$\frac{11}{\text{SUSTAINABILITY}}$

CORE POLICY OBJECTIVE: SUSTAINABILITY

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

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 such as resource depletion and pollution have raised questions and doubts. There is a growing awareness that sustainability must be a constant factor in all development. Sustainability is about ensuring that all development is socially, economically and environmentally sustainable. This understanding underpins all the other chapters in this review. This chapter focuses in more detail on promoting sustainable development and on reviewing environmental issues. These are key policy areas that must be addressed urgently as part of sustainability in the Policy Framework set out in Chapter 2.

Promoting Sustainable Development

The World Economic Forum in its latest Global Competitiveness Report notes that those economies that have been balancing economic progress with social inclusion and good environmental stewardship will be better placed to maintain high prosperity for their citizens even accounting for external shocks (World Economic Forum 2014:73). It is clear at a global level that those countries who have been promoting sustainable development and who have been investing in medium to long-term policies whilst moving society to a more sustainable footing will be best placed to meet future challenges. It is clear that in order to live within the means of the planet whilst producing the kind of society in which we want to live a sustainable development framework should be at the centre of national and international policy making.

Sustainable development is defined as 'development which meets the needs of the present, without compromising the ability of future generations to meet their needs

(World Commission on Environment and Development, 1987). It encompasses three pillars; environment, society and economy. These three pillars of sustainability must be addressed in a balanced manner if development is to indeed be sustainable. Maintaining this balance is crucial to the long-term development of a sustainable resource-efficient future for Ireland. While growth and economic competitiveness are important, they are not the only issues to be considered and cannot be given precedence over others. They must be dealt with using a framework for sustainable development which gives equal consideration to the environmental, social and economic pillars. It is also important to note that, although economic growth is seen as the key to resolving many aspects of the current crisis across the EU, it is this very growth that may be damaging the possibility of securing sustainable development in the Global South (cf Chapter 13).

Sustainable development is our only means of creating a long term future for Ireland, with the environment, economic growth and social needs joined in a balanced manner with consideration for the needs of future generations. Sustainability and the adoption of a sustainable development model presents a significant policy challenge: how environmental policy decisions with varying distributional consequences are to be made in a timely manner while ensuring that a disproportionate burden is not imposed on certain groups e.g. low income families or rural dwellers. This policy challenge highlights the need for an evidence-based policy process involving all stakeholders. The costs and benefits of all policies must be assessed and considered on the basis of evidence only. This is essential in order to avoid the policy debate being influenced by hearsay or vested interests or the thoughtless exercise of power. Before the current recession began the global economy was five times the size it had been 50 years before and, had it continued on that growth path, it would be 80 times that size by 2100 (SDC, 2009). This raises the fundamental question of how such growth rates can be sustained in a world of finite resources and fragile ecosystems. Continuing along the same path is clearly not sustainable. A successful transition to sustainability requires a vision of a viable future societal model and also the ability to overcome obstacles such as vested economic interests, political power struggles and the lack of open social dialogue (Hämäläinen, 2013).

Promoting a sustainable economy requires that we place a value on our finite natural resources and that the interdependence of economy, wellbeing and natural capital are recognised⁸³ (EC 2011). A sustainable economy requires us to acknowledge the limitations of finite natural resources and the duty we have to preserve these for future generations. It requires that natural capital and ecosystems are assigned value

⁸³ The Sustainable Society Foundation has published a comprehensive global report 'Sustainable Society Index 2014' based on these three key areas. http://www.ssfindex.com/ssi2014/wp-content/uploads/pdf/SSI2014.pdf

in our national accounting systems and that resource productivity is increased. Policy frameworks and business models should give priority to renewable energy, resource efficiency and sustainable land use. One of the most cost effective measures to promote sustainable development is to increase building energy efficiency. Increasing building energy efficiency (through retrofitting for example), along with reducing food waste and increasing yields on large scale farms are the three most effective means to increase sustainability and meet international environmental targets (McKinsey, 2011). These three areas should be prioritised for investment by Government as they will yield significant long-term dividends in terms of increasing Ireland's sustainability and reducing emissions.

A sustainable economy would involve transformative change and policies being implemented similar to those being proposed by Stahel in the 'performance economy' and Wijkman in the 'circular economy'. The 'circular economy' theory is based on the understanding that it is the reuse of vast amounts of material reclaimed from end of life products, rather than the extraction of new resources, that is the foundation of economic growth (Wijkman, 2012:166). This theory involves a shift towards servicing consumer products rather than constantly producing new goods to be consumed. The policy instruments proposed to implement a circular economy are those which are also considered to be at the heart of the sustainable development debate. They are:

- Binding targets for resource efficiency;
- Sustainable innovation and sustainable design being given priority in terms of research; and
- Tax reform: lowering taxes on labour and raising taxes on the use of natural resources.

The business case to move towards a circular economy and decouple economic growth from resource consumption has been outlined by McKinsey⁸⁴in 2014 which shows that such a move could add \$1 trillion dollars to the global economy by 2025 and that the EU manufacturing sector could generate savings of up to \$360 billion per annum by 2025. The European Commission announced a Circular Economy Package in July 2014 which aimed to create two million jobs, generate €600 billion net savings and deliver 1 per cent GDP growth. This was a very welcome development at the time. Unfortunately in December 2014 the package was withdrawn by the European Commission with a commitment to replace it with more ambitious plans by the end of 2015. This is extremely disappointing as it is clear that both Europe and Ireland should be moving towards a more sustainable model and the circular economy package would have provided an ambitious target.

⁸⁴ http://www.mckinsey.com/insights/manufacturing/remaking_the_industrial_economy

Alongside the theories of the 'performance economy' and the 'circular economy' is the concept of the 'Economy of the Common Good⁸⁵'. This model, designed by Felber (2010) is based on the idea that economic success should be measured in terms of human needs, quality of life and the fulfilment of fundamental values. This model proposes a new form of social and economic development based on human dignity, solidarity, sustainability, social justice and democratic co-determination and transparency.

It is clear that the current economic path is not sustainable and consideration must be given to how we, as a society, can transform our present system and move to a more sustainable future pathway. Creating a sustainable Ireland is one of the five pillars of *Social Justice Ireland's* Policy Framework for a Just Ireland outlined in more detail in chapter 2

Beyond 2015 - Towards Sustainable Development Goals

Discussions and negotiations at the RIO+20 summit in June 2012 culminated in the *'Future We Want'* outcome document which outlines UN commitments for a sustainable future and the development of Sustainable Development Goals (SDGs⁸⁶) to replace the Millennium Development Goals⁸⁷ (MDGs) after 2015. Work on developing SDGs began in earnest in January 2013 with the establishment of the Open Working Group (OWG) on Sustainable Development Goals⁸⁸. When formulating SDG proposals and strategies, the OWG on Sustainable Development Goals must take into account the shortcomings of the MDGs, specifically their failure to address the structural causes of poverty, inequality and exclusion.

One of the failures of the MDG process was the inability to engage people who are impacted by poverty and experiencing marginalistion in a meaningful inclusive framework to develop the goals themselves. Lessons must be learned from the MDG process to ensure that those most impacted by these issues are involved in the development of the goals, not just the implementation. The common good must be at the core of sustainable development to ensure that natural resources are protected for future generations. It is also crucial that the SDG targets are equitable, that priority is given to meeting the challenge faced by the most disadvantaged and that fair allocation of resources is secured for both poor people and poor countries. The OWG state that in order to ensure that progress is measurable and measures quantified, targets will be required. Targets and measures are an integral part of the OWG proposal

⁸⁵ https://www.ecogood.org/en/information/ecg-idea/vision-economy-common-good

⁸⁶ SDGs are also discussed in chapter 14 – The Global South

⁸⁷ For a more detailed discussion on MDGs see Annex 14 of this socio-economic review

⁸⁸ For further information see http://sustainabledevelopment.un.org/index.php?menu=1549

for Sustainable Development Goals (UN, 2014). This OWG document contains seventeen SDGs for discussion and adoption at the UN Summit on post- 2015 development in September 2015. The proposed SDGs (listed in full in Annex 13) cover areas such as poverty, food security, health, water and sanitation, climate change, and gender equality. UNCTAD calculate that the annual investment gap for implementing the SDGs are in the region of \$2.5 trillion per annum⁸⁹, the scale of the implementation challenge is immense. The on-going negotiations for the post-2015 development agenda already highlight the challenges the world faces, with delegates having different definitions of justice and different opinions on how to achieve a more equal society⁹⁰ and how to deliver a universal post-2015 development agenda. Ireland has been appointed as a co-facilitator of the post-2015 sustainable development negotiations. This represents an opportunity for Ireland to ensure that the common good and the fair allocation of resources are central to the post-2015 development agenda. Ireland should also work to ensure that all nations, especially those in the developed world take full responsibility for communicating and implementing the SDGs to ensure the world moves towards a sustainable path in order to guarantee a future for generations to come.

The strategy for SDGs being developed by the UN is in contrast with that adopted recently by the European Commission in the 2030 Framework on Climate and Energy. The European Commission commits to reducing emissions by 40% in Europe, but the document contains no national targets. The non-binding target of at least a 27 per cent improvement in energy efficiency is significantly weaker than that included in the Europe 2020 Strategy. Combined the European Commission's decision to withdraw the Circular Economy, Air Quality and Waste Packages the 2030 Framework appears to represent a significant weakening commitment among EU member states on climate and energy targets. This incoherence of policy at international level does not bode well for the successful adoption and implementation for SDGs and will pose challenges for the post-2015 development negotiations where targets are seen as critical to both implementation and monitoring by the OWG.

The need for shadow national accounts

According to Repetto, Magrath, Wells, Beer and Rossini (1989:3) the 'difference in the treatment of natural resources and other tangible assets [in the existing national accounts] reinforces the false dichotomy between the economy and "the environment" that leads policy makers to ignore or destroy the latter in the name

⁹⁰ See note 'A Brief Analysis of the Meeting' http://www.iisd.ca/vol32/enb3214e.html?&utm_source=www.iisd.ca&utm_mediu m=feed&utm_content=2015-02-06&utm_campaign=RSS2.0

⁸⁹ http://unctad.org/en/pages/PressRelease.aspx?OriginalVersionID=194

of economic development.' By not assigning value to our natural capital and environmental resources, a major national asset, we are not measuring the cost to our society of the ongoing depletion of these resources.

Acceptance 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 must be central to any model of development with sustainability at its core. This is at the core of the 'circular economy' and 'Economy for the Common Good' theories and is a key part of our core policy framework. Our present national accounts are based on GNP/GDP as scorecards of wealth and progress and miss fundamentals such as environmental sustainability. These measures completely ignore unpaid work because 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 rainforests, are added to, rather than subtracted from, GNP/GDP.

It is widely acknowledged that GDP is 'an inadequate metric to gauge wellbeing over time, particularly in its economic, environmental, and social dimensions, some aspects of which are often referred to as sustainability (Stiglitz Commission 2009: 8). A new scorecard or metric model is needed which measures the effects of policy decisions on people's lives as well as the environmental, social and economic costs and benefits of those policies. The United Nations High Level Panel on Global Sustainability recommends that the international community measure development beyond GDP and that national accounts should measure and cost social exclusion, unemployment and social inequality and the environmental costs of growth and market failures.

Development of 'satellite' or 'shadow' national accounts should be a central initiative in this. 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 the world currently uses 120 per cent of what the earth can provide sustainable each year.

In the environmental context it is crucial that dominant economic models are challenged on, among other things, the 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. These are issues that most economists tend to downplay as externalities. Shadow national accounts would help to make sustainability and

'green' procurement mandatory considerations in the decision and policy making process. They would also go some way towards driving a civil society awareness campaign to help decouple economic growth from consumption.

Social Justice Ireland welcomed the establishment of the Green Tenders Implementation group to implement the Action Plan for Green Public Procurement. This is a significant step on the road towards making green procurement mandatory in public sector procurement decisions. Green Public Procurement is referred to as an area for consideration in the forthcoming Rural Development Programme (RDP) 2014-2020⁹¹. Employment and growth possibilities in the green economy have been considered in the Government policy statement 'Delivering our Green Potential' which will guide any future initiatives in this area in the RDP. The document notes how up to 10,000 jobs could be created in six key sub-sectors of the green economy between 2012 and 2015. It would be extremely useful in term of policy making for Government to review progress on job creation in the green economy post 2015, whether or not the recommendations of the Expert Group on Future Skills Needs were implemented and the impact that these had on job creation in the green economy.

What should be measured?

Some governments and international agencies have picked up on these issues, especially in the environmental area and have begun to develop 'satellite' or 'shadow' national accounts that include items not traditionally measured. *Social Justice Ireland's* 2009 publication *Beyond GDP: What is prosperity and how should it be measured?* explored many of these new developments. It included contributions from the OECD, the New Economics Foundation, and other informed bodies and proposed a series of policy developments which would assist in achieving similar progress in Ireland.

There has, in fact, been some progress in this area, including commitments to better data collection and broader assessment of well-being and progress by the CSO, ESRI and EPA. The CSO published Sustainable Development Indicators Ireland in 2013 and this is a welcome development. However, much remains to be achieved in terms of communicating these sustainable development indicators to the public and the inclusion of well-being in the monitoring process. *Social Justice Ireland* strongly urges Government to adopt this broader perspective and commit to producing these accounts alongside more comprehensive indicators of progress. Measures of economic performance must reflect their environmental cost and a price must be put on the use of our natural capital.

⁹¹ per.gov.ie/wp-content/uploads/Partnership-Agreement-Ireland-2014-2020.pdf

The OECD Global Project on measuring the progress of society recommends that sets of key environmental, social and economic indicators be developed and that these should be used to inform evidence-based decision making across all sectors (Morrone, 2009: 23).

Social Justice Ireland recommends that government commit to producing shadow national accounts and that these accounts include indicators that measure the following:

- the use of energy and materials to produce goods;
- the generation of pollution and waste;
- the amount of money spent by industry, government and households to protect the environment or manage natural resources;
- natural resource asset accounts measuring the quantity and quality of a country's natural resources;
- sustainability of the growth being generated *vis-a-vis* our social and natural capital;
- natural resource depletion and degradation as a cost to society;
- the output of waste and pollution as a result of commercial activity as a cost within the satellite national accounts; and
- the measures of the GPI (Genuine Progress Indicator) which measure and deduct for income inequality, environmental degradation and cost of crime, amongst other items. By measuring and differentiating between economic activities that diminish natural and social capital and those activities that enhance them, we can ensure that our economic welfare is sustainable (Daly & Cobb, 1987).

Stakeholder involvement

One of the key indicators of sustainability is how a country runs stakeholder involvement. Sustainable Development Councils (SDCs) are a model for multistakeholder bodies comprising members of all major groups – public, private, community, civil society and academic – engaged in evidence-based discussion.⁹² The EU-wide experience has been that SDCs are crucial to maintaining a medium and long-term vision for a sustainable future whilst concurrently working to ensure that sustainable development policies are embedded into socio-economic strategies and budgetary processes.

⁹² For more information see http://www.eeac.eu/images/doucments/eeac-statementbackgr2011_rio_final_144dpi.pdf

Ireland established its sustainable development council (Comhar) in 1999 and disbanded it in 2011, transferring its functions to NESC (National Economic and Social Council). This is unfortunate in the light of the United Nations recommendation that the link between informed scientific evidence and policy making on sustainable development issues be strengthened (United Nations, 2012). While it is admirable that Government wishes to place sustainable development at the core of policy making and has asked NESC to ensure it gives sustainable development major consideration in all it does, it is also important to note that NESC is not in a position to do the detailed work done previously by Comhar.

All areas of governance, from international to national to local, along with civil society and the private sector, must fully embrace the requirements of a sustainable development future (United Nations, 2012). In order to facilitate a move towards a sustainable future for all, stakeholders from all arenas must be involved in the process. Sustainable local development should be a key policy issue on the new local government agenda and the Public Participation Networks could be a forum where sustainable development issues at a local level become part of local policy making.⁹³ There is need for a deliberative democracy arena within which all stakeholders can discuss evidence without power differentials impeding outcomes.

Principles to underpin sustainable development

Principles to underpin sustainable development were proposed in a report for the European Commission prepared by James Robertson in May 1997. The report, *The New Economics of Sustainable Development*, argued that these principles should include the following:

- systematic empowerment of people (as opposed to making and keeping them dependent) as the basis for people-centred development;
- 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; and
- respect for feminine values, not just masculine ones.

⁹³ For more detail on Public Participation Networks see chapter 10

At first glance these might not appear to be the type of concrete guidelines that policymakers 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 influence 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. Many of these principles underpin the 'Economy for the Common Good' Balance Sheets which rates companies based on areas including ecological sustainability, social justice and transparency⁹⁴.

A key challenge for Ireland is to ensure that the economy and key sectors develop in a sustainable way and that economic growth is decoupled from environmental pressures. This would require environmental considerations being placed at the centre of policy and decision making at national, regional and local levels (EPA, 2012). Protecting our natural resources and ensuring they are not missused or exhausted is crucial to the economic and social wellbeing of future generations in Ireland.

It is also important that any programme for sustainable development should take a realistic view of human nature, recognising that people can be both altruistic and selfish, both co-operative and competitive. It is important, therefore, 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. Incorporating social and environmental costs in regulating and pricing both goods and services, combined with promoting those goods and services which are sustainable, should also become part of sustainable development policy. In order to transition to an economy based on sustainable development and a 'green growth strategy' a policy framework is needed that is adaptive and supports shifts away from traditional economic models. This would include user charges for environmental resources to reflect environmental costs and environmental taxes to shift the tax base towards environmental pollutants and consumption and away from labour and production (EPA, 2012).

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 taxed. This framework should be developed to encourage economic efficiency and enterprise, social equity and environmental sustainability. Systematic reviews should be carried out and published on the sustainability effects of all public subsidies and other

⁹⁴ https://www.ecogood.org/en/common-good-balance-sheet

relevant public expenditure and tax differentials. Governments should identify and remove those subsidies which cause the greatest detriment to natural, environmental and social resources (United Nations, 2012:14). 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.

Social Justice Ireland welcomed the publication entitled 'Our Sustainable Future - A Framework for a Sustainable Development for Ireland' (Department of the Environment, Community and Local Government, 2012) which is a late but positive step on the road towards a sustainable development model. One area of concern, however, is the failure by governments to implement earlier sustainability strategies (2000 & 2007) and another is the lack of quantitative and qualitative targets and indicators to accompany the Framework itself. Social Justice Ireland welcomes the Framework's emphasis on the need for a whole of government approach to sustainability and the need for all areas of government policy to have regard for sustainable development. Clear leadership from Government and public bodies are needed to ensure that existing and future activities maintain and improve the quality of the environment (EPA, 2012). At a time when leadership on sustainable development and climate change is needed it is disappointing that the recently published Climate Action and Low Carbon Development Bill 2015 fails to include any specific targets on emissions reductions. Without clear targets the work of the Cabinet Committee on Climate Change and the Green Economy and the High-Level Inter-Departmental Group on Sustainable Development in order to ensure that the framework and its recommendations is at the heart of policy making in all Government departments will be much more challenging.

Monitoring sustainable development

Many studies have highlighted the lack of socio-economic and environmental data in Ireland required to assess trends in sustainable development. The empirical and methodological gaps which continue to impede the incorporation of sustainable development issues into public policy making and assessment are known (ESRI, 2005). 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.

Comhar undertook a lot of work developing indicators in order to set targets and quantitative means of measuring the progress of sustainable development. *Social Justice Ireland* does not believe that the full range of the work of Comhar⁹⁵ has been

⁹⁵ http://www.comharsustainableindicators.ie/explore-the-indicators/comharindicators.aspx

satisfactorily adopted by NESC to date and a great deal of work needs to be done in the area of indicators. There should be real consultation between NESC, the CSO, and the Community & Voluntary Pillar (which has done extensive work in this area⁹⁶) to ensure that these issues are addressed, appropriate indicators are immediately put in place and the necessary data collected. These could be used in conjunction with indicators developed by the CSO and data being collected by the EPA and ESRI to measure Ireland's progress towards sustainable development.

In a study of national strategies towards sustainable development in 2005 (Niestroy, 2005: 185) Ireland's sustainability strategy was criticised for:

- having no systematic monitoring system;
- having no general timetable;
- its lack of quantitative national targets.

The lack of quantitative and qualitative targets and indicators to accompany the new sustainability framework means that Ireland remains open to similar criticism for its current strategy. Implementation, targets and monitoring will be crucial to the success of any policy approach that genuinely promotes sustainable development. It is important that these targets and indicators and the mechanisms for monitoring, tracking and reviewing them are developed and clearly explained to ensure that responsibility is taken across all departments and all stakeholders for its implementation.

The publication by the Central Statistics Office of *Sustainable Development Indicators Ireland 2013*, aims to achieve continuous improvement in the quality of life and wellbeing for present and future generations through linking economic development with protection of the environment and social justice (CSO, 2013). These sustainable development indicators should be discussed and debated in the Dáil along with satellite or shadow national accounts and indicators of well-being as a step towards integrating sustainable development across the entire policy agenda in Ireland.

Environmental Issues

Maintaining a healthy environment remains one of the greatest global challenges. Without concerted and rapid collective action to curb and decouple resource depletion and the generation of pollution from economic growth, human activities may destroy the very environment that supports economies and sustains life (UNEP 2011: II).

⁹⁶ This work involved extensive engagement with a range of government departments on agreeing appropriate indicators to measure progress on the high-level goals contained in the national agreement *'Towards 2016'*. Much of this work remains valid despite the changing context.

Our environment is a priceless asset. It is also finite – a fact that is often ignored in current debates. Protection and conservation of our environment is of major importance as it is not just for our use alone; it is also the natural capital of future generations.

For environmental facts and details for Ireland see Annex 11.

The economic growth of recent decades has been accomplished mainly by drawing down natural resources without allowing stocks to regenerate and causing widespread degradation and loss to our eco-system. Careful stewardship of Ireland's natural resources is required to ensure the long term health and sustainability of our environment. Unsustainable use of natural resources is one of the greatest long-term threats to humankind (European Commission, 2012:3). It is crucial therefore, that Ireland meets the challenges of responding to climate change and protecting our natural resources and biodiversity with policies that are based on scientific evidence and protecting the common good.

Climate change

Climate change is one of the most significant and challenging issues currently facing humanity. Ireland produces an estimated 160,359 tonnes of greenhouse gas emissions every day (EPA, 2014). Increased levels of greenhouse gases, such as CO2, increase the amount of energy trapped in the atmosphere which leads to global effects such as increased temperatures, melting of snow and ice and raised global average sea-level. If these issues are not addressed with urgency the projected effects of climate change present a serious risk of dangerous and irreversible climate impacts at national and global levels. Food production and ecosystems are particularly vulnerable. The latest research from the World Meteorological Organisation has ranked 2014 as the hottest year on record, and finds that fourteen of the fifteen hottest years have been in this century. In Ireland, six of the ten warmest years on record have occurred since 1990 (EPA, 2014). Among the predicted adverse impacts of climate change are sea level rise, more intense storms, increased likelihood and magnitude or river and coastal flooding, adverse impacts on water quality, and changes in distribution of plant and animal species (EPA, 2014).

The 2013 report by the Intergovernmental Panel on Climate Change (IPCC) outlines the global challenge of climate change. The report sets out the effect climate change and greenhouse gas emissions have had on the planet and the impact of human influence on the climate system. Some of the main findings are:

• More than 60% of the net energy increase in the climate system is stored in the upper ocean;

- The global ocean will continue to warm during the 21st century and global mean sea level will continue to rise;
- Sea level rise is projected in more than 95% of the ocean area with 70% of coastlines worldwide expected to experience sea level change;
- It is virtually certain that global mean sea level rise will continue beyond 2100, with sea level rise due to thermal expansion to continue for many centuries;
- Carbon dioxide concentrations have increased by 40% since pre-industrial times. The ocean has absorbed 30% of the emitted carbon dioxide, causing ocean acidification;
- Global surface temperature change for the end of the 21st century is likely in the range 1.5C to 4.5C;
- It is very likely that heat waves will occur with a higher frequency and duration;
- The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions;
- Cumulative emissions of CO2 largely determine global mean surface warming by the late 21st century and beyond. Most aspects of climate change will persist for many centuries even if CO₂ emissions are stopped.

The IPCC report serves to highlight the challenges ahead for all countries in dealing with climate change. It is very disappointing therefore that the European Commission Policy Framework for Climate and Energy 2020-2030 published in January 2014 does not contain any binding national targets for member states for reducing energy use or for increasing renewable energies. This is despite the fact that the plan commits the European Commission to reducing gas emissions by 40 per cent. By not setting binding or measurable targets the European Commission is taking the opposite approach to that recommended by the SDG Open Working Group. The European Commission claims that the 2030 climate plan sets in stone a commitment to cap the temperature increase at 2°C. The IPCC data shows that a 40 per cent emissions target for 2030 means in effect there is a 50/50 chance of exceeding the 2°C threshold. This is consistent with the 450 Scenario of the IEA's *World Energy Outlook 2011* which shows that an energy pathway consistent with a 50 per cent chance of limiting global temperature increase to 2°C requires CO₂ emissions to peak at just 1.0 Gt above 2011 levels in 2017. This will be very difficult to achieve.

A new report from the United Nations Environment Programme (UNEP) published to coincide with the Lima climate talks⁹⁷ shows how the cost of adapting to climate change in developing countries is likely to reach two to three times the previous estimates of \$70billion -\$100billion per year by 2050. The report assesses the global

⁹⁷ http://unfccc.int/meetings/lima_dec_2014/meeting/8141.php

adaptation gaps in finance, technology and knowledge. Adaptation plans are not a required outcome of the Lima climate talks despite their obvious importance in helping developing countries adapt to climate change and the heavy cost of inaction as outlined by the UNEP report. It is disappointing that the UN Climate talks in Lima failed to reach substantial progress or commitment towards adopting ambitious and binding climate targets in Paris, 2015.

Climate change and implementation of climate policy have been challenges for Ireland. Despite two National Climate Change Strategies (one in 2000 and one in 2007), there have been significant delays in implementing these policies. In some cases policies have still not been implemented. The mobilisation of vested interests has been a decisive factor in many of these delays and cases of non-implementation (Coughlin (2007). This is very disappointing because if these policies had been implemented on time, and as specified, Ireland's climate policy commitments could have been met from domestic measures. Now Ireland is faced with the prospect of overshooting its EU 2020 emissions targets as early as 2016 (EPA 2012).

Social Justice Ireland welcomes the publication of the *Climate Action and Low Carbon Development Bill 2015* by the Department of Environment, Community and Local Government. The provision for five yearly National Climate Change Adaptation Frameworks and the establishment of a National Expert Advisory Council on Climate Change is welcome. However there are a number of areas of concern:

Social Justice Ireland is concerned the failure to include any specific targets on emissions reductions other than those committed to under European Union law to reach by 2020 and those under the Kyoto Protocol. The absence of sectoral targets and quantitative measures and outputs has already impeded climate change policy progress internationally (UNEP 2011: vii). Without sectoral targets and a system whereby they are regularly reviewed, the monitoring of progress on climate change policy will be very difficult. It will also make enforcing responsibility and accountability for implementation of climate policy across all Government departments and stakeholders in all sectors extremely challenging.

The failure to include the recommendations of the Oireachtas Committee on Environment, Culture and the Gaeltacht Climate Bill Report 2013⁹⁸. Of particular concern are the omission of the committee's interpretation of 'Low Carbon Development' as near zero emissions for 2050, the omission of the committee's proposal on the incorporation of principles of climate justice and the establishment of a national Green Climate fund to support climate mitigation and adaptation in developing countries.

⁹⁸ http://www.oireachtas.ie/parliament/mediazone/pressreleases/name-19163-en.html

A National Low Carbon Transition and Mitigation Plan and a National Climate Change Adaptation Framework are to be submitted within 24 months of the passing of the Bill. This means that Government does not have to adopt a national policy position on climate legislation and the transition to a low carbon future until mid-2017 at the earliest. This will give the Government less than three years to reach the targets set in the EU 2020 strategy (European Commission, 2010). Given that we are on course to overshoot emissions targets by 2016, there is a real danger that shortterm planning to limit our liabilities in respect of missed targets will overshadow the requirement for long-term planning and policy goals for a sustainable and low carbon future. The long-term goal of a low carbon economy beyond 2020 must be at the core of climate policy.

Social Justice Ireland is concerned that the Bill refers to the objective of achieving the national low carbon roadmap at the least cost to the national economy by adopting cost-effective measures that do not impose an unreasonable burden on the Exchequer. By failing to take appropriate actions and measures on climate change and carbon emissions now Ireland's economy and society will bear a far greater cost in the future. It is important that the National Expert Advisory Body on Climate Change is not constrained by economic and cost issues and that its recommendations should be based solely on scientific evidence and best practice.

A recent study examining climate change and governance in Ireland points out that local authorities have made little progress on climate change due to barriers related to resources, prioritisation and integration and a lack of public consensus for proactive measures (EPA, 2013). The report concludes that the national government has side-lined the climate change issue by not establishing a separate ministry for climate change; this signals a lack of priority on this issue at national level, resulting in a limited response at regional and local level. An integrated, cross-departmental approach is recommended and the potential of local authorities for innovative solutions is highlighted. Government must support local authorities to coordinate climate change policy and adopt legislation that clearly signals climate change as a priority. Without a shift in attitudes and strong leadership nationally Ireland will remain unprepared for upcoming challenges related to climate change. A Climate Action and Low Carbon Development Bill without targets, without refereeing to climate justice and with a focus on cost-effectiveness means a significant opportunity to provide long-term leadership in this area has been lost.

Emissions challenge99

Ireland has two sets of emissions targets to meet: the Kyoto Protocol and the EU 2020 Targets. Ireland is on track to meet its Kyoto commitments when the effects of the EU Emissions Trading Scheme and forest sinks are taken into account. However, it is already facing significant challenges in meeting its future EU emissions targets for greenhouse gases under the EU Climate and Energy package for 2020 and further anticipated longer term targets up to 2050. This is despite substantial declines in greenhouse gas emissions between 2009 and 2011 which the EPA attributes primarily to the economic recession.

Under the *Climate and Energy Package*, as part of the EU 2020 targets Ireland is required to deliver a 20 per cent reduction in non-Emissions Trading Scheme (ETS) greenhouse gas emissions by 2020 (relative to 2005 levels). Ireland also has signed up to binding annual emissions limits over the period 2013 to 2020 to ensure movement towards the EU 2020 target. The latest EPA projections indicate that Ireland will meet the 2013 target but will exceed its annual binding limit over the 2013 to 2020 period with emissions exceeding the binding limits from 2015 onwards.

Ireland's emissions profile is dominated by emissions from the energy supply, transport and agriculture sectors (EPA, 2014). The domestic sector comprises transport, agriculture and residential waste activities and is also responsible for 72 per cent of Ireland's total emissions. The immediate challenge for Irish climate policy is to meet the EU 2020 targets for the domestic sector, which is a reduction of at least 20 per cent on the 2005 emission levels by 2020. If achieved, the projected strong growth in the agriculture sector set out in the Department of Agriculture, Fisheries and Food vision *Food Harvest 2020* will likely result in agricultural emissions increasing by 7 per cent by 2020. There is a significant challenge for Government in achieving the binding EU 2020 targets whilst also pursuing its *Food Harvest* agenda.

Support for sustainable agricultural practice is important to ensure the long-term viability of the sector and consideration must also be given to how the projected increase in agriculture emissions can be offset. It is important that the agriculture sector be at the fore of developing and implementing sustainable farming practices and be innovative in terms of reducing emissions. Consideration should also be given to the European Commission proposals to establish a framework for land use, land use change and forestry (LULUCF) to be included in the emission reduction targets. This is important for Ireland because it is estimated that forest sinks could provide significant relief in reaching emissions targets (see Annex 11). The European Council Conclusions on Climate recognised the 'limited' mitigation potential of the agriculture sector and commits to considering emissions from forestry and land use and agriculture together. Agriculture accounts for the largest proportion of

⁹⁹ More detail on emissions and targets is available in Annex 11

Ireland's greenhouse gas emissions, account for 32.3 per cent of the total. Pursuing Food Harvest 2020 and increasing milk production in 2015¹⁰⁰ means that emissions from agriculture are likely to continue to increase over the coming years. Agricultural emissions increased between 2012 and 2013 and is driven by higher animal numbers reflecting plans to expand milk production (EPA, 2014). A recognition of the 'limited' mitigation potential of the sector must not reduce efforts to reduce agricultural emissions and meet international targets and obligations.

Transport and agriculture represent the most intractable sectors in terms of carbon offsets and emissions mitigations, with the transport sector recording a 115.5 per cent increase in emissions between 1990 and 2013¹⁰¹. A national sustainable transport network would represent a major step towards a low carbon, resource efficient economy. Capital investment will be required in sustainable transport infrastructure projects to ensure the reduction of transport emissions. Agriculture, which accounted for 32 per cent of total emissions in 2011, faces major difficulties in limiting emissions and meeting future targets. In the agriculture sector progress towards changing farm practices has been limited and incentives to reduce on-farm greenhouse emissions have not been delivered on a wide scale (Curtin & Hanrahan 2012: 9). The agriculture and food sector must build on its scientific and technical knowledge base to meet the emissions challenge.

The European Network for Rural Development has highlighted a number of opportunities for Ireland to use the development of renewable energy to mitigate the effects of climate change by delivering additional reductions to Ireland's CHG emissions. The opportunity and capability exist to significantly mitigate climate change through growth in afforestation and renewable energy sources. Forestry can play a significant role in combating climate change and the development of the forestry sector and renewable energy should be supported in the Irish CAP Rural Development Programme 2014-2020. It is important, therefore, that Government departments work together to tackle climate change and recognise that action on climate change is not just a challenge but a great opportunity to create jobs and develop a genuine, indigenous, low carbon economy.

Biodiversity

Nature and biodiversity are the basis for almost all ecosystem services and biodiversity loss is the greatest challenge facing humanity (EPA 2011: vii). Biodiversity loss and ecosystem degradation directly affect climate change and undermine the way we use natural resources (EEAC 2011: 114). Pollution, over-

¹⁰⁰ Milk Quotas are due to be abolished by the European Union in 2015.

¹⁰¹ Transport emissions have decreased for four consecutive years and are now 22% below peak levels in 2007.

exploitation of natural resources and the spread of non-native species are causing a decline in biodiversity in Ireland. The Environmental Protection Agency (EPA) has identified the four main drivers (EPA 2011: 11) of biodiversity loss in Ireland all caused by human activity:

- habitat destruction and fragmentation;
- pollution;
- over-exploitation of natural resources; and
- the spread of non-native species.

Our eco-system is worth €2.6 billion to Ireland annually (EPA 2011) yet our biodiversity capital is decreasing rapidly. Ireland missed the 2010 target to halt biodiversity loss and lacks fundamental information on such issues as the distribution of species and habitats that inform planning and policy in other countries. *Social Justice Ireland* is concerned that responsibility for biodiversity now lies with the Department of Arts, Heritage and the Gaeltacht, whereas responsibility for all environmental issues lies with the Department of Environment, Community and Local Government. Both departments must work together to ensure that the policies they implement are designed to complement each other and will not have any negative consequences on other areas of environmental concern.

Biodiversity underpins our eco-system, which supports our natural capital and in particular the agriculture industry. It is critically important that our biodiversity is preserved and maintained and that the effects of policies and developments on biodiversity are monitored in order to inform environmental policy in the short and long-term. Ireland has less land designated as a Special Protected Area under the EU Habitats Directive than the EU average The majority of Ireland's habitats listed under the Habitats Directive are reported to be in poor or bad conservation status (EPA 2012:76).

The economic value of biodiversity and how it contributes to our well-being needs to be better promoted and understood. The data collected by the National Biodiversity Data Centre on the environment and the eco-system goods and services provided by biodiversity should be included in any proposed shadow national accounting system. This is our greatest national asset yet we do not factor it into our present national accounting system. Without biodiversity and our eco-system the development of a sustainable, low-carbon future for Ireland will not be possible and the value of our natural capital will be lost. Climate change will not go away and initial costs will have to be incurred in order to preserve and conserve our natural resources. Environmental and socio-economic decision making should be integrated with biodiversity and resource management to maximise the benefit to society of our natural resources. The long-term benefits of these investments, both for the present and future generations, will far outweigh the initial cost. It is important that the economic value of biodiversity be factored into decision making and reflected in national accounting and reporting systems. The EPA notes that the continuing loss of biodiversity is one of the greatest challenges facing us (EPA 2012:82). *Social Justice Ireland* believes that Government should implement the EPA's recommendations regarding evidence-based decision making on biodiversity issues and the integration of the economic value of ecosystems into the national accounting and reporting systems.

Environmental taxation

The extent of Ireland's challenge in terms of climate change and maintaining and preserving our national resources is clear from the information outlined above. One way of tackling this challenge whilst also broadening the tax base is through environmental taxation. Eco-taxes, which put a price on the full costs of resource extraction and pollution, will help move towards a resource efficient, low carbon green economy. Environmental taxation enforcing the polluter pays principle and encouraging waste prevention can help to decouple growth from the use of resources and support the shift towards a low carbon economy. Carbon taxation was introduced in Ireland in Budget 2010 and was increased from €15 to €20 per tonne in Budget 2012. Social Justice Ireland welcomed the introduction of a carbon tax but is disappointed that Government has not used some of the money raised by this tax to target low income families and rural dwellers who were most affected by it. When considering environmental taxation measures to support sustainable development and the environment and to broaden the tax base, the Government should ensure that such taxes are structured in ways that are equitable and effective and do not place a disproportionate burden on rural communities or lower socioeconomic groups. Environmentally damaging subsidies should be abolished with the resulting savings invested in renewable energies.

Key Policy Priorities on Sustainability

- A common understanding of sustainable development must be communicated across all Government departments, policy makers, stakeholders and civil society. This should underpin all public policy decisions.
- The economic value of biodiversity must be accounted for in all environmental policy decisions.
- Shadow national accounts should be developed to move towards a more sustainable, resource efficient model of growth.
- A progressive and equitable environmental taxation system should be developed in a structured way that does not impose a disproportionate burden on certain groups.
- Investment should be made in sustainable infrastructure projects which will have substantial long-term dividends.