







Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta  
National Treasury Management Agency

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28 June 2013

Mr. Phil Hogan TD  
Minister for the Environment, Community  
and Local Government,  
Custom House,  
Dublin 1

Dear Minister,

I have the honour to submit to you the Report and Accounts of the Carbon Fund for the period ended 31 December 2012.

Yours sincerely

**John C. Corrigan**  
Chief Executive





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# LEGAL FRAMEWORK

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This report relates to the purchase of carbon units for compliance by Ireland with its greenhouse gas emission reduction commitment in the Kyoto Protocol compliance period 2008-2012. For the purposes of the Protocol, Ireland undertook to limit its average annual emissions of greenhouse gases over the five-year period to no more than 13 per cent more than the level of emissions in 1990. This is equivalent to a cap of 62.8 Mt CO<sub>2e</sub> per annum over the five year period.

Ireland's strategy to achieve this target was set out in the *National Climate Change Strategy 2007-2012* published by the Department of the Environment, Community and Local Government. The strategy provided for the purchase of carbon credits in respect of emissions reductions achieved elsewhere as an offset for any emissions by Ireland in excess of its Kyoto commitments. It was originally estimated that it would be necessary for the Government to purchase carbon credits to cover a projected 3.6 million tonnes of excess emissions in respect of each year of the 2008-2012 period. Following the rapid and severe deterioration in economic conditions and the anticipated lower rate of growth in the Irish economy over this period, the estimated requirement to purchase credits has been significantly reduced.

Under the Carbon Fund Act 2007, a Carbon Fund was established for the purchase of carbon credits to supplement domestic mitigation action. Management of the Fund was delegated to the National Treasury Management Agency, which was also designated the purchasing agent for the acquisition of these necessary credits. Carbon credits are referred to in the legislation as Kyoto Units.

Section 6 of the Carbon Fund Act 2007 states: *"As soon as may be, but not later than 6 months after the end of each financial year of the [National Treasury Management] Agency, the Agency shall make a report to the Minister [for the Environment, Community and Local Government] of its activities in relation to the performance during the year concerned of the functions delegated to it under this Act, and the Minister shall cause copies of the report to be laid before each House of the Oireachtas."*

This report is the sixth report to the Minister for the Environment, Community and Local Government under the Act, and covers the year ended 31 December 2012.



# THE BACKGROUND TO THE KYOTO PROTOCOL

Against the background of increasing concern as to the effect of human activity on the environment, the United Nations established the **Intergovernmental Panel on Climate Change (IPCC)** and the **World Meteorological Organisation (WMO)** in 1988. Two years later, the *First Assessment Report* of the IPCC confirmed the scientific basis for concerns about climate change. Subsequent reports expanded on this, while the *Fourth Assessment Report* in 2007 concluded that warming of the climate system is “unequivocal”.

A major step in addressing the concerns about the global climate was taken at the UN conference held in Rio de Janeiro in 1992 when a **Framework Convention on Climate Change** was agreed. There are currently 192 Parties (191 states and 1 regional economic integration organisation) to The Kyoto Protocol to the UNFCCC<sup>1</sup>. Under the Convention, industrialised countries were expected to take the lead in reducing greenhouse gas emissions<sup>2</sup> to 1990 levels. However, the commitments by the industrialised countries were not legally binding. That was seen as a weakness, and it was decided accordingly that the convention should be augmented by a protocol with stricter and legally binding undertakings to reduce emissions.

In 1995 negotiations on the protocol commenced and the **Protocol to the Framework Convention on Climate Change** was adopted in 1997 at the UN Climate Conference in Kyoto, Japan. The **Kyoto Protocol**, as it is commonly called, originally addressed the period 2008–2012. Though the Kyoto Protocol was a significant achievement, and 191<sup>3</sup> countries initially ratified it, negotiations have continued towards the development of a more comprehensive treaty. At the Climate Conference

in Bali in 2007, terms were agreed for the negotiation of a further treaty. The work in preparation for this gained momentum throughout 2008 particularly at the **Conference of Parties (COP)** at its 14th session held in Poznan, Poland in December 2008 and through the **Climate Change Talks** in March and June 2009 held in Bonn, Germany.

However the Copenhagen COP held in December 2009 proved to be a disappointment as agreement could not be reached on a comprehensive treaty to replace the Kyoto Protocol in 2012. Copenhagen resulted in a non-binding political declaration that failed to achieve consensus, with several countries dissenting. Progress was made at the COP16 in Cancun in 2010 and at COP17 in Durban, South Africa in December 2011. During this COP17, the Durban Platform for Enhanced Action was agreed which spelled out a path to negotiate a new legal and universal emission reduction agreement. This is to be adopted in 2015, and comes into effect from 2020. The key achievement was that the outcome in 2015 would address the mitigation efforts of all countries under one agreement. Governments, including 38 industrialised countries, also agreed a second commitment period of the Kyoto Protocol from January 1, 2013.

As the first commitment period came to an end, progress on the post-2012 international agenda continued at the COP18 in Doha, Qatar in December 2012. Following this the “Doha Amendment to the Kyoto Protocol” was adopted. The amendment includes new commitments for the second period (2013-2020) and a revised list of Greenhouse Gases to be reported. Parties committed to reduce GHG emissions by at least 18 percent below 1990 levels in the eight-year period from 2013 to 2020;

<sup>1</sup> In March 2013, Afghanistan became the latest country to ratify the Convention

<sup>2</sup> Carbon Dioxide (CO<sub>2</sub>) is the most common greenhouse gas and a tonne of CO<sub>2</sub> is used as the common unit of measure. Emissions of other greenhouse gases are measured as equivalents of carbon dioxide in terms of their Global Warming Potential (GWP) over a 100-year period. By definition, CO<sub>2</sub> has the GWP of 1. Below is a list of the GWPs for the main gas types:

	GWP-100
Carbon dioxide (CO <sub>2</sub> )	1
Methane (CH <sub>4</sub> )	21
Nitrous Oxide (N <sub>2</sub> O)	310
Hydrofluorocarbons (HFCs)	150 – 11,700
Perfluorocarbons (PFCs)	6,500 – 9,200
Sulphur Hexafluoride (SF <sub>6</sub> )	23,900

<sup>3</sup> The USA was an important exemption to the ratification, while Canada withdrew from the Kyoto Protocol in December 2011

however, the composition of Parties in the second commitment period is different from the first. The amendment is subject to acceptance by Parties to the Kyoto Protocol and following Afghanistan becoming a Party to the Kyoto Protocol, the total number of instruments of acceptance required for the entry into force of the amendment is 144.

In advance of the progress made at the Durban and Doha conferences, the EU had already demonstrated strong leadership in the global response to climate change by adopting a unilateral 2020 greenhouse gas mitigation target as part of a basket of legislative measures, known as the Climate and Energy Package. As part of the package, which was adopted in December 2008, binding targets were set for Ireland to reduce non-ETS<sup>4</sup> greenhouse gas emissions by 20% relative to 2005 levels in the period to 2020.

In March 2013 the European Parliament approved two new laws to improve EU rules on monitoring and reporting of greenhouse gas emissions, including those from forestry and agriculture. This establishes common rules for accounting for Greenhouse Gas (GHG) emissions and removals of carbon from the atmosphere resulting

from activities related to land use, land-use change and forestry (LULUCF). The decision represents a first step towards incorporating the forestry and agriculture sectors, the last major sectors without common EU-wide rules on GHG, into EU climate policy.

The challenging greenhouse gas mitigation agenda which Ireland faces in the period to 2020 and beyond is central to the *Programme for the Development of National Climate Policy and Legislation*<sup>5</sup> announced by the Minister for the Environment, Community and Local Government in January 2012. Having regard to the emphasis in the programme on transition to a low-carbon future, it is expected that the outcome will address the issue of using credits generated through the Kyoto Protocol flexible mechanisms to supplement domestic mitigation action.

<sup>4</sup> See page 8 for an explanation of ETS and non-ETS sectors.

<sup>5</sup> See <http://www.environ.ie/en/Environment/Atmosphere/News/MainBody,29241,en.htm>



# OBLIGATIONS UNDER THE KYOTO PROTOCOL

The defining feature of the Kyoto Protocol, in contrast to the original Framework Convention, is that, whereas the Convention encouraged the reduction of greenhouse gas emissions, the Protocol has mandatory targets for reductions in these emissions for the world's leading economies. These, primarily the major industrialised countries and former Soviet bloc countries that are undergoing the process of transition to a market

economy, are known as Annex B countries.<sup>6</sup> The targets range from reductions of 8 per cent to increases of 10 per cent on 1990 emissions levels, with the aim of reducing overall emissions by 5 per cent below the 1990 level. The commitment period for these reductions is 2008-2012.

## Kyoto Greenhouse Gas Emissions Targets

Country	Target for 2008-2012 by reference to 1990 levels
EU-15 <sup>7</sup> , Bulgaria, Czech Republic, Estonia, Latvia, Liechtenstein, Lithuania, Monaco, Romania, Slovakia, Slovenia and Switzerland	-8%
US <sup>8</sup>	-7%
Canada <sup>9</sup> , Hungary, Japan and Poland	-6%
Croatia	-5%
New Zealand, Russian Federation and Ukraine	0
Norway	+1%
Australia	+8%
Iceland	+10%

<sup>6</sup> Annex B countries are those listed in Annex B of the Kyoto Protocol and are the 39 countries with quantified emission limitation or reduction commitments. However, there is some overlap in that the European Union (EU-15) is itself a signatory while the 15 countries that were Member States of the EU at that time, including Ireland, are also listed. (See Appendix 1 for greater detail).

<sup>7</sup> The EU-15 decided to take advantage of a scheme under the Kyoto Protocol known as a "bubble" whereby countries have individual targets which are combined to make an overall target for that group of countries (Article 4).

<sup>8</sup> The US did not ratify the Kyoto Protocol. This target is therefore void.

<sup>9</sup> Canada's target is no longer valid, as it withdrew from the Kyoto Protocol in December 2011.

# THE EUROPEAN UNION AND THE KYOTO PROTOCOL

The EU-15 has an internal burden sharing agreement to meet its 8 per cent emissions reduction target by distributing different targets to its Member States. Ireland's target is to achieve emissions of no more than 13 per cent above the 1990 levels. The details for the EU-15 are:

Country	Target for 2008-2012 by reference to 1990 levels
Austria	-13%
Belgium	-7.5%
Denmark	-21%
Finland	0%
France	0%
Germany	-21%
Greece	25%
Ireland	13%
Italy	-6.5%
Luxembourg	-28%
Netherlands	-6%
Portugal	27%
Spain	15%
Sweden	4%
UK	-12.5%
EU-15	-8%

The EU-15 decided, as a major pillar of its climate policy, to collectively create a European-wide "cap and trade" scheme for major polluters – the **European Union Emissions Trading Scheme (EU ETS)**. Under the scheme, the carbon emissions of approximately 11,000 installations across the EU are controlled. Over 100 Irish installations participate in the scheme.

## EU Emissions

### TRADED SECTOR EU Emissions Trading Scheme

46% of EU CO<sub>2</sub> emissions

- Combustion installations >20MW thermal input
- Iron and steel
- Oil refineries
- Cement, lime, glass, ceramics
- Pulp / paper
- Airlines

### NON-TRADED SECTOR

54% of EU CO<sub>2</sub> emissions

- Residential
- Transport
- Agriculture etc

This scheme is the largest multi-national emissions trading scheme in the world. It sets a cap on the level of emissions for individual installations. Installations are issued allowances – **European Union Allowances (EUAs)** - which give them the right to emit up to that level. To the extent that installations emit more than their allowances they must buy credits. Those who emit less than their allowances may sell their surplus. For the period 2008–2012, the allocations of allowances to installations are made on a country-by-country basis within each country's overall National Allocation Plan. In the period after 2012, allocations of allowances will be done by sector across the EU ETS and there will be no national allocation plans. Airlines were included in the EU ETS from the 1st January 2012.

A feature of the EU Emissions Trading Scheme is that an amount of allowances (New Entrants Reserve) are put aside to allocate to those who enter an industry covered by the EU ETS, so as to avoid them being placed at a competitive disadvantage versus those already in the scheme, who have been allocated units. To the degree that these new entrant allowances are not used, they revert to the State. Equally if a firm closes, its allowances

revert initially to the New Entrants Reserve (NER) and ultimately the State. Given the economic slowdown in Ireland the units set aside for the new entrants are unlikely to be fully utilised and will form an extra source of carbon units available for compliance purposes for the State<sup>10</sup>. It is currently estimated that this will amount to approximately 6 million tonnes of CO<sub>2</sub> over the five year Kyoto period.<sup>11</sup>

With the slowdown in the European economy carbon emissions have declined among the members of the EU ETS. During 2009 it became clear the EU ETS would have a surplus of EUAs in the period to 2012. This was reflected in the Point Carbon survey<sup>12</sup> published in March 2012 where 41% of recipients said their company would have an EUA surplus in the 2008-2012 period. This contrasts with 15% of respondents in 2008 who felt they would have a surplus in the period but is broadly consistent with the 2011 survey. However, the most recent survey for 2013 indicated that a large share of participants (44%) will have a need to buy allowances for Phase 3 compliance up to 2020.<sup>13</sup>

The decline in the requirement to purchase carbon units by firms and countries and the surplus in the EU ETS market has led to a continuous decline in carbon unit

prices. However, there are proposals from the European Commission before the European Parliament to alleviate the downward pressure on prices by removing some of the glut of allowances from the EU ETS.

In Ireland the traded sector has also seen a decline in emissions. Data submitted by the Environmental Protection Agency (EPA)<sup>14</sup> to the EU Commission show verified emissions of greenhouse gasses for the years 2008-2011 for companies in Ireland covered by the EU ETS are 70.73 Mt CO<sub>2e</sub>, compared to the total ETS free allocation over the same period of 89.12 Mt CO<sub>2e</sub>. This lower than anticipated level of emissions reflects the severity of the economic slowdown. As mentioned above this surplus remains with the firms to whom the initial free allocation was made.

<sup>10</sup> It should be noted that the allowances in the New Entrants Reserve (NER) are EUAs, which are created out of a State's initial allowances of AAUs. For more detail on the different types of carbon units please refer to the Glossary of Terms.

<sup>11</sup> [http://www.epa.ie/pubs/reports/air/airemissions/GHG\\_1990-2011\\_UNFCCC\\_Final.pdf](http://www.epa.ie/pubs/reports/air/airemissions/GHG_1990-2011_UNFCCC_Final.pdf)

<sup>12</sup> See: [http://www.pointcarbon.com/polopoly\\_fs/1.1814671!Carbon%202012\\_FINAL.pdf](http://www.pointcarbon.com/polopoly_fs/1.1814671!Carbon%202012_FINAL.pdf)

<sup>13</sup> See [http://www.pointcarbon.com/polopoly\\_fs/1.2236558!Carbon%202013%20-%20At%20a%20tipping%20point.pdf](http://www.pointcarbon.com/polopoly_fs/1.2236558!Carbon%202013%20-%20At%20a%20tipping%20point.pdf)

<sup>14</sup> See: [http://www.epa.ie/pubs/reports/air/airemissions/GHG\\_1990-2011\\_UNFCCC\\_Final.pdf](http://www.epa.ie/pubs/reports/air/airemissions/GHG_1990-2011_UNFCCC_Final.pdf)



# IRELAND'S STRATEGY FOR COMPLIANCE WITH THE KYOTO PROTOCOL

Ireland's strategy for achieving its Kyoto target for reducing greenhouse gas emissions was set out in the *National Climate Change Strategy 2007-2012*, published in April 2007.<sup>15</sup>

Ireland's target under the Kyoto Protocol is to limit average annual emissions in the period 2008–2012 to 13 per cent above the baseline estimate of 55.60 million tonnes of CO<sub>2</sub> equivalent.<sup>16</sup> Accordingly Ireland's total emissions limit for the period 2008–2012 is 314.180 million tonnes, or an average of 62.836 million tonnes per year. It was estimated that measures already taken would reduce emissions by some 8 million tonnes a year. However, in the absence of additional policies and measures, it was projected that Ireland would exceed its Kyoto obligations by an average of 8.4 million tonnes of emissions each year.

The following table summarises the measures for achieving Ireland's Kyoto target outlined in the *National Climate Change Strategy 2007-2012*:<sup>17</sup>

<sup>15</sup> For details, see the full report published by the Department of the Environment, Community and Local Government available on the web at <http://www.environ.ie/en/Environment/Atmosphere/ClimateChange/NationalClimateChangeStrategy>

<sup>16</sup> The baseline estimate for Ireland is calculated as the sum of carbon dioxide, methane and nitrous oxide emissions in 1990 and the contribution from fluorinated gases in 1995, [Source: Environmental Protection Agency Press Release, 15 January 2008].

<sup>17</sup> Source: Ireland's National Allocation Plan for Emissions Trading 2008-2012, Environmental Protection Agency, 4 March 2008.

	Annual Average, 2008-2012 (Million Tonnes of CO <sub>2</sub> equivalent)
<b>Kyoto Target</b>	62.8
Projected Greenhouse Gas Emissions after effects of measures already taken.	71.2
<b>Distance to Kyoto Target</b>	8.4
<b>Additional measures to achieve Kyoto Target</b>	
(1) Emissions abatement by:	
(a) EU Emissions Trading Scheme participants	0.9
(b) Non-traded sector of economy (including additional measures)	1.9
(2) Purchase of allowances and credits (or other reductions) by:	
(a) EU Emissions Trading Scheme participants	2.0
(b) Government	3.6
	8.4



The National Treasury Management Agency was designated the purchasing agent for the State in the acquisition of the required credits of 3.6 million tonnes of greenhouse gas emissions on average in respect of each year of the 2008–2012 period, purchased under the Flexible Mechanisms of the Kyoto Protocol.<sup>18</sup> The total credits required in the period were estimated at 18 million tonnes.

With the change in Ireland's economic circumstance the Environmental Protection Agency was asked in 2009 to apply a sensitivity analysis which might better reflect the changed economic situation. This analysis, published in March 2009<sup>19</sup>, concluded that, "*applying the **Economic Shock Analysis** to the **with additional measures scenario**, (which is the most ambitious reduction scenario), the Government's purchasing requirement (or need for additional domestic policies and measures) would reduce to 1.3-1.8 Mtonnes of CO<sub>2e</sub> per annum for each of the five years 2008-2012 as compared to the 3.6 Mtonnes per annum anticipated in the National Climate Change Strategy". In light of the changing estimates of the Government's need to purchase carbon credits, it was decided in February 2009 to cease purchases of carbon credits for the time being.*

In April 2013 the EPA published the latest update of greenhouse gas emissions projections 2012-2030<sup>20</sup>. It concluded that as a consequence of the economic recession and assuming the full implementation of the Government's policies with regard to emissions, Ireland "*can comply with its Kyoto Protocol greenhouse gas reduction obligations for the first commitment period (2008 – 2012)*". The EPA also noted the likelihood that there will be a very low requirement for the use of credits to ensure compliance. Credits in this instance relate to purchased carbon units in the national portfolio.

## 2020 Obligations

While Ireland is currently on track to meet its targets for the current Kyoto period, without the requirement for further purchases of carbon units, the possible need to purchase additional carbon units in the 2013-2020 phase cannot be dismissed.

As mentioned earlier (see page 6), a second, and different, set of legally binding targets apply under the EU Climate and Energy Package agreed in December 2008. Under this package, Ireland is required to deliver a 20% reduction in non-ETS greenhouse gas emissions by 2020 relative to 2005 levels. As well as the overall reduction in emissions over the period, Ireland also has binding annual emission limits for the period 2013-2020.

The EPA in their publication "Ireland's Greenhouse Gas Emission Projections 2012-2030"<sup>21</sup> estimate that Ireland will exceed its binding annual limit in 2015-2016 and will exceed its obligations over the 2013-2020 period cumulatively by 7 – 24 Mt CO<sub>2e</sub>. The key contributors in the non-ETS sectors are projected to be transport and agriculture. Agriculture emissions are projected to grow on an annual basis out to 2020 in part as a result of the removal of the milk quota and the impact of Food Harvest 2020. Agricultural emissions are expected to grow by 12 % and Transport emissions are expected to grow by 12-20% over the period. One should note that the emissions forecasts exclude any benefit from forest sinks in line with EU accounting rules which stipulate that they may not be used for compliance towards 2020 targets<sup>22</sup>.

Addressing the distance to Ireland's greenhouse gas emission reduction target in the compliance period 2013-2020 is one of the objectives of the Government *Programme for the Development of National Climate Policy and Legislation*, announced in January 2012.

<sup>18</sup> See Annex 3 of the National Climate Change Strategy 2007-2012 in Appendix 2

<sup>19</sup> See : <http://www.epa.ie/news/pr/2009/march/name,25767,en.html>

<sup>20</sup> <http://www.epa.ie/newsandevents/news/name,51811,en.html>

<sup>21</sup> See : [http://www.epa.ie/pubs/reports/air/airemissions/EPA\\_GHG\\_Emission\\_Proj\\_pub\\_2013\\_FINAL.pdf](http://www.epa.ie/pubs/reports/air/airemissions/EPA_GHG_Emission_Proj_pub_2013_FINAL.pdf)

<sup>22</sup> Forests absorb CO<sub>2</sub> and therefore increasing forestry reduces the net amount of carbon emitted into the atmosphere. There has been considerable debate however as to the calculation of the offset provided by forestry.

# IRELAND'S GREENHOUSE GAS EMISSIONS IN 2011

Total greenhouse gas emissions (GHG) in 2011 are estimated to be 57.51 Mt CO<sub>2e</sub>, which is 6.5% (3.98 Mt CO<sub>2e</sub>) lower than the level of emissions in 2010<sup>23</sup>.

The sources of greenhouse gas emissions in Ireland in 2011 were:

Agriculture	32.0%
Energy	20.8%
Transport	19.6%
Industrial and Commercial	14.3%
Residential	11.5%
Waste	1.8%

The reduction in greenhouse gas emissions compared to 2010 primarily reflects the continued downturn in economic activity in 2011.

The largest reductions were in the Residential and Energy sectors, where emissions fell by 15.6% and 10.6% respectively, compared to 2010. The Industry and Commercial sector recorded a decrease of 8.7%, while emissions in the Waste sector grew by 9.7% in 2011. Agriculture and Transport emissions fell by 1.9% and 2.7% respectively.

Ireland's total national emissions for 2011 are well below Ireland's Kyoto Protocol limit of 62.84 Mt CO<sub>2e</sub>. However it must be remembered that any surplus among the EU ETS members remains with those members. The Carbon Fund relates to the non-ETS sectors and so the relevant target is the overall target less the allocation of 22.28 Mt CO<sub>2e</sub> to EU ETS<sup>24</sup> (62.84 – 22.28 = 40.56 Mt CO<sub>2e</sub>). Ireland's non-ETS emissions in 2011 were 41.74 Mt CO<sub>2e</sub>, leaving a gap to target of 1.18 Mt CO<sub>2e</sub><sup>25</sup>.

<sup>23</sup> The Final estimates for 2011 were published by the EPA on the 15th April 2013

<sup>24</sup> As mentioned above (page 9) there may however be some units returned to the State from the "New Entrants" allocation in the EU ETS.

<sup>25</sup> See Ireland's Greenhouse Gas Emissions in 2011 (EPA) at [http://www.epa.ie/pubs/reports/air/airemissions/GHG\\_1990-2011\\_UNFCCC\\_Final.pdf](http://www.epa.ie/pubs/reports/air/airemissions/GHG_1990-2011_UNFCCC_Final.pdf)



# FLEXIBLE MECHANISMS

The Flexible Mechanisms are an integral part of the Kyoto Protocol and are based on the fact that emissions reductions have the same environmental benefit irrespective of where they are achieved. Therefore, countries can achieve their targets by contributing to or paying for the reduction in carbon emissions in other countries. The mechanisms help identify the lowest cost opportunities for reducing emissions and so help achieve the overall target in the most economically efficient fashion. They also promote the transfer of the latest technology to developing countries.

The Flexible Mechanisms are:

- (1) **the Clean Development Mechanism (CDM)** through which credits earned by sponsoring emissions reducing projects in developing countries may be used to meet the sponsors' Kyoto obligations in their home countries. These credits are **Certified Emission Reductions (CERs)**;
- (2) **the Joint Implementation (JI) Mechanism**, under which an Annex B country implements a project in another Annex B country.<sup>26</sup> The credits thereby earned are Emissions Reductions Units (ERUs); and
- (3) International Emissions Trading whereby countries may acquire carbon credits from other countries whose emissions are below their target under the Protocol. The tradeable unit is an **Assigned Amount Unit (AAU)**. **AAUs** are the units allocated to each Government under the Kyoto Protocol representing the total allowed level of emissions for a country. **European Union Allowances (EUAs)** are emissions allowances allocated to the installations which participate in the EU Emissions Trading Scheme and constitute part of the overall allocation of AAUs for each of the EU-15 countries.

CERs, ERUs and AAUs are each equivalent to one tonne of carbon dioxide emissions and may be surrendered in fulfilment of obligations under the Kyoto Protocol. These all count as Kyoto Units for the purpose of the Carbon Fund Act 2007.

There were concerns that the Flexible Mechanisms would effectively allow industrial countries to "buy the right to pollute". This concern was addressed in the **Marrakesh Accords** negotiated in 2001 which detailed rules for implementing the Kyoto Protocol. Under these rules, the Flexible Mechanisms must be used to supplement each country's own efforts to reduce emissions. Countries are thus only allowed use the mechanisms when their national plans for achieving their Kyoto target and the implementation of these plans are judged satisfactory by the **Compliance Committee of the Kyoto Protocol**.<sup>27</sup>

Concerns were also raised about how one could verify that the various projects were actually generating emissions reductions. A number of UN bodies have been established to ensure that any units created under the Flexible Mechanisms are reflective of true emissions reductions and generate "additionality", i.e. they would not have occurred without the existence of the projects. For example, the Clean Development Mechanism (CDM) is managed by the **CDM Executive Board**. Each project, and the methodology used to calculate emissions reductions resulting from the project, has to be approved by the CDM Executive Board. Projects are monitored as they develop and the final emissions reductions are also certified by the **CDM Executive Board**. Only when the CDM Executive Board issues certificates of units of emissions reductions actually achieved are these units capable of being used for the purposes of meeting requirements under the Kyoto Protocol. There is a similar body, the **Joint Implementation Supervisory Committee (JISC)**, which supervises units generated under the JI mechanism.

<sup>26</sup> See Footnote 6 and Appendix 1 for details on Annex B countries.

<sup>27</sup> See [http://unfccc.int/kyoto\\_protocol/compliance/items/2875.php](http://unfccc.int/kyoto_protocol/compliance/items/2875.php) for further details and examples of recent rulings.



# THE MARKET IN FLEXIBLE MECHANISM UNITS

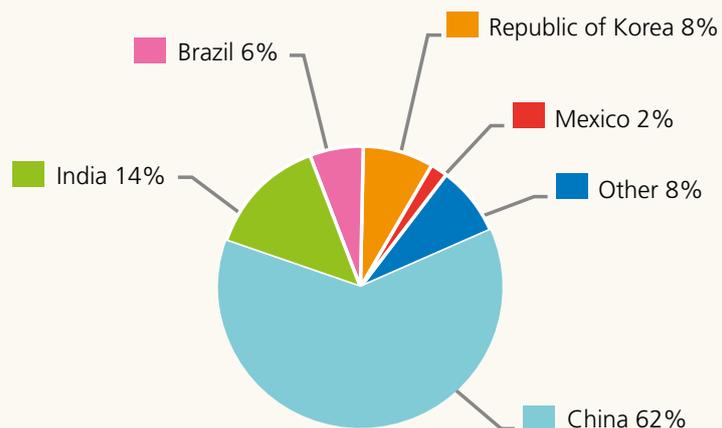
Of the Flexible Mechanisms, the most developed is the CDM market where there are 6,783 registered projects as of 7 May 2013<sup>28</sup> (compared to 4,240 registered projects as of June 2012). As a result of the number of CDM projects, there is greater clarity as to the methodologies and procedures to be followed for CERs to be issued. The CDM Executive Board has refused to issue CERs where it is not satisfied that the monitoring plan is in accordance with the approved methodology.<sup>29</sup>

The issuance of CERs has gathered pace in recent years. By mid 2009 288m CERs had been issued while by mid 2011 this had grown to 642m million CERs. As of 7 May 2013, the 6,783 approved CDM projects have generated more than 1.3 billion CERs. This increased supply of CERs has come at a time of decreasing demand, as the reduced requirement to purchase carbon units in Ireland referred to earlier is also reflected in other countries, due to the economic slowdown. This has led to a sharp decline in the price of CERs. Debate continues at international level on the potential temporary removal or “backloading” of some units in order to tackle the oversupply of carbon allowances in the market.

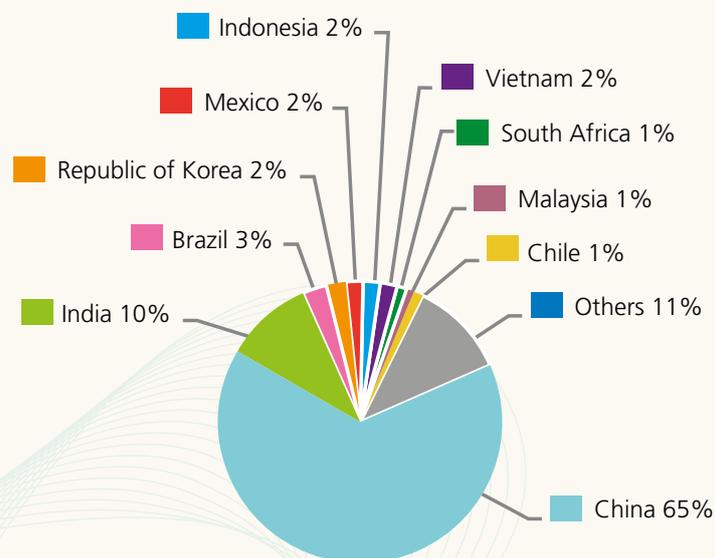
As the following charts show, while there is a fairly wide dispersal of CDM projects among host countries, the larger projects are mainly in China. China has been, and is expected to remain, the greatest source of CERs.<sup>30</sup>



CERs issued by Country of Project <sup>31</sup>



Expected issuance of CERs by Country of Project



<sup>28</sup> Source: <http://cdm.unfccc.int/>

<sup>29</sup> See the UN website <http://cdm.unfccc.int/Issuance/index.html> for more details

<sup>30</sup> The interactive map on the UN CDM website gives detail on the location and nature of CDM projects. See <http://cdm.unfccc.int/Projects/MapApp/index.html>

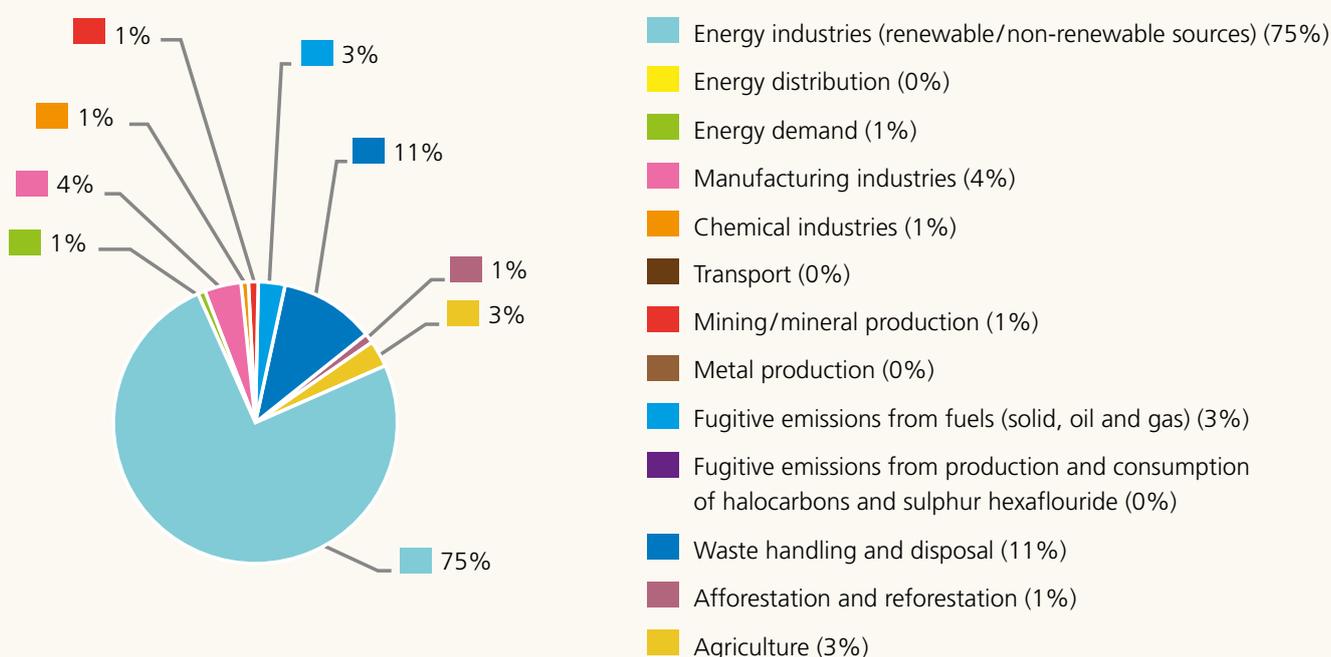
<sup>31</sup> Charts Source: UNFCCC - Data as of 7th May 2013



It is also interesting to note that the dominant sector for registered projects is unsurprisingly the Energy sector while some recognised sectors such as Transport and Energy Distribution have no projects.

This reflects the difficulty in verifying improvements in emissions in some sectors. The full breakdown of projects by sector can be seen in the following chart.

**Distribution of registered project activities by scope**



CERs can be acquired by investing directly in projects, or in funds that invest in projects, or by purchasing CERs which have already been issued and certified by the CDM Executive Board. Investment in a project at an early stage of its development involves a risk that the project may not be approved or that the number of certified units generated from it may be less than anticipated. To reduce these risks, Ireland has invested in three funds which use the expertise of the World Bank and the European Bank for Reconstruction and Development (EBRD) to invest in a number of projects.

## FUNDING FOR THE PURCHASE OF CARBON CREDITS

Funding for the purchase of carbon credits is provided from the Central Fund to the Carbon Fund. Provision is made in the annual Vote of the Department of the Environment, Community and Local Government to repay the Central Fund.

In the *National Development Plan 2007–2013* the Government designated €270 million for the purchase of carbon credits in the Kyoto commitment period 2008–2012. This is in addition to an initial investment of €20 million in 2006.



# INVESTMENTS BY IRELAND

16

The Government has undertaken investments in three multilateral funds which invest in projects to achieve carbon emissions reductions. The first investment was of €20 million made in December 2006<sup>32</sup> in the **Multilateral Carbon Credit Fund (MCCF)**<sup>33</sup> of the European Bank for Reconstruction and Development (EBRD). Two further commitments of €10 million and \$12.88 million were made respectively to the **World Bank Carbon Fund for Europe and the World Bank BioCarbon Fund in January 2007**. Consistent with its decision to suspend the carbon purchasing programme in February 2009, the Department of the Environment, Community and Local Government has negotiated a reduction in the commitment to both World Bank funds; a reduction from €10m to €5.26m in the case of the Carbon Fund for Europe and a reduction from \$12.88m to \$10.08m in the case of the BioCarbon Fund.

The Multilateral Carbon Credit Fund was established by the EBRD in partnership with the European Investment Bank (EIB) in May 2006. The aim of the fund is *“to promote much-needed energy savings projects in the EBRD countries of operation while at the same time helping those countries and corporate companies purchasing carbon credits to meet their emissions reductions targets”*<sup>34</sup>. Projects are located in up to 30 EBRD countries in Central and Eastern Europe and the Commonwealth of Independent States.<sup>35</sup> The full €20 million committed has been paid over to the EBRD. The fund uses both the JI and CDM flexible mechanism established under the Kyoto Protocol.

The **Carbon Fund for Europe** is jointly managed by the World Bank and the EIB, and was launched in March 2007. This fund, which is directed towards securing investments from EU Member States, acquires greenhouse gas reduction credits on behalf of the participants using the

World Bank's expertise and experience and the EIB's large project pipeline in developing countries. The five participants in the fund are Ireland, Luxemburg, Portugal, the Flemish Region of Belgium and Statkraft Carbon Invest AS (Norway). Of the €5.26 million committed to this Fund, €4.1 million has been paid in the period since its launch to 31 December 2012.

The **BioCarbon Fund** is a World Bank fund which aims to achieve emissions reductions while promoting biodiversity, conservation and poverty alleviation. The Fund aims to:

- a) provide resources for projects which are intended to
  - (i) generate emission reductions; and
  - (ii) demonstrate how land use and forestry activities can create additional benefits which can be measured, monitored and certified, and contribute to the sustainable development of the host countries;
- b) endeavour to effect an equitable sharing between the participants and the host countries of any benefits, including any emissions reductions, arising from the projects; and
- c) disseminate broadly the knowledge gained in the development of the Fund and the implementation of projects.

Ireland is committed to investing US \$10.08 million (€7.43m) in the second tranche of the BioCarbon Fund which commenced operations in March 2007. Projects in the current portfolio are in countries such as Brazil, Chile, China, India, Moldova, Congo and Kenya<sup>36</sup>. Of the €7.43 million committed to this Fund, €5.6 million has been paid to 31 December 2012.

The investments in the three multilateral funds have generated 2,351,360 carbon credits to end 2012.

<sup>32</sup> This was before the establishment of the Irish Carbon Fund by the Carbon Fund Act 2007. The investment is administered by the Department of the Environment Community and Local Government.

<sup>33</sup> The European Investment Bank is partnering the EBRD in managing the MCCF; Ireland's agreement is only with the EBRD.

<sup>34</sup> Quotation from EBRD President Jean Lemierre at the launch of the Fund, 22 May 2006.

<sup>35</sup> The Commonwealth of Independent States is the international organisation consisting of eleven former Soviet republics: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Ukraine and Uzbekistan.

<sup>36</sup> For details see <http://wbcarbonfinance.org/Router.cfm?Page=BioCF&FID=9708&ItemID=9708&ft=ProjectsT2>

In 2008, the NTMA initiated its purchase of carbon units. It was decided to purchase CERs as the market in these units was the most developed and transparent. Purchases of 4.355 million carbon units made in 2008 were detailed in the Carbon Fund Report 2008. In early 2009 further purchases of 0.9 million carbon units were made. In the light of the slowdown in the Irish economy and the subsequent revised estimate of Ireland's need to purchase carbon credits it was decided to cease purchase of credits for the time being. As a consequence there have been no purchases of carbon credits since early February 2009. In all, there have been 21 trades in which Ireland contracted to purchase 5.255 million CERs at an average price of €14.03 (excluding VAT).

Following a decision by the Department of the Environment, Community and Local Government in February 2009, the carbon purchasing programme remains suspended. While the NTMA have made no further trades, the Agency have assisted the Department in processing outstanding payments on the State's investments in the World Bank multilateral funds. The outstanding payments are processed through the Carbon Fund.

Management of the purchased carbon portfolio is a matter for the Department of the Environment, Community and Local Government. The extent to which the units acquired through investment by the State in the multilateral funds and units purchased by the NTMA will be required for compliance in the first commitment period under the Kyoto Protocol (2008-2012) has yet to be finalised. This is not expected to be completed until 2015, following the formal end of commitment period accounting process for the Protocol.

Based on greenhouse gas inventory and projection data published by the Environmental Protection Agency to date, it is likely that few, if any, of the units in the portfolio will be required for compliance purposes in the 2008-2012 commitment period. In that event, the priority for the Department of the Environment, Community and Local Government will be to maximise their use for compliance in the post-2012 period.



# APPENDIX 1

## Annex B Countries of the Kyoto Protocol

Party	Commitment to quantified emissions limitation or emissions reduction, expressed as percentage of emissions in base year 1990
Australia	108
Austria <sup>+</sup>	92
Belgium <sup>+</sup>	92
Bulgaria <sup>*</sup>	92
Canada (not applicable)	94
Croatia <sup>*</sup>	95
Czech Republic <sup>*</sup>	92
Denmark <sup>+</sup>	92
Estonia <sup>*</sup>	92
European Union (EU-15)	92
Finland <sup>+</sup>	92
France <sup>+</sup>	92
Germany <sup>+</sup>	92
Greece <sup>+</sup>	92
Hungary <sup>*</sup>	94
Iceland	110
Ireland <sup>+</sup>	92
Italy <sup>+</sup>	92
Japan	94
Latvia <sup>*</sup>	92
Liechtenstein	92
Lithuania <sup>*</sup>	92
Luxembourg <sup>+</sup>	92
Monaco	92
Netherlands <sup>+</sup>	92
New Zealand	100
Norway	101
Poland <sup>*</sup>	94
Portugal <sup>+</sup>	92
Romania <sup>*</sup>	92
Russian Federation <sup>*</sup>	100
Slovakia <sup>*</sup>	92
Slovenia <sup>*</sup>	92
Spain <sup>+</sup>	92
Sweden <sup>+</sup>	92
Switzerland	92
Ukraine <sup>*</sup>	100
United Kingdom <sup>+</sup>	92
United States of America (not applicable)	93

\* Countries, mainly in the former Soviet bloc, that are undergoing the process of transition to a market economy.

<sup>+</sup> See page 8 for details of the burden sharing agreement by EU-15 countries.

# APPENDIX 2

Annex 3 of *National Climate Change Strategy 2007-2012*: Published by the Department of the Environment, Heritage and Local Government (April 2007)

## Annex 3 – National policy for State purchase of Kyoto Units

### NATIONAL POLICY FRAMEWORK FOR THE PURCHASE OF KYOTO UNITS BY THE STATE FOR THE PURPOSE OF COMPLIANCE WITH THE KYOTO PROTOCOL IN THE COMMITMENT PERIOD 2008-2012

#### Introduction

This document sets out the institutional arrangements and policy context within which Ireland will purchase Kyoto Units<sup>37</sup> sufficient to enable it to meet its greenhouse gas emissions limitation target for the purposes of the Kyoto Protocol in the commitment period 2008-2012.

#### Background

For the purposes of the Kyoto Protocol, Ireland is committed to limiting average annual greenhouse gas emissions in the period 2008-2012 to 13% above 1990 levels.

Parties to the Kyoto Protocol may achieve their individual targets through domestic actions and use of Flexible Mechanisms provided for in the Protocol. The Protocol requires that use of the Flexible Mechanisms be supplemental to domestic actions.

The *National Climate Change Strategy 2007-2012* provides the national policy framework for addressing greenhouse gas emission reductions and ensuring that Ireland meets its target for the purpose of the Kyoto Protocol.

The Government has decided that it will use the Kyoto Protocol Flexible Mechanisms to purchase up to 3.607 million Kyoto Units in respect of each year of the 2008-2012 period. This requirement will be revised as necessary in light of future projections and the impact of any additional measures to reduce greenhouse gas emissions.

#### Kyoto Protocol Flexible Mechanisms

A key component of the Kyoto Protocol was the introduction of three Flexible Mechanisms to reduce the overall costs of achieving emission reductions for those Parties with emission reduction or limitation targets. These mechanisms - Joint Implementation, the Clean Development Mechanism and International Emissions Trading – are described in more detail below. The mechanisms enable Parties to purchase Kyoto Units from other Parties or to invest in cost-effective opportunities to reduce emissions or increase sequestration through projects in other countries. While the cost of reducing emissions varies considerably between projects and between countries, the effect for the atmosphere of limiting emissions is the same irrespective of where the action occurs.

**Joint Implementation (JI):** provided for under Article 6 of the Protocol, enables Parties with reduction commitments or private investors to implement projects that reduce emissions in other Parties with reduction commitments, in return for credits. Credits generated using the JI mechanism can be used by the investing Party or private entity (particularly within the EU Emissions Trading Scheme) for compliance purposes. The tradable unit under the JI mechanism is an Emissions Reductions Unit (ERU).

**Clean Development Mechanism (CDM):** provided for under Article 12 of the Protocol,<sup>38</sup> enables Parties with targets to participate in projects that reduce emissions or contribute to sequestration in those Parties that do not have targets under the Protocol. The mechanism is aimed primarily at developing countries and is intended to assist them in achieving sustainable development through, for example, access to cleaner or more energy efficient technologies. Credits generated using the CDM mechanism can be used by the investing Party or private entity for compliance purposes. The tradable unit under the CDM mechanism is a Certified Emissions Reduction (CER).

<sup>37</sup> A credit or allowance, equivalent to one metric tonne of carbon dioxide, issued pursuant to the Kyoto Protocol and the decisions adopted pursuant to the United Nations Framework Convention on Climate Change and to the Protocol. A credit is equivalent to one tonne of carbon dioxide that has already been removed. An allowance refers to a right to emit the equivalent of one tonne of carbon dioxide at some point in the future.

<sup>38</sup> Emissions trading under Article 17 of the Kyoto Protocol are distinct from the EU Emissions Trading Scheme. Operators in the EU Scheme may, however, use credits from the JI or CDM mechanisms for compliance with their obligations up to a percentage of their allocation, which is to be specified in the National Allocation Plan for the Member State in question.

**International Emissions Trading:** provided for under Article 17 of the Kyoto Protocol, enables Parties that have a greenhouse gas emissions limitation or reduction target under the Protocol to acquire Kyoto Units from those Parties that have reduced their emissions beyond their target under the Protocol. The tradable unit under emissions trading is an Assigned Amount Unit (AAU).

### **National Focal Point for JI and National Authority for CDM**

A requirement of Parties to the Kyoto Protocol is the designation of a Focal Point and a National Authority for the purpose of the JI and CDM mechanisms respectively. Under the Kyoto Protocol (Flexible Mechanisms) Regulations 2006 (S.I. 244 of 2006), the Minister for the Environment, Heritage and Local Government has designated the Environmental Protection Agency as both the Focal Point and National Authority in Ireland. The role of the Agency will be to approve participation by private or public entities in JI or CDM project activities. The Agency will publish guidelines setting out its approval procedures for participation by Irish entities in JI and CDM projects. Decisions made by the Agency on individual proposals to participate in JI or CDM projects shall be final. Project approval must also be sought in the intended host country.

### **Establishment of registry under the Kyoto Protocol**

In accordance with decisions adopted by Parties to the Kyoto Protocol, the 2006 Regulations (S.I. 244 of 2006) provide for the establishment of a national registry and the designation of the Environmental Protection Agency as the national registry administrator. The function of the national registry is to ensure accurate accounting of the issuance, holding, transfer, acquisition, cancellation and retirement of Kyoto Units.

### **National Purchasing Agent**

The National Treasury Management Agency is the designated purchasing agent for the State and will administer and manage purchases of Kyoto Units on behalf of the Government. A dedicated Carbon Fund has been established for this purpose.

The role of the Agency as purchasing agent is established on a statutory footing under the Carbon Fund Act 2007. The Act provides for the purchasing agent to perform all functions associated with the management of the Carbon Fund, including appropriate accounting for expenditure having regard to public financial procedures, subject to guidelines and/or direction from the Minister for the Environment, Heritage and Local Government.

### **Funding of the purchase of Kyoto Units**

Funding for the purchase of Kyoto Units will be provided from the Central Fund to the Carbon Fund, also established under the 2007 Act. In the course of the annual estimates process, provision will be made in the Vote of the Department of the Environment, Heritage and Local Government to repay the Central Fund.

The Government has designated €270 million for investment in the Flexible Mechanisms under the National Development Plan 2007-2013. This is in addition to an initial investment of €20m in 2006.

### **Framework for the purchase of Kyoto Units**

The National Treasury Management Agency shall purchase Kyoto Units on behalf of the State. All purchases shall be made in accordance with the following objectives:

- that they contribute to the ultimate objective of the United Nations Framework Convention on Climate Change, i.e. stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system;
- that risk is minimised, particularly in relation to the timely delivery of credits; and
- that they represent good value for money.

The National Treasury Management Agency may use the following mechanisms to purchase Kyoto Units:

- direct purchase of Kyoto Units from other Kyoto Protocol Annex B Parties;
- direct investment in joint implementation and clean development mechanism project activities;
- investment in managed funds; and
- direct market purchases of Kyoto Units;

or a combination of some or all of these, subject to ensuring that, in accordance with decisions adopted by the Parties to the Kyoto Protocol:

- any surplus Kyoto Units held by the State at the end of the 2008-2012 commitment period can be banked and used in a subsequent commitment period of the Kyoto Protocol or any successor treaty; and
- Ireland does not use emissions reduction units or certified emission reductions generated from nuclear facilities, for the purpose of meeting its Kyoto Protocol commitments.

The Minister for the Environment, Heritage and Local Government may, having regard to the objectives set out above, enter into bilateral agreements for the purpose of acquiring Kyoto Units pursuant to Article 17 of the Protocol. The Minister may direct the National Treasury Management Agency to purchase Kyoto Units that may become available on foot of any such agreements.

Subject to further direction from the Minister for the Environment, Heritage and Local Government, the Agency may sell Kyoto Units if this is necessary to ensure compliance with decisions adopted pursuant to the Kyoto Protocol for the accounting of assigned amounts under Article 7, paragraph 4 of the Protocol.

All Kyoto Units purchased by the National Treasury Management Agency shall be registered in the national registry managed by the Environmental Protection Agency. Kyoto Units entered into the national registry will be accounted for by the Environmental Protection Agency to ensure

compliance with Ireland's commitments for the purposes of the Kyoto Protocol.

This policy framework constitutes the initial direction from the Minister for the Environment, Heritage and Local Government to the National Treasury Management Agency.

#### April 2007



# GLOSSARY OF TERMS

<b>AAUs</b>	see Assigned Amount Units.
<b>Additionality</b>	An important concept under the Kyoto Protocol. Certified units will only be issued from JI and CDM projects where emission reductions are “additional to those that otherwise would occur”.
<b>Annex B Countries</b>	Countries listed in Annex B of the Kyoto Protocol. Annex B countries have quantified emission limitation or reduction commitments (see Appendix 1).
<b>Assigned Amount Units (AAUs)</b>	These are the units allocated to each Annex B country representing the total allowed level of emissions for a country under the Kyoto Protocol.
<b>Burden Sharing Agreement</b>	The agreement by the EU-15 to collectively meet their obligations under the Kyoto Protocol using the “bubble” allowed in Article 4 of the Protocol. Under the terms of the burden sharing agreement, each of the Member States has a specific target for carbon emissions.
<b>Bubble</b>	Collective scheme for countries allowed under the Kyoto Protocol. See Burden Sharing Agreement.
<b>CDM</b>	See Clean Development Mechanism.
<b>CDM Executive Board (CDM EB)</b>	The CDM EB registers validated project activities as CDM projects, issues Certified Emission Reductions to relevant project participants and manages a series of technical panels and working group meetings. It reports to the Conference of Parties to the Kyoto Protocol.
<b>CERs</b>	See Certified Emission Reductions.
<b>Certified Emission Reductions (CERs)</b>	Carbon credits produced through the Clean Development Mechanism.
<b>Clean Development Mechanism (CDM)</b>	One of the Flexible Mechanisms allowed under the Kyoto Protocol. The Clean Development Mechanism generates carbon credits by sponsoring greenhouse gas reducing projects in developing countries.
<b>CO<sub>2</sub> equivalents (CO<sub>2e</sub>)</b>	Where gases other than CO <sub>2</sub> are referred to, for comparison purposes these are converted to their equivalence in Global Warming Potential (GWP) to CO <sub>2</sub> .
<b>Conference of the Parties (COP)</b>	The COP is the supreme body of the United Nations Framework Convention on Climate Change (UNFCCC) and meets annually. The Marrakesh Accords were the result of COP7. The most recent conference, i.e. COP18 took place in Doha, Qatar in December 2012
<b>COP</b>	See Conference of the Parties.
<b>Emission Reduction Units (ERUs)</b>	Carbon credits produced through the Joint Implementation Mechanism.
<b>Emissions Units</b>	All emissions units under the Kyoto Protocol are equivalent to one tonne of Carbon Dioxide emitted.
<b>Emissions trading</b>	In the context of the EU Emissions Trading Scheme or the Flexible Mechanisms of the Kyoto Protocol, this refers to the buying and selling of allowances to emit a defined quantity of greenhouse gases or credits that represent a quantity of greenhouse gas already reduced.
<b>ERU</b>	See Emission Reduction Units.

<b>EU Emissions Trading Scheme</b>	“Cap and Trade” scheme within the EU-15 for the major polluters.
<b>EU ETS</b>	See EU Emissions Trading Scheme.
<b>EUAs</b>	See European Union Allowances.
<b>European Union Allowances (EUAs)</b>	Carbon credits allocated to companies in the EU ETS. These credits come from a country’s AAUs.
<b>Flexible Mechanisms</b>	The Flexible Mechanisms provided under the Kyoto Protocol, i.e. International Emissions Trading, Joint Implementation and the Clean Development Mechanism.
<b>Global Warming Potential (GWP)</b>	To compare the different greenhouse gases, emissions are calculated over a normalised time horizon in order to give a measure of their relative heating effect in the atmosphere. A 100 year time horizon is generally used. CO <sub>2</sub> is the basic unit. See Footnote 2, page 5.
<b>Intergovernmental Panel on Climate Change (IPCC)</b>	The IPCC is a scientific intergovernmental body set up by the World Meteorological Organization (WMO) and by the United Nations Environment Programme (UNEP). It is the authoritative scientific source on human interference with the global climate system. Website: <a href="http://www.ipcc.ch">www.ipcc.ch</a>
<b>International Transaction Log (ITL)</b>	The ITL is the centralised database of all tradable credits under the Kyoto Protocol and verifies all international transactions and their compliance with Kyoto rules and policies.
<b>IPCC</b>	See Intergovernmental Panel on Climate Change.
<b>JI</b>	See Joint Implementation.
<b>JISC</b>	See Joint Implementation Supervisory Committee.
<b>Joint Implementation (JI)</b>	A flexible mechanism for the transfer of emissions permits from one Annex B country to another. JI generates credits on the basis of emission reduction projects leading to quantifiable emission reductions.
<b>Joint Implementation Supervisory Committee (JISC)</b>	This body supervises the verification of ERUs generated by JI projects.
<b>Kyoto Protocol</b>	The Protocol to the Framework Convention on Climate Change which was agreed in Kyoto, Japan in December 1997 and came into force on 16 February 2005. It specifies emission obligations for Annex B countries and defines the three Kyoto Flexible Mechanisms: JI, CDM, and International Emissions Trading.
<b>Kyoto Units</b>	A unit of emissions equivalent to one tonne of CO <sub>2</sub> emitted.
<b>Marrakesh Accords</b>	These Accords include the detailed modalities and procedures of the international climate change policy regime and cover significant principles of technology transfer, accounting, Flexible Mechanisms implementation etc.
<b>UN Framework Convention on Climate Change (UNFCCC)</b>	The UNFCCC was established in 1992 at the Rio de Janeiro Earth Summit. It is the overall framework guiding the international climate negotiations. Its main objective is the “stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic (man made) interference with the climate system”.



# FINANCIAL STATEMENTS OF THE CARBON FUND

for the year ended 31 December 2012

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# STATEMENT OF AGENCY'S RESPONSIBILITIES

The National Treasury Management Agency ('the Agency') is required by the Carbon Fund Act, 2007 to prepare financial statements in respect of the operations of the Carbon Fund for each financial year.

In preparing those statements, the Agency:

- selects suitable accounting policies and then applies them consistently;
- makes judgements and estimates that are reasonable and prudent;
- prepares the financial statements on the going concern basis unless it is inappropriate to do so;
- discloses and explains any material departure from applicable accounting standards.

The Agency is responsible for keeping in such form as may be approved by the Minister for the Environment, Community and Local Government with the consent of the Minister for Finance, all proper and usual accounts in relation to the performance by it of the functions delegated or granted to it under the Carbon Fund Act, 2007. The Agency shall whenever requested to do so by the Minister for the Environment, Community and Local Government, give to him such accounts and such information in relation to such accounts as he may specify.

The Agency is also responsible for safeguarding assets under its control and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.



**John C. Corrigan**

Chief Executive

27 June 2013



# COMPTROLLER AND AUDITOR GENERAL REPORT FOR PRESENTATION TO THE HOUSES OF THE OIREACHTAS

## Carbon Fund

I have audited the financial statements of the Carbon Fund for the year ended 31 December 2012 under the Carbon Fund Act 2007. The financial statements, which have been prepared under the accounting policies set out therein, comprise the Accounting Policies, the Fund Account, the Net Assets Statement and the related notes. The financial statements have been prepared in the form prescribed under section 5 of the Act, and in accordance with generally accepted accounting practice in Ireland.

## Responsibilities of National Treasury Management Agency (the Agency)

The Agency is responsible for the preparation of the financial statements, for ensuring that they give a true and fair view of the state of the Fund's affairs and of its income and expenditure, and for ensuring the regularity of transactions.

## Responsibilities of the Comptroller and Auditor General

My responsibility is to audit the financial statements and report on them in accordance with applicable law.

My audit is conducted by reference to the special considerations which attach to State bodies in relation to their management and operation.

My audit is carried out in accordance with the International Standards on Auditing (UK and Ireland) and in compliance with the Auditing Practices Board's Ethical Standards for Auditors.

## Scope of Audit of the Financial Statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements, sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of

- whether the accounting policies are appropriate to the Fund's circumstances, and have been consistently applied and adequately disclosed
- the reasonableness of significant accounting estimates made in the preparation of the financial statements, and

- the overall presentation of the financial statements.

I also seek to obtain evidence about the regularity of financial transactions in the course of audit.

In addition, I read the annual report on the Fund to identify material inconsistencies with the audited financial statements for the Fund. If I become aware of any apparent material misstatements or inconsistencies, I consider the implications for my report.

## Opinion on the Financial Statements

In my opinion, the financial statements, which have been properly prepared in accordance with generally accepted accounting practice in Ireland, give a true and fair view of the state of the Fund's affairs at 31 December 2012 and of its income and expenditure for 2012.

In my opinion, proper books of account have been kept by the Agency. The financial statements are in agreement with the books of account.

## Matters on Which I Report by Exception

I report by exception if

- I have not received all the information and explanations I required for my audit, or
- my audit noted any material instance where public moneys have not been applied for the purposes intended or where the transactions did not conform to the authorities governing them, or
- the information in the annual report on the Fund is not consistent with the related financial statements for the Fund, or
- I find there are other material matters relating to the manner in which public business has been conducted.

I have nothing to report in regard to those matters upon which reporting is by exception.

*Seamus McCarthy*

Seamus McCarthy  
Comptroller and Auditor General  
28 June 2013

# ACCOUNTING POLICIES

The Carbon Fund was established under the Carbon Fund Act 2007 for the acquisition of Kyoto Units<sup>1</sup> and any other such instruments or assets on behalf of the State to meet international climate change obligations under the 1992 United Nations Framework Convention on Climate Change and the 1997 Kyoto Protocol to that Convention. The National Treasury Management Agency ('the Agency') has been designated as the Purchasing Agent on behalf of the State and administers and manages purchases of Kyoto Units.

The Agency may use the following mechanisms to purchase Kyoto Units:

- direct purchase of Kyoto Units from other Kyoto Protocol parties
- direct investment in Joint Implementation and Clean Development Mechanism projects
- investment in managed funds
- direct market purchases of Kyoto Units

The significant accounting policies adopted in respect of the Carbon Fund are as follows:

## Basis of Preparation

The financial statements have been prepared in accordance with the Carbon Fund Act 2007 in a format approved by the Minister for the Environment, Community and Local Government, with the consent of the Minister for Finance.

The financial statements summarise the transactions and net assets of the Carbon Fund.

## Reporting Period

The reporting period is from 1 January to 31 December 2012. The comparative reporting period for 2011 is from 1 January 2011 to 31 December 2011.

## Reporting Currency

The reporting currency is the euro, which is denoted by the symbol €.

## Carbon Fund Assets

Carbon Fund assets represent investments in the following:

### Direct Holdings

Kyoto Units purchased are recorded on delivery at cost of acquisition. The cost of acquisition includes Value Added Tax paid and payable in respect of the purchase of the Kyoto Units.

### Indirect Kyoto Units

Investments in indirect units are made in managed funds. Investments in these funds are recorded at investment cost. Such investments relate to carbon reducing projects that may or may not produce Kyoto Units. The total number of units, if any, will not be known until a future date when the projects complete.

The Minister for the Environment, Community and Local Government invested €20 million in 2006 in a Multilateral Carbon Credit Fund established by the European Bank for Reconstruction and Development. That investment does not form part of the fund but the units produced by projects undertaken are included herein as explained in Note 3(d).

## Gains and Losses on Carbon Fund Assets

The Kyoto Units are acquired with the intention to meet Ireland's obligation under the Kyoto Protocol, in the commitment period 2008 to 2012. The determination as to whether any or all of the purchased Units will be surrendered for that period will be agreed in accordance with the Protocol's formal end of commitment period

<sup>1</sup> A Kyoto Unit is defined in the Carbon Fund Act 2007 as "a unit, equivalent to one metric tonne of carbon dioxide, issued pursuant to the Kyoto Protocol and the decisions adopted pursuant to the Convention and the Kyoto Protocol". Kyoto Units are generally referred to as carbon credits. The legislation allows for the disposal of Kyoto Units only under very specific conditions i.e. "with the consent of the Minister [for the Environment, Community and Local Government] and the Minister for Finance and on such terms as they may specify".

accounting process. Unused credits can be carried forward to later periods.

No realised gains or losses will arise as a consequence of the surrender of these assets.

### **Fund Account**

The Fund Account records the accumulated income received or receivable from the Department of the Environment, Community and Local Government. Ongoing investments are funded initially from the Central Fund pending receipt of this income.

### **Foreign Currencies**

All transactions in foreign currencies are translated into euro at the rates of exchange prevailing at the date of such transactions.

### **Taxation**

The income and profits of the Carbon Fund are exempt from Irish corporation tax. The purchases of Kyoto Units by the Carbon Fund are liable to Value Added Tax as such transactions are regarded as a supply of a service, as defined by Section 5(1) Value Added Tax Act 1972. VAT incurred is included in the cost of acquisition of the Carbon Fund assets.



# FUND ACCOUNT

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	Notes	Year Ended 31 December 2012 €	Year Ended 31 December 2011 €
Income	1	371,237	1,903,386
Increase in Fund during the year		371,237	1,903,386
Net Assets of Fund at start of year		98,912,901	97,009,515
Net Assets of Fund at end of year		99,284,138	98,912,901

The accounting policies and notes 1 to 7 form part of these financial statements.



**John C. Corrigan**  
Chief Executive

27 June 2012



# NET ASSETS STATEMENT

	Notes	31 December 2012 €	31 December 2011 €
Carbon Fund Assets	3	99,284,138	98,912,901
Current Assets	5	371,237	1,903,386
Cash at Bank		-	-
Current Liabilities	6	(371,237)	(1,903,386)
Net Assets of Fund at 31 December		<u>99,284,138</u>	<u>98,912,901</u>

The accounting policies and notes 1 to 7 form part of these financial statements.



**John C. Corrigan**

Chief Executive

27 June 2012



# NOTES TO THE ACCOUNTS

## 1. Income

	Year Ended 31 December 2012 €	Year Ended 31 December 2011 €
Income from the Department of the Environment, Community and Local Government	371,237	1,903,386

Income comprises the funding to be reimbursed to the Carbon Fund from the Department of the Environment, Community and Local Government to meet expenditure incurred during the year.

## 2. Administration Costs

The administration expenses of the Carbon Fund are all charged to the Agency Administration Account and are paid out of the Central Fund.

## 3. Carbon Fund Assets

(a) Summary of Assets	<b>2012</b> €	<b>2011</b> €
Direct Holdings	89,573,025	89,573,025
Indirect Holdings (Note 3 (c))	9,711,113	9,339,876
	<u>99,284,138</u>	<u>98,912,901</u>
(b) Analysis by Currency of Acquisition	<b>2012</b> €	<b>2011</b> €
Euro	93,673,025	93,673,025
US Dollar	5,611,113	5,239,876
	<u>99,284,138</u>	<u>98,912,901</u>
(c) Indirect Holdings :	<b>2012</b> €	<b>2011</b> €
World Bank – Carbon Fund for Europe	4,100,000	4,100,000
World Bank – BioCarbon Fund	5,611,113	5,239,876
	<u>9,711,113</u>	<u>9,339,876</u>

### 3. Carbon Fund Assets (continued)

#### (d) Credits Delivered and Held:

The number of carbon credits delivered and held with the Union Registry for Emissions Trading at the European Commission at 31 December 2012 is 7,606,360 – 5,255,000 purchased directly and 2,351,360 acquired via indirect holdings, (2011: 5,255,000 – purchased directly and 1,837,940 acquired via indirect holdings). 2,141,429 (2011: 1,637,940) units of the 7,606,360 held at 31 December 2012 (2011: 7,092,940) relate to indirect holdings of credits acquired through investments made by the Department of the Environment, Community and Local Government prior to the establishment of the Carbon Fund.

### 4. Commitments

#### Carbon Fund Investments

The Agency administers payments on behalf of the Minister for the Environment, Community and Local Government in respect of two World Bank funds. Investments in these funds relate to projects which may yield Kyoto Units but the total number of units will not be known until a future date when the projects complete.

At 31 December 2012, the uncalled commitments in respect of these investments amounted to:

<b>Total Commitment of the State</b>				
<b>World Bank Fund</b>	<b>Local Currency</b>	<b>Euro equivalent</b>	<b>Paid to date</b>	<b>Unfunded Commitment</b>
		€	€	€
Carbon Fund for Europe	€5.26m	5,263,000	4,100,000	1,163,000
BioCarbon Fund	US\$10.08m	7,429,452	5,611,113	1,818,339
		<u>12,692,452</u>	<u>9,711,113</u>	<u>2,981,339</u>

During 2012, there was a call on payments under the BioCarbon Fund to the value of €371,237. There was no call on funds under the Carbon Fund for Europe.

Consistent with its decision to suspend the carbon purchasing programme in February 2009, the Department of the Environment, Community and Local Government has negotiated a reduction in the commitment to both World Bank funds; a reduction from €10m to €5.26m in the case of the Carbon Fund for Europe and a reduction from \$12.88m to \$10.08m in the case of the BioCarbon Fund.

### 5. Current Assets

	<b>2012</b>	<b>2011</b>
	€	€
Department of the Environment, Community and Local Government	<u>371,237</u>	<u>1,903,386</u>

The amount owed to the Carbon Fund by the Department of the Environment, Community and Local Government is due under Section 3 (4) of the Carbon Fund Act 2007.

# NOTES TO THE ACCOUNTS *(Continued)*

## 6. Current Liabilities

	2012 €	2011 €
Central Fund	<u>371,237</u>	<u>1,903,386</u>

The liability to the Central Fund is in respect of advances made by the Central Fund to the Carbon Fund, and will be repaid to the Central Fund when the Carbon Fund receives funds from the Department of the Environment, Community and Local Government.

## 7. Related Parties

### (a) Minister for Finance

Under Section 3 of the Carbon Fund Act 2007, the Minister for Finance may advance moneys to the Carbon Fund from the Central Fund, which are reimbursed by the Carbon Fund out of moneys made available by the Minister for the Environment, Community and Local Government.

### (b) Minister for the Environment, Community and Local Government

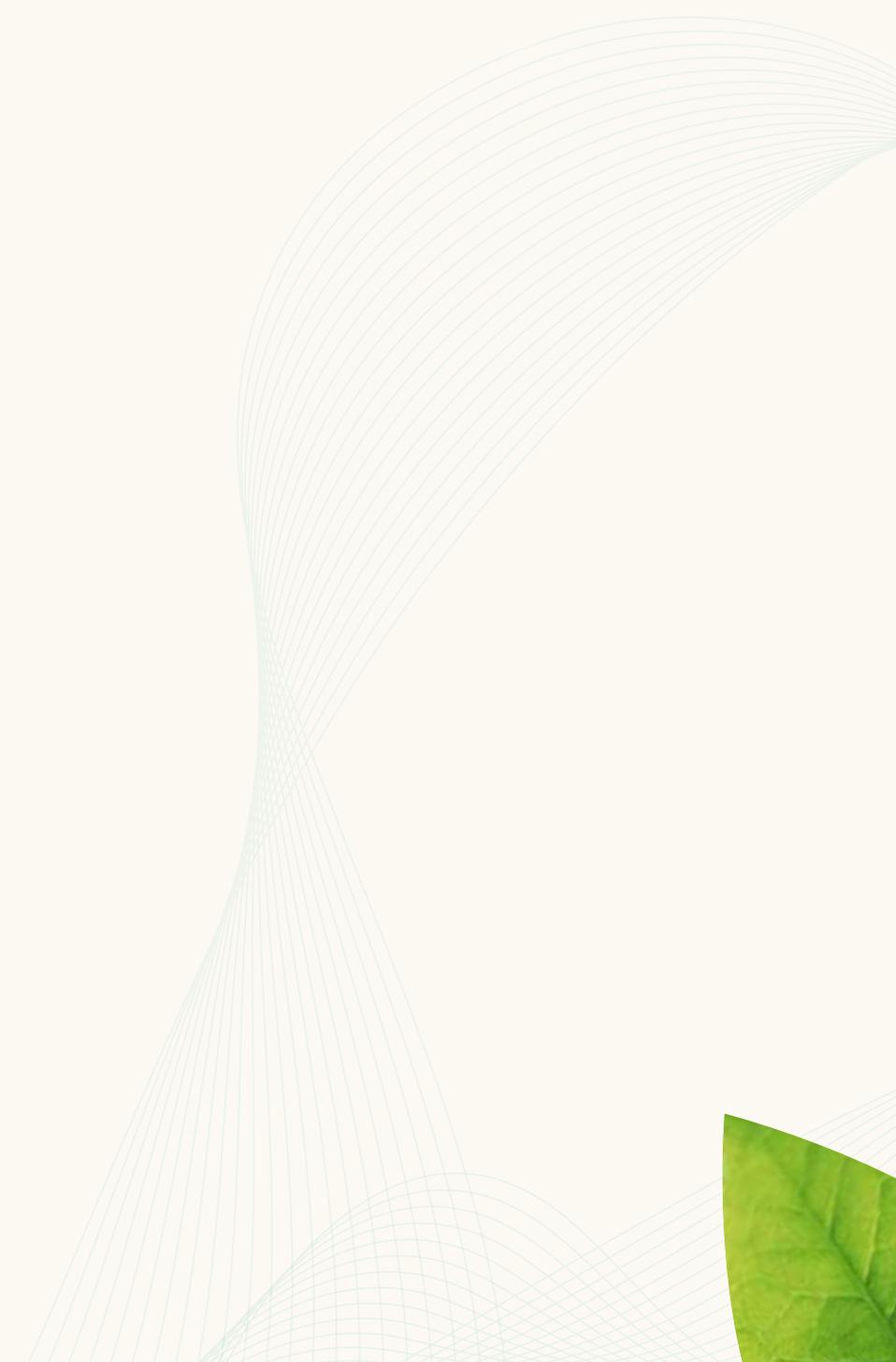
Under Section 2(3) of the Carbon Fund Act 2007, the Minister for the Environment, Community and Local Government manages and controls the Carbon Fund.

### (c) National Treasury Management Agency

Under Section 2(4) of the Carbon Fund Act 2007, the Minister for the Environment, Community and Local Government delegates the management of the Carbon Fund to the Agency.

Under Section 8 of the Carbon Fund Act 2007, the Minister for the Environment, Community and Local Government may give directions or guidelines to the Agency in relation to the performance by it of the functions delegated or granted to it under the Act.

# NOTES



# NOTES







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