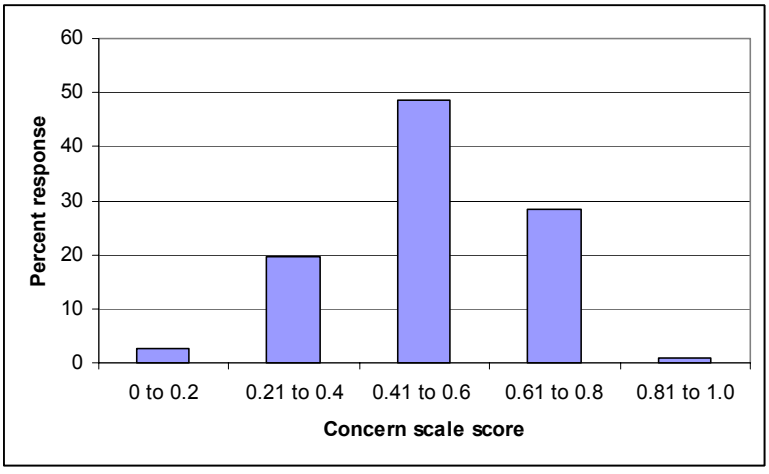
A scale designed to measure concern for the environment is constructed from the following four items[1]:

- We worry too much about the future of the environment and not enough about prices and jobs today
- There are more important things to do in life than protect the environment
- Many of the claims about environmental threats are exaggerated
- How dangerous do you think that a rise in the world's temperature caused by the 'greenhouse effect' (global warming) is to the environment

This set of questions relates to the opinion that the environment is indeed threatened and action to protect it is necessary. In the scale, the items are reoriented and re-scaled to a produce a scale that runs from zero to one, where a higher score means greater environmental concern. The items have a reliability (Cronbach's alpha) of 0.63.

The mean score on the concern scale is 0.54, with a standard deviation of 0.15. The distribution of scores is as follows:

Figure 9.1 Distribution of concern scale scores



[1] See Appendix 6 for more detail on the development of the scales

Neutral responses to all items would produce an overall concern scale score of 0.5, and so Figure 9.1 indicates that only a minority of respondents disagree with more of the four statements than they agree with.

A scale to measure personal commitment to the environment is constructed from the following items:

- I do what is right for the environment, even when it costs more money or takes more time
- How often do you make a special effort to sort glass or tins or plastic or newspapers and so on for recycling
- How often do you cut back on driving a car for environmental reasons
- Willingness to pay (all three questions added separately)

This scale is built from items that test the respondent's stated behaviour or willingness to act or pay for environmental protection. As with the previous scale, it is oriented and scaled to range from zero to one, with higher scores indicating higher environmental commitment. The reliability of the scale items is 0.75.

Mean score on the commitment scale is 0.57, with a standard deviation of 0.16. The distribution of scores for the scale is as follows:

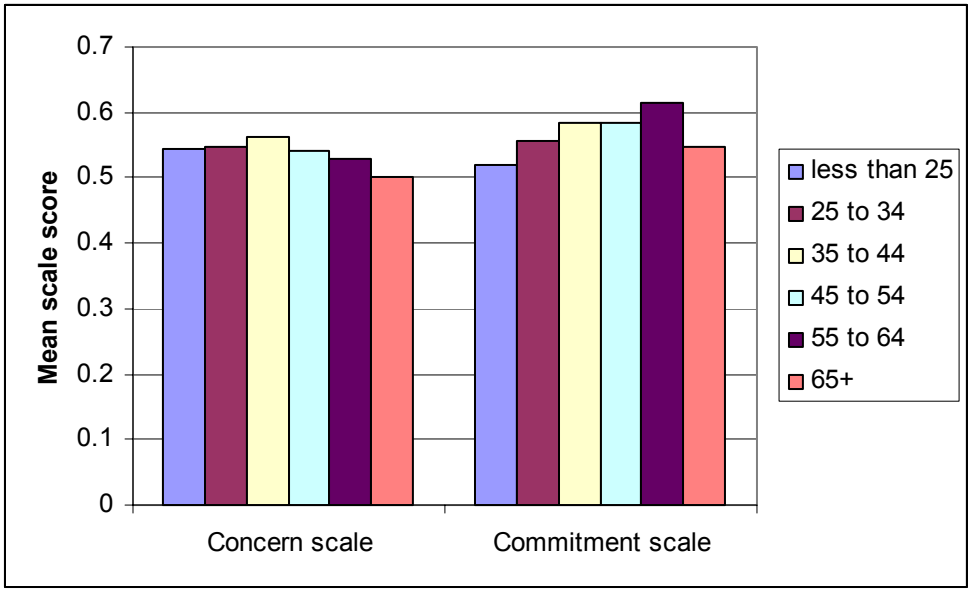
Figure 9.2 Distribution of commitment scale scores

As with the concern scale, neutral responses to all items would produce a commitment scale score of 0.5. As can be seen in Figure 9.2, the distribution of scale scores indicates an overall pattern of agreement with a majority of the statements included in the scale.

Scale scores by age

Scores on the commitment scale generally rise with age, peaking in the 55-64 age group:

Figure 9.3 Mean scale scores by age category

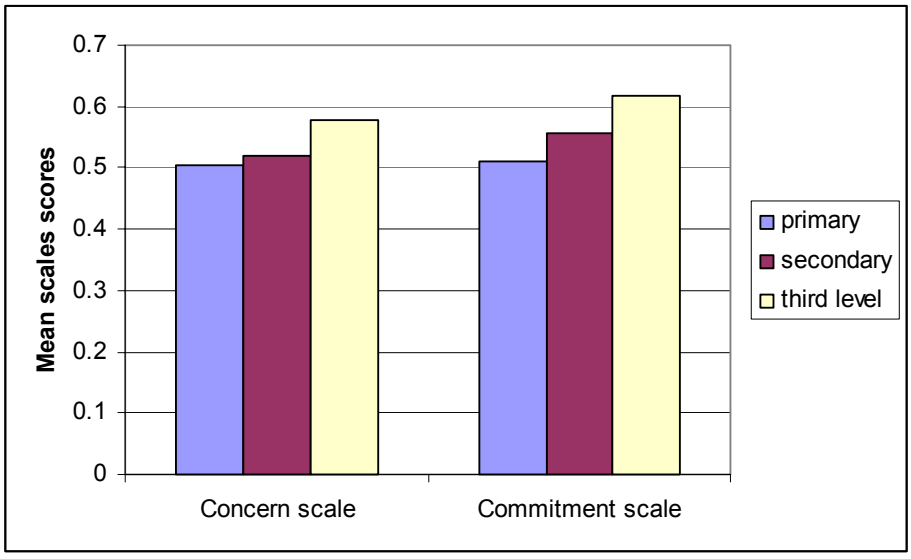


The dip in the 65+ age group is possibly due to the behavioural elements in that relative personal mobility as pertains to both the recycling and the driving question is likely to impinge here. For the concern scale, there is a slightly negative correlation with age, although the chart exhibits a bow shape that peaks in the 35 to 44 age category. It is notable that the mean scores on both scales are relatively low for the youngest age category.

Scale scores by education

Generally positive trends can be observed in both scales by level of education, and the relationship is stronger for the commitment scale:

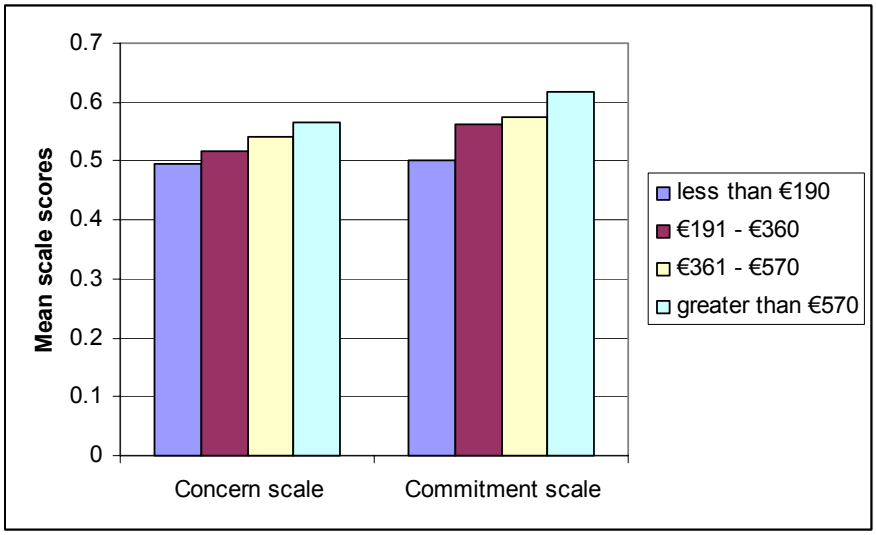
Figure 9.4 Mean scale scores by highest level of education completed



Scale scores by household income

Income also has an effect on scale scores. Mean scale scores plotted against weekly household income bands are as follows:

Figure 9.5 Mean scale scores by average weekly household income



As can be seen, mean scores on both scales rise with the income bands. The relationship is stronger and more significant with the commitment scale, as would be expected given both the willingness to pay and the behavioural items in that scale.

The scales by social class

To test if scores on the two scales are related to social class, a variable is constructed based on respondent's occupation according to CSO class categorisation. The categories are as follows:

Table 9.1 CSO social class categorisation

Social Class	Description
1	Higher professional, higher managerial, proprietors and farmers farming 200 or more acres
2	Lower professional, lower managerial proprietors and farmers farming 100-199 acres
3	Other non-manual and farmers farming 50-99 acres
4	Skilled manual and farmers farming 30-49 acres
5	Semi-skilled manual and farmers farming less than 30 acres
6	Unskilled manual

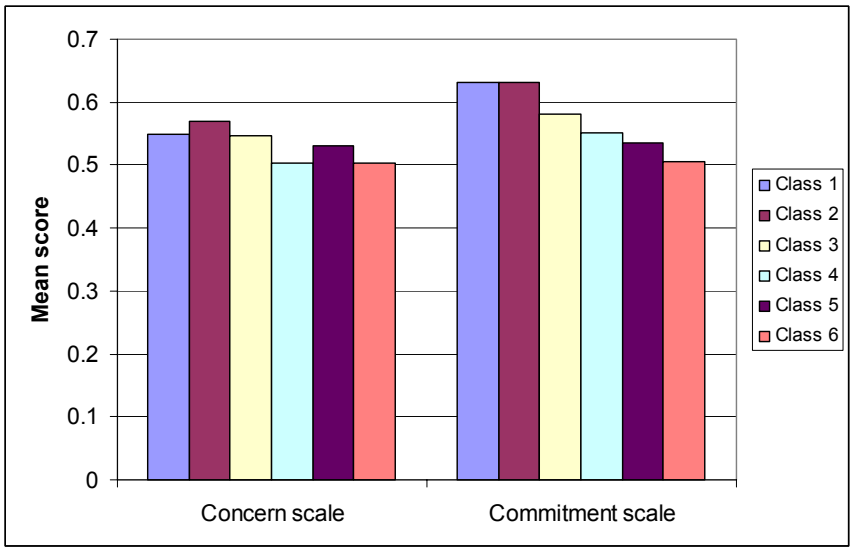
Source: Central Statistics Office.

Respondents are assigned to these class categorisations according to their stated occupation. Retired respondents are classified by their former occupation. Code 7 is used where social class in unknown, and these respondents are excluded from the correlation analysis.

Obviously, such a simplified class categorisation, with its inherent value judgements, can be no more than an approximate guide to the concept of class, and should be viewed as such in the analysis presented here. Additionally, many of the questions in the module tend to make assumptions about education, empowerment, and world

view through their language and framing, and this makes the analysis by such a class variable even more fraught. However, it is valuable nonetheless to examine the patterns of the scales by the social class variable:

Figure 9.6 Mean scale scores by social class



A lower numerical class value (i.e. higher social class as defined by the measure), predicts a higher score on the concern and, even more so, the commitment scales. The pattern for the concern scale suggests that the influence of class on these attitudes is less marked, although still observed in the same direction.

Occupation as a predictive variable

Given the variation in the mean concern and commitment scale scores according to education levels, income and class, it would be expected that patterns be visible in responses according to the occupations of the respondents. To test this, mean scores for the two scales can be calculated by one-digit ISCO occupation code, a classification code that groups occupations into the broad category headings seen in the table below:

Table 9.2 Mean scale scores according to occupation

One-digit ISCO code category	Concern scale	Commitment scale
Legislators, Senior Officials and Managers	0.54	0.61**
Professionals	0.60**	0.66**
Technicians and Associated Professionals	0.54	0.63**
Clerks	0.57	0.57
Service Workers and Shop and Market Sales Workers	0.55	0.55
Skilled Agricultural and Fishery Workers	0.50*	0.55
Craft and Related Trade Workers	0.52	0.53*
Plant and Machine Operators and Assemblers	0.48**	0.53**
Elementary Occupations	0.50*	0.51**
Overall mean	**0.54**	**0.57**

Retired people not included in this table
** Significant at the 1% level (T-test of category mean against whole sample mean)
* Significant at the 5% level

The mean score of the professionals' category is significantly higher than the overall mean for both scales. The concern scale shows the lowest mean score among 'Plant and Machine Operators and Assemblers' and then among workers in the agricultural sector and elementary occupations. For the commitment scale, the lowest scoring category is elementary occupations. Both scales show a general pattern of decrease as one moves down from professionals towards the manual and elementary categories, a pattern that has already been seen in the class, income and education variables.

Comparative analysis of socio-demographic patterns

Correlations between socio-demographics and the two scales are statistically significant, but often quite low:

Table 9.3 Correlations of scales by socio-demographic variables

		Concern scale	Commitment scale
Social class	Pearson Correlation	-0.11**	-0.28**
	N	1048	1064
Age (in years)	Pearson Correlation	-0.10**	0.07**
	N	1177	1196
Highest level of education completed	Pearson Correlation	0.19**	0.26**
	N	1198	1217
Household income	Pearson Correlation	0.06*	0.16**
	N	1199	1218
Gender	Pearson Correlation	0.10**	-0.03
	N	1199	1218

** significant at the 1% level
* significant at the 5% level

There is a strong association between the commitment scale and both social class and education level – the higher the social class and the higher the education level, the greater the degree of environmental commitment. For the concern scale, correlation with education level is the most notable. Other correlations are smaller, but most are significant.

Since several of these variables (education, income, class and occupation) follow similar trends and are obviously interdependent, it is difficult to disaggregate the data sufficiently to reveal which is the strongest influence. Income in itself is bound to be an influence on willingness to pay, but there will also be some patterns of 'world view' or identity variation across occupation and class. Linear regression of several of the socio-demographic variables and dependent variables for the scales suggests that education level is the strongest influence with regard to environmental concern, and education and social class the strongest influences on commitment:

Table 9.4 Linear regression of scales by key socio-demographic variables

Socio-demographic variable	Standardised regression coefficients	
	Concern	Commitment
Social class	-0.05	-0.18**
Age	-0.04	0.15**
Gender	0.08*	0.00
Household income	0.01	0.07
Highest level of education completed	0.15**	0.18**
Regression adjusted R^2	0.042	0.109

** Significant at the 1% level
* Significant at the 5% level

Larger regression coefficients, either positive or negative, indicate a stronger statistical relationship among the set of dependent variables taken together. The adjusted R^2 values indicate that the five socio-demographic variables explain just 4.2% of the variance in the concern scale and 10.9% in the commitment scale.

It is notable that the income variable seems to be the least important, especially when considering the willingness to pay items in the commitment scale. It thus seems likely that a sense of personal empowerment and efficacy , which may be associated with, for example, education level, is as important as the financial means to take action.

10. Conclusions

Overview of results

Despite the considerable turbulence and change in environmentalism between 1993 and 2002, particularly in terms of environmental politics, what is possibly most striking about the analysis of the environmental surveys is that change in response patterns is often quite small.

Political discourses about the environment have evolved significantly in the past ten years, particularly through the advent of the politics of sustainable development as embodied in the ecological modernisation paradigm. Sustainable development has become the dominant language of political talk about the environment, and is also a key influence on policy formation and institutional change. Sustainable development encapsulates the paradigm of ecological modernisation, in which environmental and economic goals are seen as aligned, and indeed environmental protection is seen as essential to continued economic growth. A question for this analysis is whether this change in political discourse is matched by changes in types of attitudes and concern expressed by individual respondents.

Attitudinal Shifts

Certainly, as outlined in Chapter 3, there are discernible attitudinal shifts towards two components of the ecological modernisation discourse; faith in scientific decision making, and rejection of a environmental protection – economic growth dichotomy. Support for both of these themes is growing, as revealed in several related questions. However, it is not easy to distinguish between respondents who are expressing the view that environmental imperatives can be accommodated in modern economic and political systems and those who are simply expressing either scepticism about the real extent of environmental threats or a desire for business as usual in spite of environmental concerns.

However, it does not appear from the responses to this survey that such scepticism is dominant or is growing over time. In fact, the evidence suggest the contrary. In 2002, more people accept that it is not too difficult for them to 'do something about the environment', and a majority (albeit slightly smaller than in 1993) claim to do what is right for the environment 'even when it costs more money or takes more time.'

There is also an increase in the number of people claiming willingness to pay for environmental protection, although it is notable that more people are willing to pay higher prices than are willing to pay higher taxes. This may be because of an aversion to tax generally and a preference to control payment for the environment through consumer choices. It may also reveal a tendency to respond more positively to questions about behaviour that is more remote or abstract, which is the case with unspecified higher prices as opposed to the more concrete question of higher tax. However, it is notable that between 1993 and 2002 there is more growth in positive responses to the willingness to pay higher tax item than the higher prices item.

Knowledge and concern

In both surveys, responses to scientific knowledge questions reveal a generally low level of such knowledge. In addition, virtually no change in performance is observed over time. However, there is some indication from responses that people understand the important causal links between their own actions and the environmental impacts, which is obviously more important than an understanding of the scientific details. There is also evidence that some of the items are not taken as simple factual questions, but questions of personal values. Specifically, among those expressing formal religious beliefs, negative responses to the question about humans having evolved from animals are much higher.

Analysis suggests that those with more knowledge of the issues tend to express greater environmental concern and commitment. Thus there is an identifiable type of respondent with considerable knowledge of environmental issues and a desire to prioritise their amelioration, in both personal and political terms. This is quite a modern type of environmental concern.

This concern is also seen in the questions on specific environmental issues and the respondents' levels of worry or concern about each of them. There is a strong shift away from expressions of extreme concern between 1993 and 2002, but no change in the overall levels of concern, when moderate and extreme concern are examined together. Environmental concern, it seems, is becoming embedded in day to day life and normal politics, and is less in the domain of radical or extreme political views.

Among the issues of concern to respondents, the impact of nuclear power plants remains the highest, followed by pollution of rivers and lakes and then industrial pollution. These three were the issues of highest overall concern in both 1993 and 2002. However, the most change is seen in items relating to global environmental impacts; concern about air pollution from cars 'for the environment' and the rise in the world's temperature (climate change) exhibit the most positive shifts over time.

Responsibility and trust

Despite some of the signs, discussed above, of a move towards the ecological modernisation paradigm of environmental concern, respondents' apportionment of responsibility and preferred political responses are not entirely consonant, especially regarding the role of business. Respondents quite strongly see 'people in general' as doing most to protect the environment, followed by government and then lastly by business and industry. This pattern is also seen in the very low level of support for business to 'decide for themselves' about environmental protection, and the very high support of a regulatory approach. Laws are also supported for 'ordinary people', although not to quite the same extent. For both groups, support for voluntary approaches has fallen over time.

Similar patterns of perceived trustworthiness are seen in responses about who to trust as sources of information on the environment. Universities fare best, business is seen as least trustworthy, followed by newspapers and then government departments.

One area where changing context has had the most impact on the survey results is that of recycling behaviour. There is a dramatic increase in reported recycling, particular away from those reporting that it is not an option for them, as would be expected from the increased availability of facilities over the past decade. However,

a similar trend is not seen in relation to cutting back on driving 'for environmental reasons', despite the raised profile in recent years of car usage and its environmental impacts.

Socio-demographic influences

All of these response patterns for both attitudinal and behavioural questions can be examined in terms of the influence of socio-demographic variables, such as age, gender, income and social class. Overall, there is some explanatory power in the set of socio-demographic variables. Both concern and commitment levels generally rise with education levels. Patterns by age are more complex, with the highest expressed concern and commitment occurring in the mid-range categories, and with the youngest age groups exhibiting among the lowest levels of interest in the issues. Social class is a significant predictor of many responses, and analysis suggests that identity related socio-demographic variables, such as occupation type, education and class, are more important than income. This could mean that there is a significant cultural, or self-identity related dimension to environmental attitudes.

Trends in environmental concern

There is some evidence to suggest that environmentalism is becoming a more mainstream, modern and normal paradigm of concern in Ireland. Certainly, in the 2002 responses there is less extreme concern than in 1993, and less challenge to dominant economic or scientific paradigms. However, people are concerned about the environment, and are strongly supportive of government led responses, through regulation and even through higher prices or taxes where necessary. While there is much less support for the perceived polarity between economic growth and environmental protection as political imperatives, levels of concern expressed and support for political action to protect the environment show that this move away from the oppositional paradigm is not a move away from environmental prioritisation. The danger remains, however, that if concern becomes more normal and less extreme, that some of the urgency will be lost.

While better knowledge, and better education, does equate with greater environmental concern, detailed scientific knowledge does not seem to be a significant barrier to environmental support or behaviour. While knowledge of the scientific details of environmental issues is often weak, people seem to understand the implications of their actions and their own personal place in the causality. There is, however, possibly a tendency to express general, abstract, environmental concern or support that does not necessarily translate into real personal motivation.

As stated at the beginning of this report, it is dangerous to assume common understandings of concepts or terms, and it is inadequate to presume that the environment means the same things for everyone. It is clear that there are cultural and social dimensions to how people see the environment and their place in it, and top-down over-technical approaches to environmental management tend to hide these differences, possibly at the expense of personal involvement and commitment. The data analysed here suggests that very many people have a strong interest in and commitment to environmental protection. However, they seem to often feel detached from the political and technical details. An approach to environmental management that relied on a more subtle and flexible definition of people and their environmental motivation could only improve the connection between people's

attitudes and behaviour and their wider environmental impacts. Such an approach must start from a better understanding of these issues than is currently present. The process of understanding environmentalism in Ireland is only beginning.

Appendix 1 - Survey Sample Details

The ISSP Environment module was part of a larger national survey addressing general social and political attitudes, the *Irish Social and Political Attitudes Survey*. The total number of respondents for the environment module was 1257. Of these 951 returned by post a self-completion questionnaire (see Table A1.1). The sampling and face-to-face interviewing of respondents was carried out by the Economic and Social Research Institute. The fieldwork was for the most part carried out in January 2002 with five per cent occurring in December 2001 and thirteen per cent during February 2002.

Table A1.1 Survey Sample

	N	%
Full Productive Interview	**1257**	
Total number of starting addresses	2224	56.5
Minus addresses could not be traced and addresses established as empty, demolished, no private dwellings, N = 128	2096	60.0
Minus selected respondent away during survey period, N = 346	1750	71.8
Minus Refusal at selected address, N = 477	1273	
Minus Partial Productive Interview, N = 16	1257	

A three-stage clustered sampling approach was used for sample selection. The first stage involved the random sampling of Primary Sampling Units (PSU). At the second stage a random sample of households was selected. The third stage involved a random sample of a person within that household. The sampling frame used was the most up-to-date national electoral register. Electors are recorded in the electoral list in 'Polling Books'. For sample selection purposes these 'polling books' are reconstituted into area units known as District Electoral Divisions (DEDs) of which there are a total of 3,400 in Ireland. These DEDs are the most spatially disaggregated area units in Ireland for which census data are available and are the standard PSU building blocks for random sample selection. Once the Electoral Register had been restructured into the DED format a random sample of 220 PSUs was selected. These PSUs constituted the first stage of sample selection. Once the PSU was selected a systematic sample of addresses from within each was identified. When the addresses were identified the interviewer called at each and identified the target respondent using the next birthday rule. A lower age threshold of 18 years of age was applied. A consequence of sampling in this manner is that household addresses were selected in a disproportionate probability basis. The use of the electoral register meant that larger households, that is, those containing more electors, had a higher probability of being selected than addresses which contained a lower number of electors. This means that the sample is over represented in larger households. This is a common feature of samples drawn from such lists and is fully adjusted for in the derivation of the *ex-post* survey weights and grossing factors. The other bias is the non-listing of the addresses of households in which there is no member listed on the Electoral Register. The experience of the ESRI has led them to conclude that this small element of non-coverage introduces no systematic bias in the effective sample.

Appendix 2 - Full Questionnaire

The Economic and Social Research Institute
4 Burlington Road Dublin 4 Ph. 6671525

IRISH SOCIAL ATTITUDES SURVEY, WINTER 2001/2002

Interviewer's Name _____ Interviewer's Number ☐☐☐☐

Area Code ☐☐☐ Respondent Code ☐☐

Date of Interview: Day ☐☐ Month ☐☐ Time Interview Began (24hr clock) ☐☐☐☐

Introduction (Ask for named respondent)

Good morning/afternoon/evening. I am from the Economic and Social Research Institute in Dublin. We have been commissioned by a team of researchers from Trinity College Dublin and University College Dublin to carry out a short survey into social attitudes in Ireland today. You have been selected at random from the Electoral Register to participate in this survey. The interview will take about 55 minutes to complete and all information provided will be treated in the strictest confidence by the Economic and Social Research Institute. It will not be possible for anyone to identify your individual views or attitudes.

SECTION E THE ENVIRONMENT

E1 **How much do you agree or disagree with each of the following two statements?** [Int. Show Card E1 and tick (✓) one box on each line]

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Can't choose
1. Private enterprise is the best way to solve Ireland's economic problems	☐1	☐2	☐3	☐4	☐5	☐6
2. It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes	☐1	☐2	☐3	☐4	☐5	☐6

E2 **Looking at the items on this card** [Int. Show Card E2] **please indicate what you think should be (1) Ireland's highest priority and (2) Ireland's second highest priority – the second most important thing it should do?**

	Maintain order in the nation	Give people more say in government decisions	Fight rising prices	Protect freedom of speech	Can't choose
(1) Highest priority……..	☐1	☐2	☐3	☐4	☐5
(2) Second priority……..	☐1	☐2	☐3	☐4	☐5

E3 **How much do you agree or disagree with each of the following statements?** [Int: Show Card E1 and tick (✓) one box on each line]

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Can't choose
1. We believe too often in science, and not enough in feelings and faith	☐1	☐2	☐3	☐4	☐5	☐6
2. Overall, modern science does more harm than good	☐1	☐2	☐3	☐4	☐5	☐6
3. Modern science will solve our environmental problems with little change to our way of life	☐1	☐2	☐3	☐4	☐5	☐6
4. We worry too much about the future of the environment and not enough about prices and jobs today	☐1	☐2	☐3	☐4	☐5	☐6
5. Almost everything we do in modern life harms the environment	☐1	☐2	☐3	☐4	☐5	☐6

6. People worry too much about human progress harming the environment ☐1 ☐2 ☐3 ☐4 ☐5 ☐6
7. In order to protect the environment Ireland needs economic growth ☐1 ☐2 ☐3 ☐4 ☐5 ☐6
8. It is right to use animals for medical testing if it might save human lives ☐1 ☐2 ☐3 ☐4 ☐5 ☐6
9. Economic growth always harms the environment ☐1 ☐2 ☐3 ☐4 ☐5 ☐6
10. The earth simply cannot continue to support population growth at its present rate ☐1 ☐2 ☐3 ☐4 ☐5 ☐6

E4 **Please tick one box to show which statement is closest to <u>your</u> views.** [Int. Show Card E3 and tick (✓) one box only]

Nature is sacred because it is created by God ☐1
Nature is spiritual or sacred in itself ☐2
Nature is important, but not spiritual or sacred ☐3
Can't choose ☐4

E5 **How willing would you be:** [Int: Please tick (✓) one box on each line]

	Very Willing	Fairly willing	Neither willing nor unwilling	Fairly unwilling	Very unwilling	Can't choose
1. to pay much higher <u>prices</u> in order to protect the environment?	☐1	☐2	☐3	☐4	☐5	☐6
2. to pay much higher <u>taxes</u> in order to protect the environment?	☐1	☐2	☐3	☐4	☐5	☐6
3. to accept cuts in your standard of living in order to protect the environment?	☐1	☐2	☐3	☐4	☐5	☐6

E6 **How much do you agree or disagree with each of these statements?** [Int: Show Card E1 and tick (✓) one box on each line]

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Can't choose
1. It is just too difficult for someone like me to do much about the environment	☐1	☐2	☐3	☐4	☐5	☐6
2. I do what is right for the environment, even when it costs more money or takes more time	☐1	☐2	☐3	☐4	☐5	☐6
3. There are more important things to do in life than protect the environment	☐1	☐2	☐3	☐4	☐5	☐6
4. There is no point in doing what I can for the environment unless others do the same	☐1	☐2	☐3	☐4	☐5	☐6
5. Many of the claims about environmental threats are exaggerated	☐1	☐2	☐3	☐4	☐5	☐6

E7 **I am going to read out 6 statements. I would like you to tell me how true you think each is.**[Int: Please tick (✓) one box on each line – show card E4]

	Definitely true	Probably true	Probably not true	Definitely not true	Can't choose
In your opinion, how true is this?					
1. 'Antibiotics can kill bacteria but not viruses'	☐1	☐2	☐3	☐4	☐5
2. 'Human beings developed from earlier species of animals'	☐1	☐2	☐3	☐4	☐5
3. 'All man-made chemicals can cause cancer if you eat enough of them'	☐1	☐2	☐3	☐4	☐5
4. 'If someone is exposed to any amount of radioactivity they are certain to die as a result'	☐1	☐2	☐3	☐4	☐5

5. 'The greenhouse effect (global warming) is caused by a hole in in the earth's atmosphere' ..... ☐1 ☐2 ☐3 ☐4 ☐5

6. 'Every time we use coal or oil or gas, we contribute to the greenhouse effect' (global warming) ..... ☐1 ☐2 ☐3 ☐4 ☐5

E8a In general, how dangerous do you think that air pollution caused by cars is on the environment? [Int: Show Card E5 and tick (✓) one box only]

extremely dangerous for the environment	very dangerous	somewhat dangerous	not very dangerous	not dangerous at all for the environment	Can't choose
☐1	☐2	☐3	☐4	☐5	☐6

E8b And how dangerous do you think that air polluction caused by cars is to you and your family? [Int: Show Card E6 and tick (✓) one box only]

extremely dangerous for you and your family	very dangerous	somewhat dangerous	not very dangerous	not dangerous at all for you and your family	Can't choose
☐1	☐2	☐3	☐4	☐5	☐6

E9a In general, do you think that air pollution caused by industry is …[Int: Show Card E5 and tick (✓) one box only]

extremely dangerous for the environment	very dangerous	somewhat dangerous	not very dangerous	not dangerous at all for the environment	Can't choose
☐1	☐2	☐3	☐4	☐5	☐6

E9b And do you think that pesticides and chemicals used in farming are:….[Int: Show Card E5 and tick (✓) one box only]

extremely dangerous for the environment	very dangerous	somewhat dangerous	not very dangerous	not dangerous at all for the environment	Can't choose
☐1	☐2	☐3	☐4	☐5	☐6

E9c And do you think that pollution of Ireland's rivers, lakes and streams is …[Int: Show Card E5 and tick (✓) one box only]

extremely dangerous for the environment	very dangerous	somewhat dangerous	not very dangerous	not dangerous at all for the environment	Can't choose
☐1	☐2	☐3	☐4	☐5	☐6

E10a In general, do you think that a rise in the world's temperature caused by the 'greenhouse effect' (global warming) is … [Int: Show Card E5 and tick (✓) one box only]

extremely dangerous for the environment	very dangerous	somewhat dangerous	not very dangerous	not dangerous at all for the environment	Can't choose
☐1	☐2	☐3	☐4	☐5	☐6

E10b And do you think that modifying the genes of certain crops is …[Int: Show Card E5 and tick (✓) one box only]

extremely dangerous for the environment	very dangerous	somewhat dangerous	not very dangerous	not dangerous at all for the environment	Can't choose
☐1	☐2	☐3	☐4	☐5	☐6

E11a If you had to choose, which one of the following would be closest to your views? [Int: Show Card E7 and tick (✓) one box only]

Government should let **ordinary people** decide for themselves how to protect the environment, even if it means they don't always do the right thing…..☐1

OR

Government should pass laws to make **ordinary people** protect the environment, even if it interferes with people's rights to make their own decisions…..☐2

Can't choose……..☐3

E11b And which one of the following would be closest to your views? [Int: Show Card E8 and tick (✓) one box only]

Government should let **businesses** decide for themselves how to protect the environment, even if it means they don't always do the right thing …..☐1

OR

Government should pass laws to make **businesses** protect the environment, even if it interferes with businesses' rights to make their own decisions…..☐2

Can't choose……..…….☐3

E12 Some countries are doing more to protect the world environment than other countries are. In general, do you think that Ireland is doing … [Int: Please tick (✓) one box only]

More than enough…..☐1 About the right amount…..☐2 Too little…..☐3 Can't choose…..☐4

E13a On balance, which of these two do you think is making more effort to look after the environment [Int: Please tick (✓) one box only]

Business and industry…..☐1 People in general…..☐2 Both equally…..☐3 Can't choose…..☐4

E13b And which of <u>these</u> two groups do you think is making more effort to look after the environment… [Int: Please tick (✓) one box only]

Government…..☐1 Business and industy…..☐2 Both equally…..☐3 Can't choose…..☐4

E13c And which of <u>these</u> two groups is making more effort to look after the environment… [Int: Please tick (✓) one box only]

People in general…..☐1 Government…..☐2 Both equally…..☐3 Can't choose…..☐4

E14 How much do you agree or disagree with each of these statements? [Int: Show Card E9 and tick (✓) one box on each line]

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Can't choose
1. For environmental problems, there should be international agreements that Ireland and other countries should be made to follow	☐1	☐2	☐3	☐4	☐5	☐6
2. Poorer countries should be expected to make less effort than richer countries to protect the environment	☐1	☐2	☐3	☐4	☐5	☐6
3. Economic progress in Ireland will slow down unless we look after the environment better	☐1	☐2	☐3	☐4	☐5	☐6

E15 How likely do you think that, within the next five years, an accident at a nuclear power station will cause long-term environmental damage across many countries? [Int: Please tick (✓) one box only]

Very likely…..☐1 Likely…..☐2 Unlikely…..☐3 Very Unlikely…..☐4 Can't choose…..☐5

E16 How much trust do you have in each of the following groups to give you correct information about causes of pollution? [Int: Show Card E10 and please tick (✓) one box on each line]

	A great deal of trust	Quite a lot of trust	Some trust	Not much trust	Hardly any trust	Can't choose
1. Business and industry ……	☐1	☐2	☐3	☐4	☐5	☐6
2. Environmental groups ……	☐1	☐2	☐3	☐4	☐5	☐6
3. Government departments ……	☐1	☐2	☐3	☐4	☐5	☐6
4. Newspapers ……	☐1	☐2	☐3	☐4	☐5	☐6
5. Radio or TV programmes ……	☐1	☐2	☐3	☐4	☐5	☐6
6. University research centres ……	☐1	☐2	☐3	☐4	☐5	☐6

E17a How often do you make a special effort to sort glass or tins or plastic or newspapers and so on for recycling?
[Int: Please tick (✓) one box only]

Always…..☐1 Often…..☐2 Sometimes…..☐3 Never…..☐4 Recycling not available where I live….☐5

E17b. And how often do you <u>cut back</u> on driving a car for environmental reasons? [Int: Please tick (✓) one box only]

Always…..☐1 Often…..☐2 Sometimes…..☐3 Never…..☐4 I do not have or cannot drive a car…..☐5

E18 Are you a member of any group whose main aim is to preserve or protect the environment?
[Int: Please tick (✓) one box only]

YES…….. ☐1 NO……..….☐2

E19 In the last five years, have you ... [Int: Please tick (✓) one box on each line]

	Yes I have	No I have not
1. signed a petition about an environmental issue?	☐1	☐2
2. given money to an environmental group?	☐1	☐2
3. taken part in a protest or demonstration about an environmental issue?	☐1	☐2

E20 Please tick one box below to show which statement comes closest to expressing what you believe about God
[Int: Show Card E11 and tick (✓) one box only]

1. I don't believe in God……..☐1
2. I don't know whether there is a God and I don't believe there is any way to find out……☐2
3. I don't believe in a personal God, but I do believe in a Higher Power of some kind……☐3
4. I find myself believing in God some of the time but not at others…… .....☐4
5. While I have doubts, I feel that I do believe in God……☐5
6. I know God really exists and I have no doubts about it…… ☐6
7. Can't choose……☐7

E21 Would you describe the place where you live as … [Int: Please tick (✓) one box only]

A big city	the suburbs or outskirts of a big city	a small city or town	a country village	a farm or home in the country
☐1	☐2	☐3	☐4	☐5

E22 In general, do you think that nuclear power stations are … [Int: Show Card E5 and please tick (✓) one box only]

extremely dangerous for the environment	very dangerous	somewhat dangerous	not very dangerous	not dangerous at all for the environment	Can't choose
☐1	☐2	☐3	☐4	☐5	☐6

E23 How much do you agree or disagree with each of these statements? [Int: Please tick (✓) one box on each line]

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Can't choose
1. Government should redistribute income from the better-off to those who are less well off	☐1	☐2	☐3	☐4	☐5	☐6
2. There is little that people can do to change the course of their lives	☐1	☐2	☐3	☐4	☐5	☐6
3. One of the problems with people today is that they challenge authority too often	☐1	☐2	☐3	☐4	☐5	☐6
4. People with money should be left to enjoy it	☐1	☐2	☐3	☐4	☐5	☐6
5. There are times when people should follow their consciences even if it means breaking the law	☐1	☐2	☐3	☐4	☐5	☐6

6. Private enterprise needs to be controlled to protect everyone's needs ..... ☐1 ☐2 ☐3 ☐4 ☐5 ☐6

7. All societies have inequalities which it is better not to interfere with ..... ☐1 ☐2 ☐3 ☐4 ☐5 ☐6

8. Taking everything into account, the world is getting better ..... ☐1 ☐2 ☐3 ☐4 ☐5 ☐6

E24 Interviewer Record Time (24 hour clock) ☐☐☐☐

SECTION F SOCIO-DEMOGRAPHICS

F1 Sex of respondent Male ..... ☐1 Female..... ☐2

F2 Could I ask for your date of birth ☐☐ Day ☐☐ Month ☐☐☐☐ Year

F3a Could I ask about your current marital status? Are you:

Married…. ☐1 Separated ….. ☐2 Divorced…. ☐3 Widowed…… ☐4 Never married…. ☐5

F3b Are you currently living with your husband/wife?

Yes… ☐1 No… ☐2

F3c Are you currently living with another partner? Yes… ☐1 No… ☐2

F3d Are you currently living with a partner? Yes… ☐1 No… ☐2

F4a How many years of full-time education did you receive? [Int: If respondent did not return to full-time education as an adult calculate as (age when left full-time education minus 5)]

_____ years of full-time education No formal education..... ☐1

F4b Which of the following best describes the highest level of education you have completed to date.
[Int. Please tick (✓) one box only]

None..... ☐1
Incomplete Primary..... ☐2
Complete Primary ..... ☐3
Started Second Level but no exams taken..... ☐4
Group Cert or equivalent..... ☐5
Junior/Intermediate Cert or equivalent..... ☐6
Leaving Cert or equiv. ..... ☐7
Started Third Level but did not complete ..... ☐8
Certificate or diploma ..... ☐9
University primary degree or equivalent..... ☐10
University higher degree or equivalent ..... ☐11

F5 During the last five years have you been unemployed and seeking work? By unemployed I mean available for and actively seeking work in contrast, for example, to someone who is engaged in home duties.

Yes……. ☐1→go to F6 No…….. ☐2→go to F7

F6 For how many months, over the last five years were you unemployed?_____

F7 Which of the following best describes your present situation with regard to employment:

[Int. Please tick (✓) one box only]

At work full-time (30 hrs or more) ..... ☐1→ **Go to F9**
At work part-time (less than 30 hrs weekly) ..... ☐2→ **Go to F9**
At work as relative assisting/unpaid family worker ..... ☐3→ **Go to F9**
Unemployed and seeking work ..... ☐4→ **Go to F8**
Student ..... ☐5→ **Go to F8**
Retired ..... ☐6→ **Go to F8**
Engaged in home duties ..... ☐7→ **Go to F8**
Long term sick or disabled ..... ☐8→ **Go to F8**
Other, specify_____ .. ☐9→ **Go to F8**

F8 [Int: For people who are unemployed or coded 4-9 in question F7] **Did you ever work at any time in the past, even if not currently working now?**

Yes ☐1 No ☐2 →go to F14

F8b When did you give up this job?_____month _____year →go to F9

F9 **How many hours do/did you normally work per week-including usual overtime if any?** _____hours

F10a **What is/was your occupation? Please describe fully. If farmer please record the number of acres farmed. If appropriate, please record the rank or grade, e.g. Civil Service, Gardai, Defence Forces etc.**

_____

_____

F10b **Please describe as fully as possible the nature of the business activity of your employer.**

_____

_____

F11a **Do/did you work in the public or private sector?** [PLEASE TICK ONE BOX ONLY]

Civil Service ..... ☐1
Local Authority Health Board or VEC ..... ☐2
Non-commercial semi-state body ..... ☐3
Semi-state body ..... ☐4
Private sector ..... ☐5

F11b **Are/were you self employed (including farmer) or are you an employee?**

Self employed ..... ☐1 Employee ..... ☐2

F11c How many people do you employ, including yourself? _____

F11d **Are/were you a member of any trade union at this time?** Yes .... ☐1 No ..... ☐2

F11e **Do/did you normally supervise any other workers in your job?**

Yes ..... ☐1 No ..... ☐2 → **Go to F12**

F11f Approximately how many do/did you supervise? _____ → **Go to F12**

F12 **How worried are/were you that you might become unemployed in the next year?**

Very worried…..☐1 Somewhat worried…..☐2 A little worried…..☐3 Not at all worried…..☐4

F13 **If you did become unemployed how long do you think it would take you to find a suitable job?** _____

F14 **[Int: check marital status at question F3] Is the respondent married or living with a partner?**

Yes..... ☐1→go to F15 No ..... ☐2→go to F19

F15 **In relation to employment could you describe your spouse's /partner's situation at present?** [Int. Please tick (✓) one box only]

At work full-time (30 hrs or more) ..... ☐1→ **Go to F18**
At work part-time (less than 30 hrs weekly) ..... ☐2→ **Go to F18**
Student ..... ☐5→ **Go to F16**
Retired ..... ☐6→ **Go to F16**

At work as relative assisting/unpaid family worker..... ☐3→ **Go to F18**
Unemployed and seeking work..... ☐4→ **Go to F16**
Engaged in home duties ..... ☐7→ **Go to F16**
Long term sick and disabled..... ☐8→ **Go to F16**
Other, specify_____ ☐9→ **Go to F16**

F16 **[Int: For people whose spouse/partner are unemployed or coded 4-9 in question F15 above] Did your spouse ever work at any time in the past, even if not currently working now?**

Yes ☐1 No ☐2 →go to F19

F17 **When did she/he give up this job?** ____month _____year →go to F18

F18 **What is/was your spouse's occupation? Please describe as fully as possible. If farmer please record the number of acres farmed. If appropriate, please record the rank or grade, e.g. Civil Service, Gardai, Defence Forces etc**

_____

_____

F19 **When you were 16 what kind of work did your father do- what was his occupation? Please describe fully. If farmer please record number of acres farmed. If appropriate, please record the rank or grade, e.g. Civil Service, Gardai, Defence Forces etc**

_____

_____

F20 **What were some of your father's main duties at work? Please write in a description of his duties.**

_____

_____

F21 **With regard to your accommodation, could you tell me if it is….** Int. Please tick (✓) one box only]

A house or a flat that you are buying on a mortgage ..... ☐1
A house or a flat that you are purchasing under a local authority tenant purchase scheme…… ☐2
A house or a flat that you own outright ..... ☐3
A house or a flat that you are renting from the local authority ..... ☐4
A house or a flat that you are renting privately..... ☐5
Other, please specify ..... ☐6

_____

F22 **Do you belong to any religious denomination?**

Yes…..☐1→Which one? _____ No…..☐2→go to F23 Don't Know….☐3→go to F23

F23 **Did your family belong to any religion when you were 16 years of age? Please describe as fully as possible**.
[Int: If none, write NONE, DO NOT LEAVE BLANK]

_____

_____

IF RELIGION GIVEN AT EITHER F22 OR F23 ABOVE

F24 **How often nowadays do you attend religious services?** [Int: Show Card F1 and tick (✓) one box only]

Several times a week..... ☐1
Once a week..... ☐2
2 or 3 times a month..... ☐3
Once a month ..... ☐4
Several times a year ..... ☐5
Once a year ..... ☐6
Less Frequently..... ☐7
Never..... ☐8
Refused ..... ☐9
Don't Know ..... ☐10
No Answer ..... ☐11

F25 **Using this card can you tell me if you personally believe that God exists or not? People who believe that God definitely <u>does not</u> exist would give a score of '0'. People who fully believe that God definitely <u>does</u> exist, would give a score of '10'. Other people would place themselves somewhere in between these two views. Where would you place yourself on this scale?** [Int. Show Card F2 and tick (✓) one box on each line]

God definitely ⟶ *God definitely*

DOES NOT exist										*DOES EXIST*
0	1	2	3	4	5	6	7	8	9	10

F26 **For about how much time, if any, have you ever lived outside the Republic of Ireland, not counting periods of less than three months?** [Int. Please tick (✓) one box on each line]

Never lived outside the Republic of Ireland for a period of three months or more…… ☐1
Lived for more than three months but less than a year ..... ……☐2
Lived for 1 to less than 2 years ..... ……☐3
Lived for 2 to less than 3 years ..... ……☐4
Lived for 3 to less than 4 years ..... ……☐5
4 years or longer ..... ……☐6

F27 **Many people think of themselves as being part of a particular nationality, for example as French or American or whatever. Do you think of yourself as Irish or as belonging to some other nationality, or do you not think of yourself in this way?** [Int. Show Card F3 and tick (✓) one box on each line]
I think of myself as:

Irish ..... ☐1→go to F28

Another nationality ..... ☐2→Which one?_____ →go to F28

A combination of different nationalities ..... ☐3→Which ones?_____ →go to F28

I don't think of myself in this way..... ☐4→go to F29

F28 **Overall how important is it to you that you are 'Irish' [if code 1 at F27] or other nationality (ies) [read out nationality if code 2 or 3 at F27]?**

Very important…..☐1 Fairly important…..☐2 Not very important…..☐3 Not important at all…..☐4

F29 **Are you a citizen of Ireland?**

Yes, citizen of Ireland…….☐1 No……...☐2

F30 **Which country are you a citizen of?** _____(please specify) →go to F31

F31 **Can you tell me whether or not (1) your mother and (2) your father was a citizen of Ireland when you were born?** [Int. Please tick ✓ one box only]

(1) Mother Yes…….☐1 No…….☐2
(2) Father Yes…….☐1 No…….☐2

F32 **Some people also think of themselves as belonging to a larger group that includes people from other countries, for example, as European, North American, African and so on. How about you? Do you think of yourself in this way?**

Yes…….☐1→ Which group? _____ **go to F33** No…….☐2→**go to F34**

F33 **Overall, how important is it to you that you are (read out the 'larger group' specified above)?**

Very important…..☐1 Fairly important…..☐2 Not very important…..☐3 Not important at all…..☐4

F34a **I would like to ask about the approximate level of net household income? This means the total income, after tax, PRSI and other statutory deductions, of *all* members of the household. It includes all types of income: income from employment, social welfare payments, child benefit, rents, interest, pensions etc. We would just like to know into which of four broad groups the total income of your household falls. I'd like to assure you once again that all information you give me is entirely confidential** [Int. Show Card F4 and tick (✓) one box below]

Per week	*Per Month*	*Per Year*		
A. Under £190	Under £825	Under £10,000	☐1	⇒*Go to Q.A below, Show Card A*
B. £191 - £360	£826 - £1570	£10,001 - £19,000	☐2	⇒*Go to Q.B below, Show Card B*
C. £361 - £570	£1571 - £2475	£19,001 - £30,000	☐3	⇒*Go to Q.C below, Show Card C*
D. £571 or more	£2476 or more	£30,001 or more	☐4	⇒*Go to Q.D below, Show Card D*

F34b [INT: Show Card A, B, C or D from the yellow cards as appropriate. Tick ONE Box only below]

A Would that be: (per week)	Under £85 ☐1	£86-£110 ☐2	£111-£150 ☐3	£151-£190 ☐4
_____(per month)	Under £370 ☐1	£371-£475 ☐2	£476-£650 ☐3	£651-£825 ☐4

	(per year)	Under £4500 ☐1	£4501-£5700 ☐2	£5701-£8000 ☐3	£8001-£10000 ☐4
B Would that be:	(per week)	£191-£220 ☐1	£221-£270 ☐2	£271-£320 ☐3	£321-£360 ☐4
	(per month)	£826-£950 ☐1	£951-£1150 ☐2	£1151-£1400 ☐3	£1401-£1570 ☐4
	(per year)	£10001-£11500 ☐1	£11501-£14000 ☐2	£14001-£16500 ☐3	£16501-£19000 ☐4
C Would that be:	(per week)	£361 -£400 ☐1	£401-£450 ☐2	£451-£500 ☐3	£501-570 ☐4
	(per month)	£1571-£1750 ☐1	£1751-£2000 ☐2	£2001-£2200 ☐3	£2201-£2475 ☐4
	(per year)	£19001-£21000 ☐1	£21001-£24000 ☐2	£24001-£26000 ☐3	£26001-£30000 ☐4
D Would that be:	(per week)	£571 -£650 ☐1	£651-£750 ☐2	£751-£950 ☐3	£951 or more ☐4
	(per month)	£2476 -£2800 ☐1	£2801-£3200 ☐2	£3201-£4100 ☐3	£4101 or more ☐4
	(per year)	£30001-£33500 ☐1	£33501-£38500 ☐2	£38501-£49000 ☐3	£49000 or more ☐4

F35 Thinking now of your household's total income, from all sources and from all household members, would you say that your household is able to make ends meet?

With great difficulty…..☐1 With some difficulty…..☐2 Fairly Easily…..☐3 Very Easily…..☐4

F36 Do you, or does anyone else in your household, own or have regular use of a car or van?

Yes, One Car/Van……☐1 Yes, More than one Car/Van…..☐2 No…….☐3

F37 In general, how good would you say your health is? Would you say it is:

Very Good…..☐1 Good…..☐2 Fair…..☐3 Bad…..☐4 Very Bad…..☐5

F38 Do you have any chronic, physical or mental health problem, illness or disability?

Yes ☐1 No…..... ..☐2

F39 Could you tell me:

1. Who is the leader of Fianna Fail?

Charlie McCreevy…☐1 Brian Cowen…☐2 Charlie Haughey…☐3 Bertie Ahern…☐4 Don't know…☐5

2. The Green Party recently elected a leader for the first time. Could you tell me who that is?

Patricia McKenna…☐1 John Gormley…☐2 Trevor Sargent…☐3 Roger Garland…☐4 Don't know…☐5

3. Who is the leader of Fine Gael?

Jim Mitchell…☐1 John Bruton…☐2 Michael Noonan…☐3 Alan Dukes…☐4 Don't know…☐5

4. Who is the Ceann Comhairle in the Dail (Speaker of the Dail)? [Int. Tick (✓) one box only]

Sean Tracey…☐1 Jim Mitchell…☐2 Sean Doherty…☐3 Seamus Pattisson…☐4 Don't know…☐5

5. Who is Ireland's European Commissioner?

David Byrne…☐1 Maire Geoghan Quinn…☐2 Barry Desmond…☐3 Padraig Flynn…☐4 Don't know…☐5

F40 I would like you to think now about who lives in your household. Could you please tell their (a) gender; (b) age last birthday; and finally (d) their relationship to each other. [Int. Show Card E on yellow cards.]

No	(A) Name/Initial	(B) Sex		(C) Age last birthday	(D) Relationship of each member to each other member. READ ACROSS THE ROWS Relationships listed on yellow card								
No		**Male**	**Female**	**YEARS**	***No***	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***
1	Head of Household	☐1	☐2		***1***									
2		☐1	☐2		***2***									
3		☐1	☐2		***3***									
4		☐1	☐2		***4***									
5		☐1	☐2		***5***									
6		☐1	☐2		***6***									
7		☐1	☐2		***7***									

8		☐1	☐2		*8*								
9		☐1	☐2		*9*								

F41 **Int: Please record the person number of the respondent (1 to 9 from F40 above)** _____

F42 **Are you the head of your household?** Yes ☐1→**go to F44** No ☐2

F43 **What is/was occupation of the head of the household? Please describe as fully as possible. If farmer please record the number of acres farmed. If appropriate, please record the rank or grade, e.g. Civil Service, Gardai, Defence Forces etc**

_____

_____

F44 **Size of location in which household is situated:**

Open Country	☐1	Waterford City	☐7
Village (200-1,499)	☐2	Galway City	☐8
Town (1,500-2,999)	☐3	Limerick City	☐9
Town (3,000-4,999)	☐4	Cork City	☐10
Town (5,000-9,999)	☐5	Dublin City (incl. Dun Laoghaire)	☐11
Town (10,000 or more)	☐6	Dublin County (outside Dublin city)	☐12

F45 **Interviewer Record Time (24 hour clock)** ☐☐☐☐

Appendix 3 - Data Tables

Table A3.1 Question E1, 2002
How much do you agree or disagree with each of the following two statements?

		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Can't choose / DK	N
1. Private enterprise is the best way to solve Ireland's economic problems	*2002*	6.5	37.5	26.9	16.8	3.1	9.1	1253
	1993	15.0	39.4	14.4	18.7	6.4	6.0	957
2. It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes	*2002*	10.8	54.3	14.6	14.8	1.4	4.2	1253
	1993	35.9	39.7	6.1	12.9	3.1	2.3	957

Table A3.2 Question E2, 2002

Looking at the items on this card please indicate what you think should be (1) Ireland's highest priority and (2) Ireland's second highest priority – the second most important thing it should do?

	Ireland's highest priority		**Ireland's 2nd highest priority**	
	2002	*1993*	*2002*	*1993*
Maintain order in the nation	43.8	37.0	19.2	23.0
Give people more say in govt decisions	21.6	32.2	24.1	25.9
Fight rising prices	17.1	21.7	25.2	30.2
Protect freedom of speech	9.1	8.0	20.3	19.2
Can't choose / DK	8.4	1.0	11.2	1.7
N	1253	957	1253	957

Table A3.3 Question E3, 2002

How much do you agree or disagree with each of the following statements?

		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Cant Choose, DK
Statement		**Percentage Responses**					
E3-1. We believe too often in science, and not enough in feelings and faith	*2002*	6.1	45.3	19.6	20.5	1.7	6.6
	1993	16.4	47.6	12.2	19.4	1.3	2.9
E3-2. Overall, modern science does more harm than good	*2002*	2.2	18.4	16.1	52.7	4.9	5.5
	1993	5.7	31.4	13.4	39.9	6.7	2.8
E3-3. Modern science will solve our environmental problems with little change to our way of life	*2002*	0.8	20.6	21.0	43.9	5.2	8.6
	1993	2.5	22.7	15.4	45.0	10.8	3.7
E3-4. We worry too much about the future of the environment and not enough about prices and jobs today	*2002*	3.5	24.0	14.0	48.3	6.8	3.1
	1993	18.9	35.7	7.2	32.1	5.6	0.4
E3-5. Almost everything we do in modern life harms the environment	*2002*	4.2	46.5	15.1	29.7	1.5	3.0
	1993	7.5	40.6	11.8	33.7	5.0	1.3
E3-6. People worry too much about human progress harming the environment	*2002*	1.0	29.8	15.0	45.3	4.5	4.3
	1993	5.3	35.8	9.3	43.0	4.9	1.5
E3-7. In order to protect the environment Ireland needs economic growth	*2002*	2.5	45.1	17.5	26.3	1.7	7.0
	1993	12.7	51.3	12.9	17.9	2.5	2.7
E3-8. It is right to use animals for medical testing if it might save human lives	*2002*	5.8	49.1	12.8	20.2	7.3	4.6
	1993	13.2	43.7	12.5	19.5	9.1	1.9
E3-9. Economic growth always harms the environment	*2002*	1.3	20.1	21.1	49.0	2.6	6.0
	1993	4.8	26.4	14.9	42.9	7.4	3.4
E3-10. The earth simply cannot continue to support population growth at its present rate	*2002*	4.7	40.0	19.1	23.4	1.4	11.4

Table A3.4 Question E4, 2002
Please tick one box to show which statement is closest to <u>your</u> views.

	2002 Percent	1993 Percent
Nature is sacred because it is created by God	39.7	44.8
Nature is spiritual or sacred in itself	22.3	21.3
Nature is important, but not spiritual or sacred	26.3	30.4
Cant choose, DK	11.6	3.4
N	1253	957

Table A3.5 Question E5, 2002
How willing would you be:

		Very willing	Fairly willing	Neither nor	Fairly unwilling	Very unwilling	Cant Choose, DK	N
Statement		Percentage Response						
1. to pay much higher prices in order to protect the environment?	*2002*	6.3	44.6	13.8	19.7	11.1	4.5	1253
	1993	8.3	41.1	10.4	18.9	20.3	1.0	957
2. to pay much higher taxes in order to protect the environment?	*2002*	4.1	28.1	13.5	29.4	19.3	5.6	1253
	1993	3.4	20.2	7.9	24.3	42.9	1.1	957
3. to accept cuts in your standard of living in order to protect the environment?	*2002*	4.2	29.4	16.0	26.7	19.3	4.5	1253
	1993	4.5	24.6	10.6	23.2	35.8	1.4	957

Table A3.6 Question E6, 2002
How much do you agree or disagree with each of these statements?

		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Can't Choose, DK
Statement		Percentage responses					
1. It is just too difficult for someone like me to do much about the environment	*2002*	2.9	29.9	7.3	51.5	6.1	2.4
	1993	12.4	34.4	6.0	37.0	9.6	0.6
2. I do what is right for the environment, even when it costs more money or takes more time	*2002*	3.0	51.7	18.7	22.2	1.3	3.0
	1993	8.8	51.6	17.0	20.3	0.9	1.6
3. There are more important things to do in life than protect the environment	*2002*	2.2	22.4	17.1	49.0	6.6	2.6
4. There is no point in doing what I can for the environment unless others do the same	*2002*	4.5	41.2	5.5	43.5	3.6	1.5
5. Many of the claims about environmental threats are exaggerated	*2002*	2.1	24.6	16.0	44.1	7.2	6.2

Table A3.7 Question E7, 2002
I am going to read out 6 statements. I would like you to tell me how true you think each is

	Correct answer		Definitely true	Probably true	Probably not true	Definitely untrue	Cant Choose, DK
a. 'Antibiotics can kill bacteria but not viruses'	True	*2002*	31.2	39.9	6.5	4.2	18.2
		1993	28.8	39.8	12.5	4.2	14.6
b. 'Human beings developed from earlier species of animals'	True	*2002*	21.9	40.5	12.0	13.0	12.7
		1993	21.1	38.8	13.5	18.6	8.0
c. 'All man-made chemicals can cause cancer if you eat enough of them'	False	*2002*	14.1	41.9	18.7	10.8	14.5
		1993	20.9	41.2	18.7	9.8	9.4
d. 'If someone is exposed to any amount of radioactivity, they are certain to die as a result'	False	*2002*	11.8	32.4	25.8	19.4	10.6
		1993	17.2	39.7	20.6	16.7	5.7
e. 'The greenhouse effect is caused by a hole in the earth's atmosphere'	False	*2002*	34.8	45.5	4.3	5.7	9.7
		1993	40.9	38.3	4.8	6.0	10.0
f. 'Every time we use coal or oil or gas, we contribute to the greenhouse effect'	True	*2002*	35.5	45.7	7.3	2.6	8.9
		1993	31.8	47.3	11.2	3.1	6.6

Table A3.8 Questions E8-E10, 2002
In general, how dangerous do you think…

		Extremely dangerous	Very dangerous	Somewhat dangerous	Not very dangerous	Not dangerous at all	Total	Cant Choose, DK
Statement		**Percentage Responses**						
How dangerous do you think that air pollution caused by cars is to the environment	*2002*	13.5	35.2	40.6	6.9	0.8	97.0	3.0
	1993	15.9	29.0	39.5	13.8	.8	99.1	0.9
How dangerous do you think that air pollution caused by cars is to you and your family	*2002*	6.3	21.9	46.3	19.2	2.8	96.5	3.5
	1993	13.6	24.9	37.9	19.1	3.3	98.9	1.1
How dangerous do you think that air pollution cause by industry is to the environment	*2002*	17.8	40.2	34.4	4.4	0.2	96.9	3.1
	1993	26.3	38.1	28.4	6.0	0.5	99.4	0.6
How dangerous do you think that pesticides and chemicals used in farming are to the environment	*2002*	14.8	36.3	39.3	6.1	0.7	97.2	2.8
	1993	23.8	31.2	35.4	7.2	1.5	99.2	0.8
How dangerous do you think that pollution of Ireland's rivers, lakes and streams is to the environment	*2002*	22.3	41.1	29.8	4.0	0.2	97.5	2.5
	1993	36.2	35.2	23.1	4.6	.5	99.6	0.4
How dangerous do you think that a rise in the world's temperature caused by the 'greenhouse effect' (global warming) is to the environment	*2002*	18.0	32.2	35.5	6.6	0.5	92.8	7.2
	1993	25.0	28.6	30.6	6.4	1.1	91.7	8.2
How dangerous do you think that modifying the genes of certain crops is to the environment	*2002*	15.1	26.8	34.2	8.9	1.3	86.3	13.7

N=1253 (2002); 957 (1993)

Table A3.9 Question E11, 2002
If you had to choose, which one of the following would be closest to your views?

Government should let **ordinary people** decide for themselves how to protect the environment, even if it means they don't always do the right thing OR

Government should pass laws to make **ordinary people** protect the environment, even if it interferes with people's rights to make their own decisions…..

		Decide themselves	Pass laws	Can't Choose	N
E11a Ordinary people	*2002*	16.5	71.6	11.2	1244
	1993	24.3	71.6	4.1	918
E11b Businesses	*2002*	6.7	84.4	7.7	1238
	1993	9.1	87.7	3.1	926

Table A3.10 Question E12, 2002
Some countries are doing more to protect the world environment than other countries are. In general, do you think that Ireland is doing …

Response	Percent
More than enough	2.2
About the right amount	32.7
Too little	55.8
Can't choose	8.9
N	1247

2002 responses only, question wording different in 1993

Table A3.11 Question E13, 2002
On balance, which of these two do you think is making more effort to look after the environment

	Percent Responses 2002		
	E13a Business vs. People	*E13b Government vs. Business*	*E13c People vs. Government*
Business and industry	9.7	9.7	-
People in general	52.7	-	37.1
Government	-	41.5	21.1
Both equally	21.7	26.1	25.9
Can't choose	15.2	21.9	14.9

N=1241

Table A3.12 Question E14, 2002
How much do you agree or disagree with each of these statements?

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Can't Choose, DK	N
Statement							
1. For environmental problems, there should be international agreements that Ireland and other countries should be made to follow	22.5	61.1	6.3	5.1	0.1	4.7	1244
2. Poorer countries should be expected to make less effort than richer countries to protect the environment	2.6	27.5	11.0	48.1	6.6	4.1	1238
3. Economic progress in Ireland will slow down unless we look after the environment better	6.5	44.4	20.0	18.4	1.0	8.9	1241

Table A3.13 Question E15, 2002
How likely do you think that, within the next five years, an accident at a nuclear power station will cause long-term environmental damage across many countries?

Response	Percent
Very likely	20.9
Likely	45.3
Unlikely	19.5
Very unlikely	5.2
Can't Choose	9.1
N	1245

Table A3.14 Question E16, 2002
How much trust do you have in each of the following groups to give you correct information about causes of pollution?

	business and industry	environmental groups	government departments	newspapers	radio or tv programmes	university research centres
A great deal of trust	1.4	19.5	3.2	4.2	6.6	28.0
Quite a lot of trust	5.5	41.4	21.6	20.1	32.2	42.0
Some trust	37.2	29.0	46.7	44.2	45.2	21.9
Not much trust	33.6	4.8	17.8	19.6	9.8	3.0
Hardly any trust	18.4	1.9	7.7	9.1	3.5	1.6
Can't choose / DK	4.0	3.4	3.0	2.7	2.6	3.4

N=1253

Table A3.15 Question E17, 2002

E17a How often do you make a special effort to sort glass or tins or plastic or newspapers and so on for recycling?

E17b And how often do you cut back on driving a car for environmental reasons?

		Always	Often	Sometimes	Never	Not available/Not applicable/DK
Recycling	2002	26.2	22.3	26.3	17.5	7.7
	1993	14.4	14.2	17.9	26.3	27.2
Cut back on driving for environmental reasons	2002	1.5	5.7	18.1	53.2	21.5
	1993	0.8	1.6	11.2	52.6	33.9

N=1253 (2002); 957 (1993)

Table A3.16 Question E18, 2002
Are you a member of any group whose main aim is to preserve or protect the environment?

	Yes	No	N
2002	3.7	96.3	1243
1993	4.0	96.0	956

Table A3.17 Question E19, 2002
In the last five years, have you

		Yes	No	N
signed a petition about an environmental issue?	*2002*	25.2	74.8	1243
	1993	20.6	79.4	953
given money to an environmental group?	*2002*	19.8	80.2	1238
	1993	22.8	77.2	950
taken part in a protest or demonstration about an environmental issue?	*2002*	4.9	94.9	1240
	1993	4.3	95.7	952

Table A3.18 Question E20, 2002
Please tick one box below to show which statement comes closest to expressing what you believe about God

	2002 Percent	1993 Percent
I don't believe in God	2.5	2.1
I don't know whether there is a God and I don't believe there is any way to find out	3.6	2.0
I don't believe in a personal God, but I do believe in a Higher Power of some kind	7.5	4.5
I find myself believing in God some of the time but not at others	10.0	7.7
While I have doubts, I feel that I do believe in God	26.2	20.8
I know God really exists and I have no doubts about it	47.8	61.3
Cant Choose, Dk	2.5	1.6

N=1253 (2002); 957 (1993)

Table A3.19 Question E21, 2002
Would you describe the place where you live as

	2002	1993
A big city	4.8	4.2
Suburbs/outskirts of a big city	23.5	25.9
Small city or town	28.1	24.9
A country village	10.5	10.8
A farm or home in the country	32.8	34.2
Missing/DK	0.4	0.1

N=1253 (2002); 957 (1993)

Table A3.20 Question E22, 2002
In general, do you think that nuclear power stations are

	Extremely dangerous	Very dangerous	Somewhat dangerous	Not very dangerous	Not dangerous at all	Cant Choose, DK
2002	44.6	33.0	17.5	1.5	0.4	3.0
1993	53.0	30.3	12.9	2.3	0.3	1.2

N=1253 (2002); 957 (1993)

Table A3.21 Question E23, 2002
How much do you agree or disagree with each of these statements?

	strongly agree	agree	neither agree/disagree	disagree	strongly disagree	Can't choose / DK
1. Government should redistribute income from the better-off to those who are less well off	8.5	44.1	15.6	25.6	2.3	3.8
2. There is little that people can do to change the course of their lives	1.4	14.8	7.3	61.3	12.8	2.4
3. One of the problems with people today is that they challenge authority too often	2.7	28.6	15.3	43.2	6.3	3.9
4. People with money should be left to enjoy it	5.5	63.9	17.5	8.5	1.1	3.5
5. There are times when people should follow their consciences even if it means breaking the law	2.8	30.9	15.8	37.3	6.1	7.1
6. Private enterprise needs to be controlled to protect everyone's needs	4.0	54.1	18.1	13.2	1.8	7.7
7. All societies have inequalities which it is better not to interfere with	1.0	26.0	20.8	36.5	3.8	12.0
8. Taking everything into account, the world is getting better	2.5	43.3	17.6	26.6	4.5	5.5

N=1253

Appendix 4 - Additional Analytical Tables

Table A4.1 Factor analysis of E3 items

Item	Component		
	1	2	3
believe too often in science	0.12	0.00	0.76
modern science does more harm than good	0.17	0.12	0.74
modern science-solve our environ probs	0.50	0.34	-0.00
worry too much about future of environ	0.77	-0.15	0.21
everything do in mod life harms environ	-0.00	0.52	0.46
worry too much-human prog harm environ	0.74	0.00	0.21
protect environ-irl needs econ growth	0.62	0.33	-0.00
econ growth always harms the environment	0.18	0.54	0.25
econ prog s/down-unless look after environ	0.00	0.60	0.00
earth cant support populat growth @ rate	0.14	0.71	-0.00

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 7 iterations.

Table A4.2 Correlations of attitudes by age

	believe too often in science	modern science does more harm than good	modern science-solve our environ probs	worry too much about future of environ	protect environ-irl needs econ growth	Nature as sacred	closest to what you believe about god
Correlation by Age	-0.09**	-0.11**	0.01	-0.11**	-0.07*	-0.26**	0.22**
N	1222	1222	1221	1220	1219	1223	1225

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table A4.3 Correlations of attitudes by income

	believe too often in science	modern science does more harm than good	modern science-solve our environ probs	worry too much about future of environ	protect environ-irl needs econ growth	Nature as sacred	closest to what you believe about god
Correlation by income	0.01	0.05	-0.01	0.09**	-0.04	0.04	-0.14**
N	1245	1245	1243	1243	1242	1247	1249

** Correlation is significant at the 0.01 level (2-tailed).

Table A4.4 Correlation of willingness to pay by income

	pay higher PRICES-protect environment	pay higher TAXES-protect environment	cuts standard living-protect environment
Correlation by income	-0.13**	-0.13**	-0.13**
N	1246	1239	1240

** Correlation is significant at the 0.01 level (2-tailed).
Lower scores on willingness to pay items indicate more willing to pay

Table A4.5 Correlations against quiz scores

	Protect environ: pay much higher prices	Protect environ: pay much higher taxes	Protect env: cut your standard of living	Gender
Correlation against quiz score	-0.26**	-0.28**	-0.26**	-0.03
N	1209	1202	1203	1215
Correlation by gender	0.05	0.08**	0.08**	1.00
N	1225	1218	1219	1232

** Correlation is significant at the 0.01 level (2-tailed).
Lower scores on willingness to pay items indicate more willing to pay

Table A4.6 Correlation coefficients of different environmental behaviours

	How often sort glass etc for recycling	Cut back on driving for environ reason	Member of group-protect environment	Last 5yrs-Signed petition	Last 5yrs-Given money to env group	Last 5yrs-Protest on environ issue
How often sort glass etc for recycling	1.00	0.25	0.08	0.20	0.21	0.12
Cut back on driving for environ reason	0.25	1.00	0.12	0.14	0.21	0.08
Member of group-protect environment	0.08	0.12	1.00	0.19	0.19	0.15
Last 5yrs-Signed petition	0.20	0.14	0.19	1.00	0.47	0.30
Last 5yrs-Given money to env group	0.21	0.21	0.19	0.47	1.00	0.22
Last 5yrs-Protest on environ issue	0.12	0.08	0.15	0.30	0.22	1.00

All correlations significant at the 0.01 level (2-tailed).
N = 1231 - 1243

Table A4.7 Correlations of environmental behaviour by gender and by age

	How often sort glass etc for recycling	Cut back on driving for environ reason	Member of group-protect environment	Last 5yrs-Signed petition	Last 5yrs-Given money to env group	Last 5yrs-Protest on environ issue
Correlation by gender	-0.15**	0.08**	0.03	-0.02	-0.05	0.00
N	1245	1243	1243	1243	1238	1240
Correlation by age	-0.11**	-0.04	0.02	0.14**	0.08**	0.03
N	1222	1220	1220	1220	1215	1217

** Correlation is significant at the 0.01 level (2-tailed).

Appendix 5 - Additional Self-Completion Questions

Respondents to the questionnaire were asked by the interviewer to keep an additional questionnaire for completion at their convenience and return by post. 76% of respondents to the main survey returned the additional take home questionnaire. Among the items on this questionnaire were 13 additional questions relating to environmental issues, a brief overview of the results are presented here. More detailed analysis will be presented in subsequent project reports.

Table A5.1 Self-completion responses – general questions

	strongly disagree	Disagree	slightly disagree	neither agree nor disagree	slightly agree	agree	strongly agree	Don't know
Q5-1 The natural environment is fragile and needs great care	2. 0	1.7	2.7	7.5	13.7	45.9	26.1	0.5
Q5-2 In the modern world natural resources are being depleted too rapidly	1.3	1.7	2.7	9.9	14.6	46.8	22.2	0.8
Q5-3 The Irish State should do what scientists say about protecting nature	1.3	2.1	3.4	13.3	23.2	42.8	13.3	0.7
Q5-4 However much human beings try to alter nature for their own benefit it will follow its own ways	1.7	9.8	7.5	13.1	20.4	36.7	9.9	1.0
Q5- 5 You can never be sure how nature will react	0.8	3.7	2.8	9.9	15.5	50.4	15.8	1.2
Q5-6 Modifying nature for human use seldom causes serious problems	9.7	36.5	11.7	18.0	8.2	11.7	2.4	1.9
Q5-7 To protect nature, everybody needs to follow environmental regulation	1.4	2.0	1.9	5.5	17.3	52.0	18.5	1.6
Q5-8 My first priority is to provide for myself and my family, even if this means doing things that harm the environment	5.5	23.6	14.4	17.8	17.4	15.8	4.3	1.4
Q5-9 It is very important to maintain the variety of living species in the world	1.6	1.3	1.3	5.9	11.5	47.0	30.4	1.2

N=951

Responses Q5-1 and Q5-2 reveal a very high degree of environmental concern, while Q5-4 and Q5-5 suggest a belief in the resilience and independence of nature. These seem somewhat contradictory results, but are probably showing a tendency to answer in a pro-environmental way to all types of question testing concern.

Q5-3 elicits similar support for scientific approaches found in the main questionnaire (see Chapter 3), and Q5-7 also matches the pattern of support for regulatory approaches discussed in Chapter 7. The pattern or responses to Q5-8 indicates a considerable degree of prioritisation of environmental protection, and would seem to support the finding that many people are willing to take personal action and make personal sacrifices.

Among the set of questions on waste and recycling, it is notable that the acceptability of incinerators and landfill sites are quite similar, and in both cases quite high, or at least not strongly negative. However, the difference between abstract questions about national approaches and local dispute about specific plans should not be forgotten. Respondents express a high degree of willingness to pay for recycling, but also support the view that original manufacturers should take responsibility for recycling of their products:

Table A5.2 Self-completion responses – questions on waste
N=951

	strongly disagree	Disagree	slightly disagree	neither agree nor disagree	slightly agree	agree	strongly agree	Don't know
Q5-10 Using incinerators is the best way to dispose of waste	7.2	19.9	7.7	26.6	10.4	22.1	5.2	1.1
Q5-11 I would be willing to pay more in order to recycle waste	2.4	7.8	5.6	12.6	22.2	39.5	8.7	1.2
Q5-12 New landfill sites should be developed to dispose of waste	7.2	17.8	10.1	22.0	12.7	25.3	4.0	1.0
Q5-13 It should be up to the original manufacturer to recycle consumer products	1.7	11.5	5.2	17.0	16.9	33.5	13.1	1.1

Appendix 6 - Development of the attitudinal scales

Chapter 9 makes use of two attitudinal scales – a concern scale and a commitment scale – to analyse patterns in the data by socio-demographic variables. These scales were developed through a mixture of theoretical and statistical analysis of the questions and their response patterns in order to identify valid scales that tapped into meaningful underlying constructs. The object was not to develop scales for wider use or to imply special meaning to them, but rather to create robust proxies for the underlying concepts, concern and commitment, that could then be used in the analysis of socio-demographic patterns.

In order to construct the concern scale, an initial set of possible question items were selected through a mixture of overall correlation analysis and theoretical consideration of items relevant to the general concern concept. Factor analysis was then carried out on these items, with a scale emerging based on four attitudinal items that encapsulate environmental concern in the concepts of relative environmental prioritisation, belief in the existence of environmental problems, and worry about probably the major global environmental problem on the political agenda today. These items were:

- We worry too much about the future of the environment and not enough about prices and jobs today
- There are more important things to do in life than protect the environment
- Many of the claims about environmental threats are exaggerated
- How dangerous do you think that a rise in the world's temperature caused by the 'greenhouse effect' (global warming) is to the environment

Factor analysis of these four items on their own give the following result:

Table A6.1 Final factor analysis for the concern scale

Item	Component
	1
worry too much about future of environ	0.72
more imp things than protect environment	0.72
many claims about environ-exaggerated	0.68
rise in world temp-by greenhouse effect	-0.436

Extraction Method: Principal Component Analysis.
1 component extracted.

In order to create a valid and usable scale, the items are oriented together (the fiurth item being reversed) and re-scaled so that the final scale runs between 0 and 1, with higher values indicating greater levels of concern. The reliability (Cronbach's alpha) of the four items taken together as a scale is 0.63.

For the commitment scale, a mixture of attitudinal and behavioural items was considered. This was to allow the scale to be based on both expressions of personal commitment and also on current environmental habits. Again, factor analysis was undertaken, with a six item scale emerging, based on a mixture of attitudinal and behavioural items, thus representing commitment as measured by current environmental plus stated intent. Thus the commitment scale can be constructed from these items:

- I do what is right for the environment, even when it costs more money or takes more time
- How often do you make a special effort to sort glass or tins or plastic or newspapers and so on for recycling
- How often do you cut back on driving a car for environmental reasons
- Willingness to pay higher prices
- Willingness to pay higher taxes
- Willingness to accepts cuts in the standard of living

Factor analysis of these items gives the following result:

Table A6.2 Final factor analysis for the commitment scale

Item	Component
	1
pay higher PRICES-protect environment	0.83
pay higher TAXES-protect environment	0.82
cuts standard living-protect environment	0.81
I do what's right for envir-even if cost more	0.58
how often, sort glass etc for recycling	0.44
cut back on driving for environ reason	0.43

As with the concern scale, the items are oriented together and re-scaled so that the final scale measures commitment between 0 and 1, with 1 being the highest level of commitment. Cronbach's alpha, measuring reliability, for this scale is 0.75.

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