

## Chapter 1

# Introduction



# Introduction

**Climate change is one of the key environmental challenges that we face both nationally and globally.**

This report is the latest in the EPA State of the Environment series, which is published every 4 years. It is published at a time when climate change is a global issue and a key environmental priority for countries across the planet. New agreements on greenhouse gas emissions targets were reached at the Conference of the Parties (COP21) held in Paris in 2015 (UN, 2015). The pressing need to reduce greenhouse gas emissions, as well as to develop plans to tackle the implications of climate change, has been extensively reported on across the scientific literature, by non-governmental organisations, state bodies and in the media. The World Meteorological Organization (WMO) announced that the amount of greenhouse gases in the atmosphere had reached new record highs, while ocean temperatures also reached their highest levels since measurements began (WMO, 2015; Blunden, J. and D.S. Arndt, Eds., 2016). According to NASA, global temperature records were broken in 2016, with April and May setting new global temperature records, continuing the trend of the preceding 6 months (NASA, 2016). Reports such as these have highlighted the urgent need to tackle climate change.

The State of the Environment report allocates a lot of discussion to climate issues and the key sectors of the economy that generate the majority of greenhouse gas emissions. However, climate change is just one of the environmental challenges that we face both nationally and globally.

The benefit of a clean environment for health and wellbeing is now widely recognised. People should not have to live in an area where local amenities are degraded and cannot be used. Controlling the release of chemicals and pollutants to the environment is probably one of the main concerns which people think about when they hear about health and the environment. But it is increasingly being recognised that having a clean environment in itself is highly beneficial to wellbeing by providing better places to live and local amenities for communities.

Ireland still has many unspoilt areas that are beneficial to people as well as to the economy. The outstanding natural beauty and wilderness of the Wild Atlantic Way is now recognised as a key economic asset that attracts significant numbers of visitors each year.<sup>1</sup> However, even here there are environmental pressures that need to be closely monitored. The protection of water quality is essential, and effective environmental protection measures are needed to ensure that coastlines, beaches, rivers and lakes along the Wild Atlantic Way, and elsewhere, are maintained and protected.

<sup>1</sup> Wild Atlantic Way Official Travel Site: [www.wildatlanticway.com/home](http://www.wildatlanticway.com/home)



## Content of the Report

This report provides an overview of the current state of Ireland's environment. It uses information and data available from the EPA and other organisations. Environmental professionals working in different fields across the EPA have used this information and data to produce this update on the state of Ireland's environment.

Following on from this short introduction section, Section II examines the quality of our environment through assessments covering air, climate, nature, water, waste and land use and soil. Some of the environmental issues discussed here include reducing greenhouse gas emissions and vehicle exhaust emissions, tackling biodiversity loss and the need to reduce the input of nutrients to waters. These issues are also recognised as European and global issues where action is needed.

Human health protection is a fundamental aspect and a driver of much environmental legislation. Section III explores how human health and the quality of the environment are closely linked and how environmental pollution can affect our quality of life. It also covers the wider societal benefits of a good environment and how this can lead to better health outcomes.

Section IV focuses on the environment and economy. It looks at our current generation of products and services and the resulting emissions, waste and residues. It covers the concept of the circular economy, which

is a relatively new policy area being implemented in the European Union (EU) that is intended to decouple economic growth from its reliance on scarce resources and to foster innovations that enable us to “do more with less”. This would bring benefits to our environment as well as to our economy. This section also delves into the environmental challenges around the economic sectors covering transport, energy and agriculture. It examines the environmental impacts and effectiveness of policies and programmes in these sectors.

Section V rounds off the report by providing an overview of the priorities and main messages for improving the quality of our environment in Ireland. It describes progress made in addressing environmental issues within the context of goals, targets and legislation from the European Commission (EC). Ensuring effective implementation and enforcement of legislation is still a critical factor in ensuring that environmental and health protection standards are achieved.

## Mixed Progress in Addressing Environmental Challenges

The 2012 State of the Environment report identified four key environmental challenges for Ireland and these challenges remain as valid now as they were in 2012 (EPA, 2012):

- valuing and protecting our natural environment
- building a resource efficient, low carbon economy
- implementing environmental legislation
- putting the environment at the centre of decision making.

Based on the assessments presented in this latest report, the overall score card 4 years on for these challenges is mixed. Each of these challenges is complex and broad and, although there have been some improvements, we have not yet as a country fully transitioned into developing everyday effective solutions to deal with these environmental challenges. Biodiversity loss is still a real issue. We are still highly dependent on fossil fuels and meeting our 2020 greenhouse gas emissions targets will be very challenging. We are slow in implementing some environmental directives, particularly those linked to the protection of water.

Many sectors of our economy now have plans that include sustainability, but we are finding that reporting systems need to be strengthened to measure through verifiable evidence how these plans are performing over time. Only then will we be able to judge whether the environment is really at the centre of our decision making process, as those plans with sound environmental policies and



actions should result in improving environmental trends and provide positive indicators about the quality of our environment.

On the other hand, there are local community and niche projects that are leading the way in the transition to a more sustainable future. These community-led projects demonstrate that local solutions are one of the ways to change environmental behaviour and offer new ways to approach environmental challenges in the future. This is clearly an area that requires further support and development as we move forward.

The Environmental Protection Agency Strategy for 2016 to 2020 sets out how to protect and improve the environment over the next 5 years. It lists key environmental challenges that will be targeted for improvement, along with a range of other strategic goals and objectives. Several of the objectives in the strategy match closely with the main messages in this report including:

- tackle the challenges to deliver improved water quality in Ireland
- engage with other strategic partners to promote the development of a holistic national response to climate change
- enhance the air and radiation protection framework in Ireland
- engage the public in the protection and improvement of the environment
- promote a greater awareness of the impact of environment quality on human health.



## Key Messages for Ireland in 2016

There are many and often complex linkages between our everyday lives and the wider environment. Many linkages are already known, but others are still to be discovered and their effects on our environment investigated. This is where the EPA research programme plays a key role.

Many of the steps needed to deal with known environmental issues in Ireland have already been mapped out, but appropriate buy-in and implementation of these steps across society is often the biggest challenge. The main messages for protecting Ireland’s environment arising from the report are as follows:

Figure 1.1 Seven Key Environmental Actions for Ireland on the State of the Environment in 2016



Our understanding of Ireland's environment is constantly changing with ongoing monitoring programmes, research and the implementation of policies and legislation. To complement this report the EPA has developed the "Ireland's Environment" section on the EPA website. This site supports the State of the Environment report by providing up-to-date online information that includes environmental indicator data.

Ireland's economy is beginning to grow again and we must balance our focus on growth with an emphasis on becoming more sustainable and reducing emissions. The adoption of the New York Agreement on Sustainable Development Goals and the Paris Agreement on climate change, both in 2015, provide ambitious, legally binding frameworks for global action on sustainability and climate change. In addition, Ireland has taken a national policy position that commits us to reducing 1990 levels of carbon dioxide emissions by 80% by 2050 across the electricity generation, built environment and transport sectors while achieving carbon neutrality in the agriculture and land use sectors.

However, EPA projections indicate that we face considerable challenges to becoming a low-carbon economy. Ireland must follow a pathway to decarbonise energy, transport and heating. We must break our dependence on fossil energy infrastructures. In addition, the agriculture, forestry and land use sectors should achieve effective greenhouse gas emissions (GHG) neutrality by 2050. In effect, GHG emissions neutrality is the same amount of emissions being emitted as being sequestered or captured. So it effectively means net-zero emissions<sup>2</sup>. This will take planning, investment and time but can be achieved in the overall framework of national, EU and global commitments.

We need to mobilise the four and a half million people living in Ireland to place the environment at the heart of their decisions and actions every single day; only by doing this can we build a sustainable future. A sustainable Ireland is an Ireland with a vibrant economy that offers a decent livelihood for all its citizens; people and communities that help and respect each another; and, underpinning this, a

protected environment that allows us to live more healthy lives. To become sustainable we all need to change the way we act as consumers, in our homes, our businesses and our public bodies. Our challenge is to do this within the planet's capacity and ecological limits.

The environment and our health and wellbeing are inextricably linked. A thriving, clean environment provides the very basis of good lifestyles and we need to look beyond simply protecting people from threats in their environment to considering how the environment can deliver a much wider range of health benefits.

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2 [www.carbonbrief.org/cop21-experts-discuss-greenhouse-gas-emissions-neutrality](http://www.carbonbrief.org/cop21-experts-discuss-greenhouse-gas-emissions-neutrality)