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# Ireland's International Climate Commitments & Domestic Actions to Reduce Emissions

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## Herding Cats

Climate change is a global challenge and therefore requires a global solution. No one country, no matter how big, can solve this problem alone. It can be costly to take action, even though there are also benefits such as job creation in low carbon sectors, boosting innovation etc.



Politicians tend to think in short-term election cycles: “what can we do now to respond to citizens’ immediate needs?” is the mind-set. Schools, hospitals, roads, and housing will always win out by this metric, and climate change can be seen as a distant problem, which voters rarely bring up on the doorstep. This means that there is always a temptation for countries to do nothing and leave the effort to others (this is sometimes called “free riding”). One of the biggest issues is therefore coordinating the efforts of almost 200 nations so that everyone is seen to make a fair effort. Coordinating countries can therefore be a bit like herding cats: and just when you think they’re all moving in the same direction, one tries to make an escape!

This is where the United Nations Framework Convention on Climate Change (UNFCCC) comes in. This is a UN forum where countries discuss climate change and try to come up with ways to work together to solve the problem. Broadly speaking the negotiations can be divided into those focused on:

1. Mitigation: trying to reduce greenhouse gas emissions (GHGs)
2. Adaptation: trying to manage the impacts of climate change which are increasingly inevitable

In this briefing paper, I will focus on the first of these: mitigation: that is, how to reduce GHGs, decarbonise the economy, and avoid dangerous climate change.

## A Global Response

The first big success of the UNFCCC was the Kyoto Protocol, agreed in 1997. The problem was that only wealthy countries were required to reduce their emissions, and, more importantly, the USA never ratified the treaty. The international community spent the next two decades

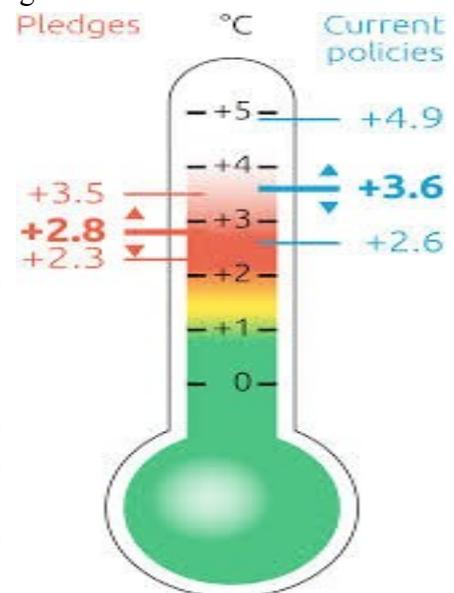
trying to agree a new treaty, without much success. Then, partly because the USA finally had a President who wanted to take responsibility, the Paris Agreement was agreed in December 2015. So far it has been ratified by 160 countries.



It is the first international agreement to include developing and developed countries. It commits parties to avoid “dangerous” climate change and to maintain global temperatures “well below 2 degrees Celsius above pre-industrial levels”, and to “pursue efforts” to limit temperature increases to below 1.5 degrees (these targets are regarded by scientists as “guardrails” beyond which dangerous climate change becomes increasingly likely). The Agreement specifies that countries must seek to collectively ‘peak global greenhouse gas emissions as soon as possible’ and ‘to undertake rapid reductions thereafter in accordance with the best available science’.

Under the Agreement the clear majority of countries have made pledges to reduce emissions. The problem is that when you add up the impact of all the pledges, even if you assume these pledges are fully implemented, warming in the region of 2.8 degrees would occur by the end of 2100, well beyond the threshold for dangerous climate change.

Countries need to make more ambitious pledges (and implement them!). The Agreement therefore requires countries to come forward with more demanding pledges every 5 years, following an assessment called a “global stocktake”. This has been called a “ratchet mechanism” because it is hoped that these stocktakes will encourage countries to ratchet up their efforts over time as low carbon technologies continue to become cheaper.



The Preamble of the Paris Agreement requires that international, regional and national action on climate change considers the imperative of “a just transition”. Climate justice is a very important principle under the Paris accord: what it means is that rich countries like Ireland, which are responsible for more emissions into the atmosphere, must do more to deal with the problem than poor countries who have done little to cause the problem.

### The EU

Ireland is part of a collective EU pledge to the UNFCCC. The EU has committed to reduce GHGs:

- 20% by 2020
- At least 40% by 2030; and
- Between 80% and 95% by 2050.

These EU targets apply to all GHG emissions in the EU. Very roughly speaking about 80% of EU emissions are carbon dioxide (CO<sub>2</sub>) from burning fossil fuels. 10% is methane (CH<sub>4</sub>) from agriculture and waste. The final 10% is mostly from N<sub>2</sub>O (fertiliser application in agriculture). This overall EU target is then divided among Member States, including Ireland.

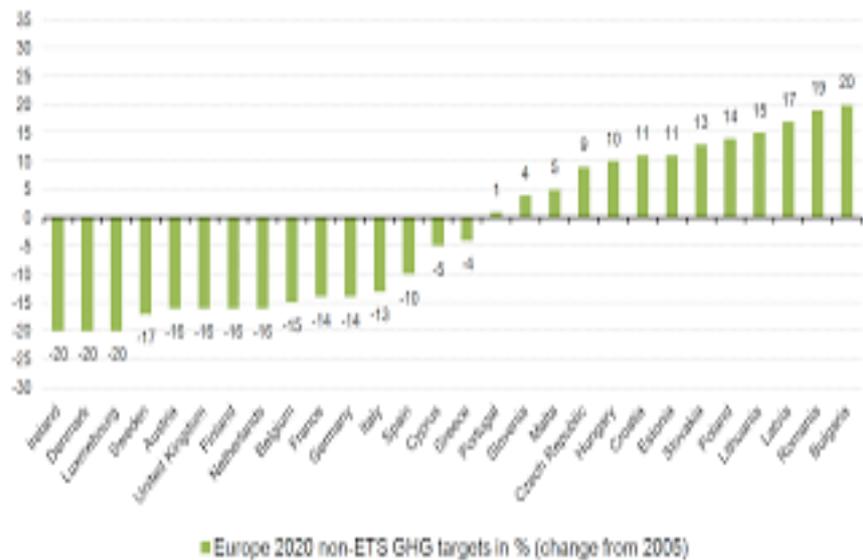
### Ireland's Targets

Two things that are important to take away from this section:

1. Ireland has a lot of confusing targets for renewables and emissions, but none of these are on track to be met (see table below).
2. These targets imply a structural transformation of the economy, with potentially profound implications for different sectors, jobs and society.

The details are a bit confusing because Ireland has a range of targets, nationally and at EU level.

The most important immediate target is for 2020, to reduce emissions by 20%. This is the most challenging target in the EU. This target applies to the agriculture, transport and buildings sectors.



All heavy industry and power generation,

however, are covered under an EU-wide Emissions Trading Scheme. Under this scheme companies like ESB or Smurfit, for example, must buy carbon permits for every tonne of CO<sub>2</sub> they emit (discussed further below). Ireland also has many other targets (some nationally agreed, some imposed at EU level), which you may be interested in reading about in the table below.

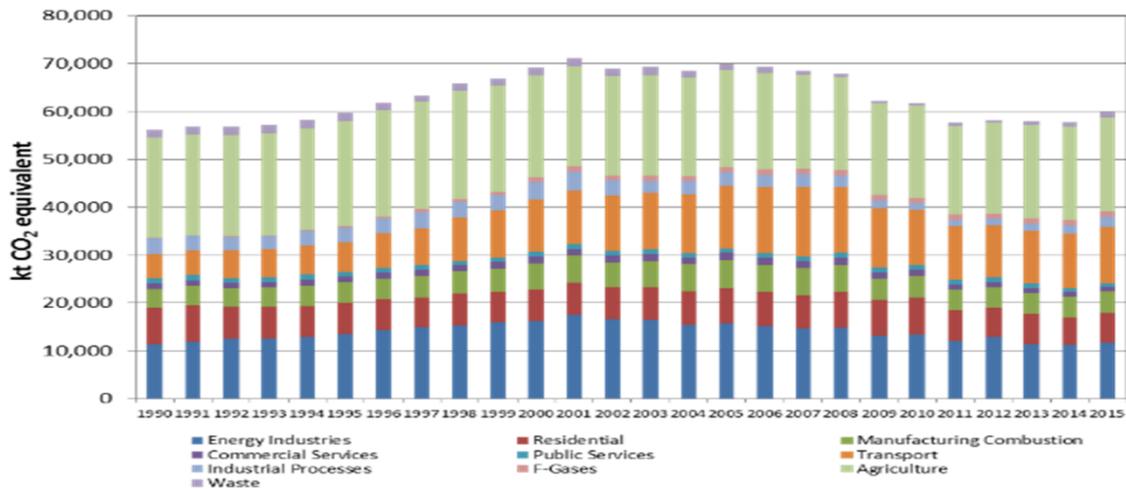
### Ireland's Targets

Description	Period	Nature	Status
Reduce emissions from buildings, transport and agriculture 20% on 1990 levels	2020	Legally binding under EU	Not on target: emissions 12% below 1990 levels and now growing
16% of energy to come from renewables	2020	Legally binding under EU	Not on target: approximately 8% of energy from renewables and increasing slowly
Reduce emissions from buildings, transport and agriculture 30% on 1990 levels	2030	Under negotiation	Not on target: emissions 12% below 1990 levels and increasing
Reduce energy emissions 80% and achieve "carbon neutrality" in agriculture	2050	National commitment	Not on target: emissions from agriculture and energy both increasing

## Ireland's Distance to Target

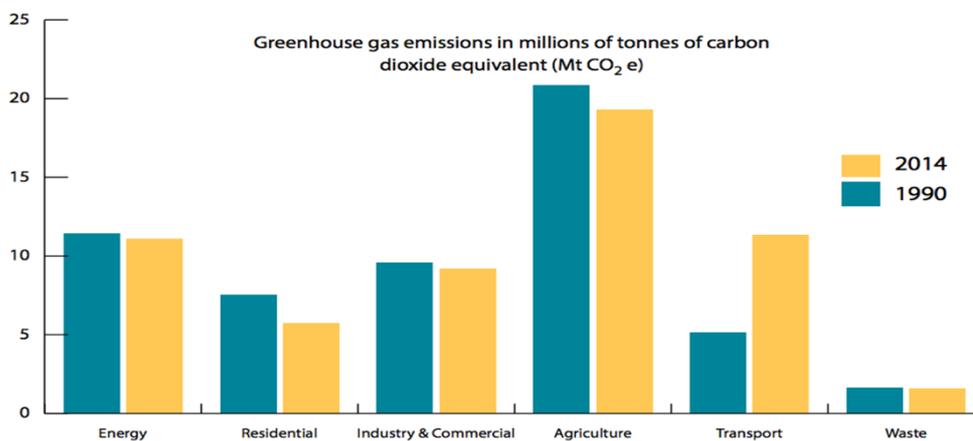
As the EPA graph below shows, Ireland's emissions have begun to increase as the economy has begun to recover from the recession, in a period when the UN and EU require rapid decreases in emissions from wealthy countries.

### Sectoral emissions in Ireland (1990 to 2015)



According to Ireland's Climate Change Advisory Council, the pace of decarbonisation is falling short of what would be required to meet Ireland's immediate and longer-term objectives. The most notable trend since 1990 has been a rapid increase in transport sector emissions over this period (see below).

### Change in sectoral emissions (1990-2014)



Should Ireland fail to meet its EU targets through national efforts, as seems likely, it is required under the terms of these EU Directives to secure compliance through alternative means: this usually involves purchase of carbon credits from other member states, or even payment of fines. It is very hard to estimate how much it might cost in carbon credits and fines for failure to meet EU renewables and emissions targets, but according to some estimates it could be in the region of hundreds of millions by 2020, and perhaps billions by 2030 (this is if no action is taken to reduce emissions and promote renewables, which is unlikely). This would mean less money for schools, roads, health services, social welfare etc.

## Progress and Challenges

There have been achievements in reducing emissions in all sectors, but progress has been far too slow. Looking at key sectors, some of the measures that have been implemented are reviewed below, with a short discussion of the key challenges in each case. This is not a comprehensive assessment, and I've tried to focus on the most important measures only.

**Electricity Generation and heavy industry:** An incentive to generate electricity from renewables, first introduced by the Government in 2006/2007, has spurred the rapid decarbonisation of electricity in Ireland, mostly through the development of large-scale wind farms. Unlike other countries (Germany, Canada, Denmark, the UK), however, there has been almost no local investment, ownership or involvement of local communities in these wind farm developments. This has resulted in the widespread mobilisation of local host communities against wind farms which are perceived to benefit “remote corporate” investors, and not local communities.

The EU Emissions Trading scheme, on the other hand, has not been so effective. This EU-wide scheme applies to heavy industry and electricity generation sectors. In Ireland, it covers approximately 100 large power stations, industrial plants (such as ESB/Smurfit etc.) and some airline operations. This means that covered companies must acquire a carbon credit for each emitted tonne of CO<sub>2</sub>. A persistently low carbon price (of circa €5 per tonne of carbon emitted) has meant that the scheme has only had a marginal impact to date. The number of available permits is reduced by about 2% every year, so overall emissions from this sector will fall and the price of credits should go up over the coming decades. This should encourage companies to stop polluting and to invest in clean alternatives. At least that's the theory. There are lots of problems with this scheme in practice that need to be sorted out at EU level.

**Houses and other buildings:** Several grants schemes have been introduced in the buildings sector to encourage individual households to invest in low carbon technologies and reduce energy use in homes (community-focused schemes are also growing in importance). These have, however, largely been focused on promoting investments in low cost technologies (attic and cavity wall insulation) that are cost effective for homeowners without grants. For deep decarbonisation to be achieved, the focus must be on promoting much deeper and comprehensive retrofit of homes and buildings in the community, involving a wide range of insulation and renewable technologies. New innovative approaches are required, such as on-bill repayment of loans and/or widespread availability of low interest loans for energy efficiency retrofit of homes, and for the purchase of renewable heating systems, solar panels etc.

**Transport:** Amendments to the Vehicle Registration Tax (VRT) and motor taxation schemes have successfully shifted investment away from high CO<sub>2</sub> vehicles (but towards highly polluting diesel cars). Also, fuel is now blended with biodiesel before the pump reducing emissions somewhat. Grants schemes for Electric Vehicles (EVs), however, have not succeeded in promoting widespread uptake. Deep decarbonisation requires a much greater level of investment in low-carbon electric or electric-hybrid vehicles, in the private motor fleet and freight sectors. The experience of countries such as Norway illustrates that this is possible with a mix of financial and non-financial incentives. Additionally, greater use of public transport, cycling and walking is required, but Ireland has an underdeveloped public transport infrastructures compared to many European countries. Capital infrastructure plans remain resolutely skewed towards roads and away for public transport or cycling infrastructure. Measures to increase costs of private diesel and petrol vehicles (increased carbon taxes, road charges, tolls, or congestion charges) are perceived as unpopular and politically unfeasible.

**Agriculture:** there has been some progress in promoting tree planting (afforestation), which sequesters CO<sub>2</sub>, but annual growth rates are far behind the 16,000 hectares per annum required to achieve the Government objective of 18% forest cover by 2046. Efficiency gains (achieved through using fertilizers more efficiently or by increasing the genetic merit of the herd, for example) will be offset by planned increases in output, and emissions from agriculture are projected to grow in the period to 2030. Climate change is seen a threat to the expansion plans for the agri-food sector set out in industry/government strategy documents (Food Harvest 2020 and Food Wise 2025). To date farmers have been somewhat reluctant to consider potential opportunities arising from decarbonisation that have been identified, including in the bio-economy, climate-smart farming, and distributed renewables, for a variety of social, cultural and other reasons.

**Conclusion:** the process of decarbonisation is often complicated by the fact that high carbon lifestyles and economic activities are deeply embedded into routines and practices for many. Low carbon development can impose costs disproportionately on specific communities and economic sectors, whereas benefits can be dispersed across society. This is a dynamic which is evident from the activities of stakeholder and civil society groups that have mobilised to oppose aspects of low-carbon transition (pylons, wind turbines, forestry, carbon tax etc.).

### The road ahead

Looking forward, when Ireland's emissions pathway is set against its existing target for 2020, and the likely future target for 2030, a very significant gap to target arises. Ireland is not doing enough to make a contribution to global decarbonisation. There are many challenges to be overcome if climate targets are to be met: technological, economic, political etc. But I want to focus below on social acceptability, which is often forgotten in the debate.

Societal acceptance for low-carbon transition is clearly a problem. Particularly in rural, some communities may see climate action as a threat to their landscape (forestry, pylons, wind turbines in remote corporate ownership) and to traditional economic sectors such as beef farming or peat.

However, ambitious climate action can happen in such a way that benefits rural communities, and in a manner that drives regionally dispersed economic development. After all, distributed renewable energy sources such as wind, sunlight, wood, and organic wastes are abundant in rural and marginalised communities. The technologies needed to harvest these renewable sources of energy are, in many cases, small scale, so that they can provide business opportunities for locals.

The challenge for Government is to articulate a new vision for low carbon transition around developing green economic development. This requires incentives to promote low carbon business opportunities for local actors, as well as access to expertise and finance. This will take a change in mind-set in many quarters, from Government all the way down to the communities themselves.