

## 3.10 Sustainability

### **CORE POLICY OBJECTIVE: SUSTAINABILITY**

**To ensure that all development is socially, economically and environmentally sustainable**

Sustainability is a crucial issue for people and the environment in the 21<sup>st</sup> century. Too often, however, sustainability is defined in terms that are too narrow. Sustainability is about a range of issues including environmental, economic and social. To complement the economic and social analysis elsewhere in this publication, this section focuses first on promoting sustainable development before then turning to assess environmental issues.

#### **(a) Promoting Sustainable Development**

The search for a humane, sustainable model of development has gained momentum in recent times. After years of people believing that markets and market forces would produce a better life for everyone, major problems and unintended side-effects have raised questions and doubts. There is a growing awareness that sustainability must be a constant factor in all development, whether social, economic or environmental.

This fact was reiterated by Kofi Annan, the Secretary-General of the United Nations, at the opening of the World Summit on Sustainable Development in Johannesburg, South Africa (September 2002). There he stated that the aim of the conference was

to bring home the uncomfortable truth that the model of development that has prevailed for so long has been fruitful for the few, but flawed for the many.

And he further added that

the world today, facing the twin challenges of poverty and pollution, needs to usher in a season of transformation and stewardship – a season in which we make a long overdue investment in a secure future.

Sustainable development has been defined in many different ways. Perhaps the best-known definition is that contained in *Our Common Future* (World Commission on Environment and Development, 1987:43):

development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

It is crucial that the issues of environmental, economic and social sustainability be firmly at the core of the decision making process.

### **The need for shadow national accounts**

Conventional economic models of development or progress fail to meet the needs of millions and millions of people on this planet today. This failure is evident even within better-off countries such as Ireland. These conventional economic models also compromise the ability of future generations to meet their needs. As this becomes more evident, there is a growing demand worldwide to find new models that will conserve the planet and its resources and empower people to meet their own needs and the needs of others.

Central to any model of development which has sustainability at its core must be a realisation of the need to move away from money-measured growth, as the principal economic target and measure of success, towards sustainability in terms of real-life social, environmental and economic variables. Already within mainstream decision-making, this realisation has begun to have some impact. This can be seen, for example, in the growing awareness that environmental taxation should be recognised as a key policy instrument in dealing with environmental concerns. Public concern in the area of genetically modified (GM) food stands as another example. In the context of income and social welfare policy, the increasing recognition of the benefits of a basic income are a further example of the same search for policies that will be sustainable into the future (see section 3.1(d)). The growing demand for the recognition of unpaid work being done in society stands as yet another example. As can be seen from these examples, however, there is a long way to go before Ireland or the EU can claim to have placed sustainability at the centre of their development models.

A central initiative in this context should be the development of “satellite” or “shadow” national accounts. Our present national accounts miss fundamentals such as environmental sustainability. Their emphasis is on GNP/GDP as scorecards of wealth and progress. These measures, which came into widespread

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use during World War II, more or less ignore the environment, and completely ignore unpaid work. Only money transactions are tracked. Ironically, while environmental depletion is ignored, the environmental costs of dealing with the effects of economic growth, such as cleaning up pollution or coping with the felling of rain forests, are added to, rather than subtracted from, GNP/GDP. New scorecards are needed.

Already a number of alternative scorecards exist, such as the United Nations' Human Development Index (HDI), former World Bank economist Herman Daly's Index of Sustainable Economic Welfare (ISEW) and Hazel Henderson's Country Futures Index (CFI). A 2002 study by Wackernagel et al presented the first systematic attempt to calculate how human demands on the environment are matched by its capacity to cope. It found that we currently use 120 per cent of what the earth can provide sustainably each year.

In the environmental context it is crucial that dominant economic models are challenged on (among other things) their assumptions that nature's capital (clean air, water and environment) are essentially free and inexhaustible; that scarce resources can always be substituted; and that the planet can continue absorbing human and industrial wastes which most economists tend to downplay as externalities.

Some governments have picked up on these issues, especially in the environmental area. They have begun to develop "satellite" or "shadow" national accounts, which include items not traditionally measured. *Towards 2016* commits the Irish government to examine the application of satellite accounts in the area of environmental sustainability. *Social Justice Ireland* welcomed this development which was scheduled to occur during 2007. However, to date this process has not happened. We strongly urge government to deliver on this commitment during 2010.

### **Principles to underpin sustainable development**

Principles to underpin sustainable development have been suggested in a report for the European Commission prepared by James Robertson in May 1997. Entitled *The New Economics of Sustainable Development*, the report argues that these principles would include the following:

- systematic empowerment of people (as opposed to making and keeping them dependent) as the basis for people-centred development

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- systematic conservation of resources and environment as the basis for environmentally sustainable development
  - evolution from a “wealth of nations” model of economic life to a “one-world” economic system
  - evolution from today’s international economy to an ecologically sustainable, decentralising, multi-level one-world economic system
  - restoration of political and ethical factors to a central place in economic life and thought
  - respect for qualitative values, not just quantitative values
  - respect for feminine values, not just masculine ones.

At first glance, these might not appear to be the concrete guidelines that policy-makers so often seek. Yet they are principles that are relevant to every area of economic life. They also apply to every level of life, ranging from personal and household to global issues. They impact on lifestyle choices and organisational goals. If these principles were applied to every area, level and feature of economic life they would provide a comprehensive checklist for a systematic policy review.

It is also important that any programme for sustainable development should take a realistic view of human nature, recognising that people are altruistic and selfish, co-operative and competitive. Consequently it is important to develop the economic system to reward activities that are socially and environmentally benign (and not the reverse, as at present). This in turn would make it easier for people and organisations to make choices that are socially and environmentally responsible. A simple example is the tax on plastic bags. It shows how quickly people can and will change. In just one week some retail outlets were reporting a 90 per cent reduction in the use of plastic bags. Overall the Department of Environment and Local Government estimated that usage had declined by 95 per cent (approximately one billion bags) in 2002. Since then there has been some increase in usage despite an increase in the levy. This highlights the need to sustain the effort required in relevant areas to ensure the need for sustainable development is recognised and pursued.

Any programme for sustainable development has implications for public spending. In addressing this issue it needs to be understood that public expenditure programmes and taxes provide a framework which helps to shape market prices, rewards some kinds of activities and penalises others. Within this framework there are other areas which are not supported by public expenditure or are not taxed. This framework should be developed to encourage economic efficiency and enterprise, social equity and environmental sustainability. Systematic reviews should be carried

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out and published on the sustainability effects of all public subsidies and other relevant public expenditure and tax differentials. Such reviews could then lead to the elimination of subsidies that favour unsustainable development. Systematic reviews should also be carried out and published on the possibilities for re-orientating public spending programmes, with the aim of preventing and reducing social and environmental problems.

### **Monitoring sustainable development: some problems**

Two studies have highlighted the lack of socio-economic and environmental data in Ireland required to assess trends in sustainable development. A chapter by Carrie in the Feasta review (2005) focused on the lack of long-run socio-economic data on issues such as education participation, crime and healthcare. Another paper by Scott (ESRI, 2005) outlined the empirical and methodological gaps which continue to impede the incorporation of sustainable development issues into public policy making and assessment. It is only through a sustained commitment to data collection in all of these areas that these deficiencies will be addressed. We welcome recent developments in this area, particularly at the CSO, and look forward to all of these data impediments being removed in the years to come.

### **(b) Environmental Issues**

Our environment is a priceless asset. Its protection is of major importance not just to current times but also to the generations that will follow us. However, the environment is regularly taken for granted; it is often mistreated and excessively exploited. We start this section with a brief overview of some key environmental facts about Ireland. Then, we examine a number of environmental issues that are of concern at this time.

### **Ireland: some key environmental facts**

Three recent publications offer some very interesting figures on environmental issues and policies in Ireland. They are: *Measuring Ireland's Progress 2008* (CSO 2009a); *The Statistical Yearbook of Ireland 2009* (CSO 2009b); and *Ireland's Environment 2008* (Environmental Protection Agency, 2008a). While it is only possible to assess a fraction of the issues covered by these documents, the following are among the key figures reported in these documents:

- Smoke pollution in Dublin, Cork and Limerick has decreased significantly since the introduction of legal restrictions on the sale of non-smokeless coals (CSO 2008a: 68). Dublin, Cork, and 21 other Irish towns now record pollution levels below the EU limits. Dublin last exceeded the limit in the

period of 1997–1999, while Cork and the sample of other Irish towns have not done so in the years for which data are available (from 2000) (CSO 2009a:68).

- The number of private cars in Ireland per 1,000 population aged 15 and over has increased from 403 in 1997 to 545 in 2007. The EU average (excluding the UK and Greece) is 497 cars per 1,000 population (15 years +) (CSO 2009a: 71). In 1997 93.1 per cent of all inland freight was transported by road (CSO 2008a: 72). This increased to 99.3 per cent in 2007, 22.8 percentage points higher than the EU-27 average.
- There were 730,494 hectares of afforested land in Ireland in 2008. This represents a gain of almost 6,248 hectares on 2007 and an increase of 51.8 per cent since 1990 (CSO 2009b: 327).
- In 2007 trees removed 1,518 kilotonnes of CO<sub>2</sub> from the Irish atmosphere while road transport created 13,755 kilotonnes (CSO 2009b: 327–328).
- ‘Acid rain precursor emissions’ have decreased by 44.8 per cent between 1990 and 2007 (CSO, 2009b: 331).
- Oil and gas accounted for 82.1 per cent of Ireland’s energy supply in 2007 (CSO, 2009b: 329).
- Renewable energy only provides 2.9 per cent of Ireland’s electricity generation needs (CSO, 2009b: 329)

In 2007, 42.9 per cent of Ireland’s energy demands derived from transport, 22 per cent from residential households, 20.3 per cent from industry, 12.6 per cent from agriculture and 12.6 per cent from the service sector (CSO 2009b: 329).

### **(i) Waste disposal and recycling**

Household and commercial waste has increased by over 38.2 per cent in volume between 2001 and 2007 (CSO, 2009b). Ireland produced almost 3.1 million tonnes of waste – excluding agricultural waste – in 2007 (EPA, 2008). This represents an increase of 23 per cent since 2004.

The management of this growing volume of waste remains a challenge. In 2007, 36.5 per cent of our waste was recovered, while the remaining 63.5 per cent went to landfill (CSO, 2009b: 333). This represents an improvement on 2004, when 32.7 per cent of waste was recovered (CSO, 2008a: 70). As Table 3.10.1 shows there are still some problematic areas where levels of landfill remain very high. Targeted policies in the areas of plastics, textiles and organic waste are clearly needed if we are to further increase this recycling figure. However, it should be noted that with 36.1 per cent of waste recycled, 2006 represented the first year in which Ireland

reached the EU target of 35 per cent. This target was to be met by 2013 and its early achievement proves that through good policies, real changes and improvements in environmental policies can be achieved.

**Table 3.10.1: Total waste collected and landfilled in Ireland in 2007**

<b>Material</b>	<b>Tonnes (000s)</b>	<b>% Landfilled</b>
Paper and cardboard	914.1	42.0
Glass	182.6	26.3
Plastic	288.8	77.5
Metals (Aluminium etc)	133.5	37.5
Textiles	244.9	95.6
Organic Waste	918.4	92.4
Wood	240.7	7.1
Others	251.7	86.6
<b>Total</b>	<b>3,174.6</b>	<b>63.5</b>

**Source:** CSO (2009a: 333)

*Social Justice Ireland* welcomes this development and we echo the call by the EPA that “a revised target to present new challenges and build on this success is required”. While Ireland has achieved the EU recycling target we have some distance to go to match some Scandinavian countries and the US city of San Francisco who have set targets to eliminate all landfill by 2020. Another area where improvement is necessary is in the diversion of biodegradable municipal waste (BMW) from landfill. In 2006, 1.4m tonnes of BMW was landfilled, an increase of 8 per cent on 2005 (EPA, 2007). Ireland must reduce this quantity to reach EU limits of 916,000 tonnes by 2010 (EPA 2009a: 21). Finally, it is worth noting that the growth in the volume of waste has also been dramatic. At this rate of growth it is no surprise that our landfill capacity will soon be reached. In that context continued efforts to encourage reductions in waste generation and additional recycling are necessary.

A welcome recent innovation has been the production of performance league tables of local authority waste management. This table has been produced by the Local Government Management Services Board (LGMSB) and its most recent edition was published in June 2009 and related to the year 2008. Their report examined how local authorities have been dealing with the waste produced in their area and in particular it identified the proportion of waste being landfilled.

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Table 3.10.2 sets out the results for the 4 best and 4 worst local authorities as reported by the LGMSB.

<b>Table 3.10.2: League table of local authority waste management – best and worst</b>		
	<b>% Recycling</b>	<b>% Landfill</b>
<b>4 Best</b>		
Longford County Council	55.1	44.9
Galway City Council	49.2	50.8
Waterford City Council	46.0	54.1
Waterford County Council	45.6	54.4
<b>4 Worst</b>		
North Tipperary County Council <sup>75</sup>	18.5	81.5
Sligo County Council	17.1	83.0
Donegal County Council	15.0	85.0
Carlow County Council	12.7	87.3

**Source:** LGMSB, 2009: 49

Longford county council topped the league table by recycling 55.12 per cent of their waste. Carlow remains the worst performance, having landfilled 87.3 per cent of their waste, though this represents an improvement on 91.7 per cent in 2007. *Social Justice Ireland* welcomes the publication of this league table. Its continued production will ensure that local authorities are incentivised to improve their performance. We also note that it is important to monitor local authority policies which aim to reduce and reuse commodities rather than purely dispose of them.

Both industry and households need to change their attitude towards recycling. Industry in all sectors will have to use fewer material inputs and emit fewer wastes. To facilitate this, government needs to move towards making material inputs and waste disposal far more expensive, and towards making increasing demands for the durability, reparability and recyclability of goods. The highly successful Waste Electrical & Electronic Equipment (WEE) directive marks considerable progress in the right direction. Further EU directives which will force car companies to take back their products at the end of their useful lives are also a necessary step in this direction. The 2008 Finance Bill also allowed companies to claim the full cost of

<sup>75</sup> 2007 figures as 2008 figures had not been received from private waste collectors.

investments in energy efficient equipment against their taxable income. However, more needs to be done. Households will also have to change their behaviour. Sustained campaigns to further encourage and facilitate recycling are necessary, while incentives to recycle rather than landfill need to be put in place

**(ii) Greenhouse gases, air pollution and carbon credits**

Over time, Ireland's air has become more and more polluted. Between 1990 and 2008 the EPA reported that Ireland's greenhouse gas emissions grew by 23.0 per cent (see Table 3.10.3). Total combined Irish emissions of the three main greenhouse gases regarded as having global warming potential amounted to 67.43m tonnes of CO<sub>2</sub> equivalent in 2008, up from 55.8m tonnes in 1990.

A breakdown of the 2008 pollution figures shows that agriculture is the single largest contributor to overall emissions, at 27.3 per cent of the total, followed by energy (generation and oil refining) at just over 21.8 per cent and transport at 21.1 per cent.

The most recent figures indicate that current levels of emissions now exceed the limits agreed under the Kyoto protocol. The Irish government and the European Commission agreed a target of an 8 per cent reduction in European CO<sub>2</sub> emissions on their 1990 level by 2012. Within this agreement, Ireland agreed to limit its increase of CO<sub>2</sub> emissions to 13 per cent between 1990 and 2012. Table 3.10.3 reports the level of greenhouse gas emissions versus the 1990 level (set at 100 on the emissions index). *Social Justice Ireland* welcomes Ireland's ongoing commitment to this protocol, despite the refusal of some countries, including the USA, to ratify its implementation. However, these emissions are a major cause of climate change, and it is in all our interests to ensure that the limits agreed in the Kyoto protocol are met.

The recent decline in economic activity is expected to reduce emissions levels. However, it would seem inappropriate to abandon the plans and policy developments of recent years. Clearly, there are additional changes that Ireland can continue to make which will further reduce our emissions levels. In particular, the transport sector has a central role to play. While launching the 2007 figures, the EPA noted that the transport sector recorded the greatest increase between 2006 and 2007 (of 4.7 per cent) and that that sector's pollution contribution has grown by 178 per cent since 1990. If simple policy options are available to address this sustained growth in transport related emissions, they should be adopted.

**Table 3.10.3: Ireland's Greenhouse Gas Emissions and the Kyoto Target**

<b>Year</b>	<b>Emissions Index</b>	<b>+ / - Kyoto Target</b>	<b>% from target</b>
1990	100.00	-13.00	
1998	118.11	5.11	+4.5
1999	120.69	7.69	+6.8
2000	123.62	10.62	+9.4
2001	126.98	13.98	+12.4
2002	123.59	10.59	+9.4
2003	123.17	10.17	+9.0
2004	122.78	9.78	+8.7
2005	125.55	12.55	+11.1
2006	124.61	11.61	+10.3
2007	123.41	10.41	+9.2
2008	123.02	10.02	+8.9

**Source:** EPA (2009b: 7)

Firstly, the EPA underlines as a key issue the reduction of Ireland's emissions of transboundary air pollutants in line with international commitments (EPA, 2008a: 43).

Secondly, traffic emissions in Cork and Dublin have caused levels of nitrogen dioxide and particulate matter to approach EU limits. In Ireland, the growth in traffic on our roads has been one of the more visible elements of our recent economic growth; the number of registered vehicles on the road in Ireland has increased by 132 per cent over the period 1990–2007 (CSO, 2009b: 323). The number of private cars increased by 136 per cent over the same period. This enormous growth in car usage is attributed to the lack of an extensive public transport system. The EPA (2008a) concludes that “government departments, national agencies and local authorities must make air quality protection an integral part of their planning and traffic management processes, and there needs to be a modal shift from the private car to high-quality public transport.” An integrated, efficient public transport system is urgently required. Infrastructure to divert heavy vehicles away from city and town centres is also essential” (2002: viii). A welcome step in this direction was Budget 2007's reform of VRT and motor taxes. The general thrust of the reforms we proposed suggested that both VRT and motor taxes should be increased on the most heavily polluting cars and reduced on those with the lowest engine sizes and the smallest carbon dioxide emissions levels. In

particular, there would be significant increases in the taxes levied on the highest polluting and largest engine cars. In that context we welcomed the reforms introduced by the Minister for Finance in Budget 2008. Although we regret that the start date of these new taxes was delayed until July 2008 – long after the vast majority of car sales for 2008 occurred.

**(iii) Climate change: international and Irish implications**

Over the past number of years many questions have been raised with regard to the appropriateness and reliability of the scientific evidence on climate change. In particular, there have been a number of politicians and academics who have dismissed the available evidence and suggested that the identified effects of global warming are part of the Earth's natural cycle. In response to this uncertainty the British Government commissioned an independent report to critically examine the available evidence. Nicholas Stern, a former chief economist of the World Bank and the current head of the British Government Economic Service, researched and wrote the report. Among the key findings of the report are the following:<sup>76</sup>

- Carbon emissions have already pushed up global temperatures by half a degree Celsius
- If no action is taken on emissions, there is more than a 75 per cent chance of global temperatures rising between two and three degrees Celsius over the next 50 years
- Rising sea levels could leave 200 million people permanently displaced
- Up to 40 per cent of species could face extinction
- There will be more examples of extreme weather patterns
- Extreme weather could reduce global gross domestic product (GDP) by up to 1 per cent
- A two to three degrees Celsius rise in temperatures could reduce global GDP by 3 per cent
- In the worst case scenario global consumption per head would fall 20 per cent
- To stabilise at manageable levels, emissions would need to stabilise in the next 20 years and fall between 1 per cent and 3 per cent after that. This would cost 1 per cent of GDP

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<sup>76</sup> A full version of the report can be downloaded from the website: [www.sternreview.org.uk](http://www.sternreview.org.uk)

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International reports such as those issued by the Intergovernmental Panel on Climate Change (IPCC, 2001 and 2007) have provided further details on the international implications of climate change. To complement these, two reports focusing on Ireland have been prepared for the EPA by the Department of Geography at the NUI, Maynooth. (Sweeney et al, 2003; McElwain and Sweeney, 2007), presented an assessment of the magnitude and likely impacts of climate change in Ireland over the course of the current century.

The 2003 report entitled *Climate Change: scenarios & impacts for Ireland* predicted the following:

- Current mean January temperatures in Ireland are predicted to increase by 1.5°C by mid-century with a further increase of 0.5–1.0°C by 2075.
- By 2055, the extreme south and south-west coasts will have a mean January temperature of 7.5–8.0°C. By then, winter conditions in Northern Ireland and in the north Midlands will be similar to those currently experienced along the south coast.
- Since temperature is a primary meteorological parameter, secondary parameters such as frost frequency and growing season length and thermal efficiency can be expected to undergo considerable changes over this time interval.
- July mean temperatures will increase by 2.5°C by 2055 and a further increase of 1.0°C by 2075 can be expected. Mean maximum July temperatures in the order of 22.5°C will prevail generally with areas in the central Midlands experiencing mean maxima of up to 24.5°C.
- Overall increases of 11 per cent in precipitation are predicted for the winter months of December–February. The greatest increases are suggested for the north-west, where increases of approximately 20 per cent are suggested by mid-century. Little change is indicated for the east coast and in the eastern part of the Central Plain.
- Marked decreases in rainfall during the summer and early autumn months across eastern and central Ireland are predicted. Nationally, these are of the order of 25 per cent with decreases of over 40 per cent in some parts of the east.

(Sweeney et al, 2003)

Both reports also examine the specific implications of these findings for agriculture, water resources, forestry, sea-levels and eco-systems in Ireland.

A more recent report by the Community Climate Change Consortium for Ireland (2008) published the following key findings:

- Warming of the climate is to continue, particularly in autumn and winter, and in the South and East. Possible increases of 3 to 4°C are expected towards 2100.
- Towards the end of the century, autumns and winters will become 15–25 per cent wetter, while summer will become 10–18 per cent drier. As a result stream flows will be reduced in summer and increase in winter, increasing the risk of flooding.
- An increase in the frequency of very intense cyclones is probable.
- The seas around Ireland will continue warming at trend – 0.3–0.4°C per decade, except for over the Irish Sea, which will continue to warm by 0.6–0.7°C.
- Sea levels are rising 3.5cm per decade.
- Changes in climate may impede the recovery of the ozone layer, bringing the negative health consequences of UV radiation.
- Demand for heating energy is likely to decline significantly with further warming.

Overall the reports suggest that there are considerable implications of climate change for Ireland and they underscore the necessity to adequately address this issue in the immediate future.

#### **(iv) River water quality**

Slowly the quality of Ireland's surface waters is improving. In total Ireland has a network of 13,200km of river channels. Table 3.10.4 outlines the findings of the recent EPA (2009c) *Water Quality in Ireland 2007-2008* report. The table presents the figures from the earliest data, for the years 1987–1990, and the data for the two most recent assessments. The figures for 2004–2006 recorded an improvement in water quality; this continues a trend from 2001–03 when the statistics for the first time recorded improvements. However, it is of concern that almost 30 per cent of river channels are still classified as polluted to some extent.

**Table 3.10.4: Irish River Quality, 1987-2008 (%)**

	<b>1987-90</b>	<b>2001-03</b>	<b>2004-06</b>	<b>2004-08</b>
Unpolluted	77.3	69.3	71.4	70.0
Slightly Polluted	12.0	17.9	18.1	19.0
Moderately Polluted	9.7	12.3	10.0	11.0
Seriously Polluted	0.9	0.6	0.5	0.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Source:** EPA (2008b: 2-5, 2009c: 4)

The EPA (2008b) cites a number of sources of this problem. Cases of slight pollution are in the majority caused by agriculture, with municipal sources and forestry also featuring prominently. Moderate pollution is largely caused by municipal and agricultural sources. The bulk of cases of serious pollution are attributed to municipal sources. In all cases, municipal sources most frequently refers to sewage discharge. All of the abovementioned sources pollute waters with phosphorous and nitrates. The EPA's *Environment in Focus* (2006) report suggests that there is a need to promote better farmyard management, to reduce the over-application of fertilisers and to expand the system of nutrient management planning. At river basin district level, improvements were noted in the South Western and South Eastern regions, with more significant deteriorations taking place in the North Western and Shannon regions. Groundwater quality is also of concern. In the period 1995 to 2006, there have been elevated nitrate concentrations in groundwater in the south-east and east, and elevated phosphate concentrations in the west (EPA, 2008c: 5-26). Intensive agricultural practices are likely the source of the former, while the latter is probably caused by the vulnerable nature of Karst aquifers. Protection of groundwater will have to be improved if these problems are to be adequately addressed and if the EU water framework directive is to be fully implemented.

#### **(v) Genetic engineering (GE)**

Genetic engineering refers to a set of technologies that artificially move genes across species boundaries to produce new organisms. The techniques involve the manipulation of genetic material and other biologically important chemicals. The resultant organisms have new combinations of genes, and therefore new combinations of traits that are not found in nature and, indeed, are not possible through normal breeding techniques. Proponents of the technology, mainly multinational agribusiness corporations, argue that genetically engineered crops are necessary to feed a growing world population.

By contrast, opponents of agricultural biotechnology claim that genetic engineering will not feed the hungry people in our world. Only sustainable agriculture and equitable social and economic policies at local and global level can effectively tackle malnutrition, hunger and poverty.

Critics of genetic engineering maintain that it is hazardous to human health and the environment, and that it will undermine biodiversity. Given the risks to human health and the environment, and the complex ethical, economic and social issues involved, we believe that a moratorium should be placed on the deliberate release of genetically engineered organisms.

#### **(vi) Environmental taxation and poor households**

The extent of Ireland's pollution problem is clear from the studies outlined above. Furthermore, it is also clear that if we are to seriously address this problem then new environmental taxes are necessary. In particular, *Social Justice Ireland* welcomes the announcement of carbon taxation in Budget 2010.

One of the objections presented to the increase of excise duties on fuels is that they would substantially damage the economic position of poor households. Indeed research by the ESRI has confirmed this. However, a series of research papers by the ESRI has shown that it is possible to insulate poorer households from the effects of these new taxes (see Bergin et al 2002:25; Scott and Eakins, 2002). Scott and Eakins have suggested that a proportion of the revenue generated by new carbon taxes should be transferred to the Department of Social and Family Affairs and used by them to increase payments (in particular fuel allowances) given to poor households. Such an increase in these payments would therefore compensate poorer households for the effect of the new tax and consequently ensure that Ireland's poorest households do not suffer.

*Social Justice Ireland* believes that the compensation mechanism proposed for poorer households should accompany the introduction of these environmental taxes. We expressed concern that Budget 2010 provided limited information in this area and we encourage Government to present the details of these proposals in advance of the implementation of the tax in mid-late 2010.<sup>77</sup>

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<sup>77</sup>Taxation issues, including environmental taxes are discussed further in section 3.2.

## Policy Proposals on Sustainability

- Sustainability-proof all public policy initiatives and provision.
- Deliver on the *Towards 2016* commitment to examine the development of ‘satellite’ national accounts. These should include the value of all unpaid work and the costs of all environmental damage and resource consumption.
- Restructure the tax system in favour of environmentally benign development and high levels of employment and useful work.
- Terminate subsidies and other public-expenditure programmes that encourage unsustainable development.
- Introduce public purchasing policies that encourage contractors to adopt sustainable practices.
- Develop more self-reliant local economies.
- Develop and implement a programme of accounting, auditing and reporting procedures to establish the sustainability performance of businesses and other organisations.
- Introduce demand-reduction policies in areas such as energy and transport, and tackle the implications of such reduction.
- Fully introduce the *National Climate Change Strategy*.
- Publish the renewed *National Sustainable Development Strategy*.

### *On waste*

- Develop a policy for resource management, and achieve waste-reduction targets by implementing and policing the relevant sections of the Waste Management Act, 1996.
- Provide households with additional incentives to recycle rather than landfill their waste.

- **Allocate further resources to the development of recycling facilities.**
- **Put in place appropriate mechanisms to address the issue of the cost of waste disposal for those on low incomes.**

*On pollution*

- **Continue to pursue policies which will ensure that the Kyoto target of an 8 per cent CO<sub>2</sub> reduction by 2012, agreed by the Irish Government and the European Commission, is met.**
- **Continue to pursue strategies to achieve the reduction of activities at Sellafield.**

*On water*

- **Review the Water Pollution Acts and increase the level of statutory fines to a maximum of at least €150,000.**
- **Implement a nutrient-management plan on a national basis as one effective measure to protect against agricultural pollution of watercourses.**
- **Review water-pricing policies and introduce a water charge, which is equitable and is levied on high-consumption water-users, to ensure conservation of our water supplies.**

*On genetic engineering (GE)*

- **Introduce a five-year moratorium on the deliberate release of GE organisms. During this period**
    - **promote public debate about the desirability of genetic engineering and fund independent research into the health and environmental risks associated with GE,**
    - **insist that there be segregation at the source of all genetically engineered organisms,**
    - **reform the way the Environmental Protection Agency (EPA) deals with applications to release GE organisms into the environment.**
  - **Facilitate a full-scale public debate on both the benefits and risks involved in GE, based on comprehensive scientific knowledge and a**
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**full airing of the economic, social and ethical implications of biotechnology.**

- **Fund appropriate research in parallel with such a consultative process.**
- **Introduce legislation that protects the consumer and the environment, rather than the interests of multi-national corporations.**

*On the Environmental Protection Agency (EPA)*

- **Review the interface between the EPA and An Bord Pleanála to ensure that the environmental impact and sustainability of industrial developments are thoroughly assessed in an integrated way.**