2007

Carbon Fund Annual Report

National Treasury Management Agency

Report and Accounts of the Carbon Fund for the period ended 31 December 2007

National Treasury Management Agency

30 June 2008

Mr. John Gormley, T.D.
Minister for the Environment, Heritage
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 2007.

Yours sincerely,

Michael J. Somers
Chief Executive

Treasury Building, Grand Canal Street, Dublin 2, Ireland. Telephone (353 1) 664 0800 Fax: (353 1) 6640890 e-mail: info@ntma.ie Swift: NTMAIE2D

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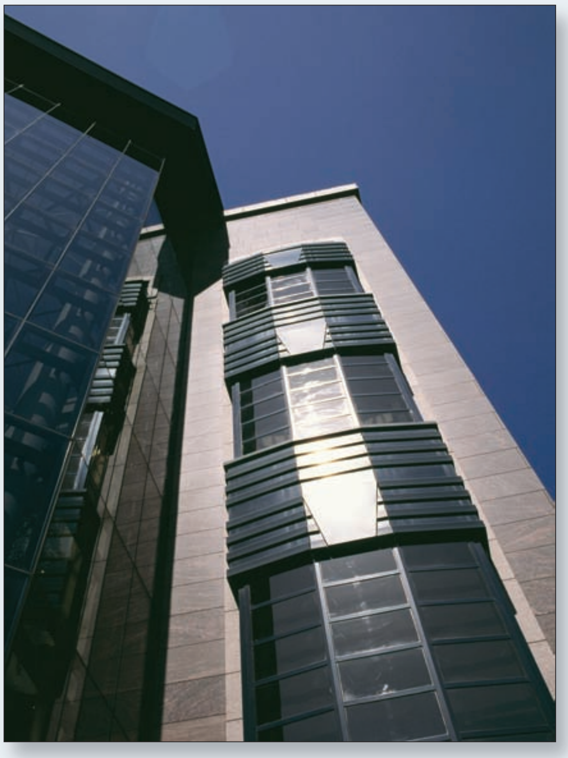
Legal Framework

Under the terms of the Kyoto Protocol Ireland has undertaken to limit its average annual emissions of greenhouse gases in the period 2008–2012 to a maximum of 13 per cent more than the level of emissions in 1990. Ireland's strategy to achieve this target is set out in the *National Climate Change Strategy 2007-2012* published by the Department of the Environment, Heritage and Local Government. The strategy includes 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 limits. It is estimated that it will be necessary for the Government to purchase carbon credits for 3.6 million tonnes of excess emissions in respect of each year of the 2008–2012 period. A Carbon Fund was established for this purpose by the Carbon Fund Act 2007 and the management of the Fund was delegated to the National Treasury Management Agency which has also been designated the purchasing agent for the acquisition of these 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, Heritage 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 first report to the Minister for the Environment, Heritage and Local Government under the Act, and covers the period ended 31 December 2007.

The Background to the Kyoto Protocol

The effect of human activity on the environment has been a matter of concern for some time. In 1988 the United Nations established the **Intergovernmental Panel on Climate Change (IPCC)** and the **World Meteorological Organisation (WMO).** 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".

In response to the increasing concerns about the global climate, a number of conferences were held by the United Nations. A major step was taken in Rio de Janeiro in 1992 when a **Framework Convention on Climate Change** was agreed. This was subsequently ratified by 190 countries. Under the Convention, industrialised countries were expected to take the lead in reducing greenhouse gas emissions[1] 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 in 1997 the **Protocol to the Framework Convention on Climate Change** was adopted at the UN Climate Conference in Kyoto, Japan. The **Kyoto Protocol**, as it is commonly called, covers the period 2008–2012. Though the Kyoto Protocol was a significant achievement, 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, and it is intended that it will be finalised at a conference to be held in Copenhagen in December 2009.

The European Union has already agreed that it will set demanding targets for the post 2012 period and has committed unilaterally to reduce its own emissions by at least 20 per cent on the 1990 levels by 2020. This will be increased to 30 per cent if there is a satisfactory global agreement.

1 Carbon Dioxide (CO_2) is the most common greenhouse gas and a tonne of CO_2 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_2 has the GWP of 1. Below is a list of the GWPs for the main gas types:

	GWP-100
Carbon Dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous Oxide (N_2O)	310
Hydrofluorocarbons (HFCs)	150 – 11,700
Perfluorcarbons (PFCs)	6,500 – 9,200
Sulphur Hexafluoride (SF_6)	23,900

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 industrialised countries and former Soviet bloc countries that are undergoing the process of transition to a market economy, are known as Annex B countries.[2] 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 to 2012.

Kyoto Greenhouse Gas Emissions Targets

Country	Target 2008–2012 by reference to 1990 levels
Bulgaria, Czech Republic, Estonia, Latvia, Liechtenstein, Lithuania, Monaco, Romania, Slovakia, Slovenia, Switzerland and EU-15[3]	-8%
US[4]	-7%
Canada, Hungary, Japan and Poland	-6%
Croatia	-5%
New Zealand, Russian Federation and Ukraine	0
Norway	+1%
Australia	+8%
Iceland	+10%

2 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.

3 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).

4 The US did not ratify the Kyoto Protocol. This target is therefore void.

The European Union and the Kyoto Obligations

The EU-15 has an internal burden sharing agreement to meet its 8 per cent emission reductions 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 Change 2008–2012*
	%
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 Kyoto target	-8

*The percentage changes shown are from 1990 levels

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 12,000 installations across the EU are controlled. Over 100 Irish installations participate in the scheme.

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.

Within the EU Emissions Trading Scheme there is only a limited opportunity for installations with a shortfall of allowances to purchase credits from outside the scheme to achieve compliance with their Kyoto obligations. These externally produced credits arise from the Flexible Mechanisms of the Kyoto Protocol – see page 11 and following for details. The aim is to oblige the members of the scheme to reduce their overall emissions and the market in EUAs sets the price at which this can be done most efficiently.

EU Emissions

TRADED SECTOR

EU Emissions Trading Scheme

46% of EU CO_2 emissions

- combustion installations>20MW output
- iron and steel
- oil refineries
- cement, lime, glass, ceramics
- pulp / paper

NON-TRADED SECTOR

54% of EU CO_2 emissions

- Residential
- Transport
- Agriculture
- etc

Ireland’s Greenhouse Gas Emissions in 2006

Total greenhouse gas emissions in 2006 were 69.76 million tonnes of carbon dioxide equivalent, which is 0.8 per cent lower than the level of emissions in 2005. The 2006 emissions are 25.5 per cent above the 1990 levels. Ireland’s commitment under the Kyoto Protocol is to keep emissions during the period 2008–2012 at an average level no more than 13 per cent over the 1990 emissions.

Sources of greenhouse gas emissions in Ireland in 2006

Agriculture	27.7%
Energy	22.3%
Transport	19.7%
Industrial and Commercial	17.2%
Residential	10.5%
Waste	2.6%
Total	100%

Ireland's Strategy for Compliance with Kyoto

Ireland's strategy for achieving its Kyoto target for reducing greenhouse gas emissions is set out in the *National Climate Change Strategy 2007–2012,* published in April 2007.[5]

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_2 equivalent.[6] 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 is estimated that measures already taken will reduce emissions by some 8 million tonnes a year. However, in the absence of additional policies and measures, it is projected that Ireland would exceed its Kyoto obligations by an average of 8.4 million tonnes of emissions each year. Abatement measures to be undertaken by the installations included in the EU Emissions Trading Scheme are projected to reduce emissions by 0.9 million tonnes per annum, while similar measures in the non-traded sector of the economy are projected to reduce annual emissions by 1.9 million tonnes. The remaining 5.6 million tonnes of annual emissions in excess of the Kyoto target will be accounted for by the purchase of credits or allowances (or other reductions) for 2.0 million tonnes of annual emissions by the Irish members of the EU Emissions Trading Scheme and by average annual purchases of credits for 3.6 million tonnes by the State on behalf of the non-traded sectors of the economy.

The following table summarises the additional measures for achieving Ireland's Kyoto target:[7]

	Annual Average 2008–2012 (Million Tonnes of CO_2 equivalent)
Kyoto Target	62.8
Projected Greenhouse Gas Emissions after effects of measures already taken.	71.2
Distance to Kyoto Target	8.4
Additional measures to achieve Kyoto Target	
(1) Emissions abatement by:	
(a) EU Emissions Trading Scheme participants	0.9
(b) Non-traded sector of economy	1.9
(2) Purchase of allowances and credits by:	
(a) EU Emissions Trading Scheme participants	2.0
(b) Government	3.6
Total	8.4

The National Treasury Management Agency has been designated the purchasing agent for the State in the acquisition of the required credits for 3.6 million tonnes of greenhouse gas emissions on average in respect of each year of the 2008–2012 period under the Flexible Mechanisms of the Kyoto Protocol.[8] The total credits required in the period are for 18 million tonnes.

5 For details, see the full report published by the Department of the Environment, Heritage and Local Government available on the web at http://www.environ.ie/en/Environment/Atmosphere/ClimateChange/NationalClimateChangeStrategy
6 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 of 15 January 2008).
7 Source: *Ireland's National Allocation Plan for Emissions Trading 2008-2012*, Environmental Protection Agency, 4 March 2008.
8 See Annex 3 of the *National Climate Change Strategy 2007-2012* in Appendix 2

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, Heritage 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 of 2008–2012. This is in addition to an initial investment of €20 million in 2006.

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 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.[9] The credits thereby earned are **Emission Reduction 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 who 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. In the Carbon Fund Act 2007, these are all referred to as **Kyoto Units.**

There were concerns that the Flexible Mechanisms would effectively allow industrial countries to "buy the right to pollute". This concern was addressed with the negotiation of the **Marrakesh Accords** in 2001 when the detailed rules for implementing the Kyoto Protocol were agreed. Under these rules, the Flexible Mechanisms must be used to supplement each country's own efforts to reduce emissions. Countries are thus only allowed to 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**.[10]

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.

9 See Footnote 2 and Appendix 1 for details on Annex B countries.
10 See 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 the 1,000th project was approved in April 2008. By comparison, there are only two registered JI projects and no certified units have been issued under the JI Mechanism. As a result of the number of CDM projects, there is increasing 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.[11]

The 1,000 approved projects in 49 countries have generated more than 135 million CERs to date and the mechanism is forecast to generate more than 2.7 billion CERs in 2008–2012, the first commitment period of the Kyoto Protocol.[12]

As the two charts on the opposite page show, while there is a fairly wide dispersal of CDM projects among host countries, the larger projects are mainly in China. That country is accordingly the greatest source of CERs.[13]

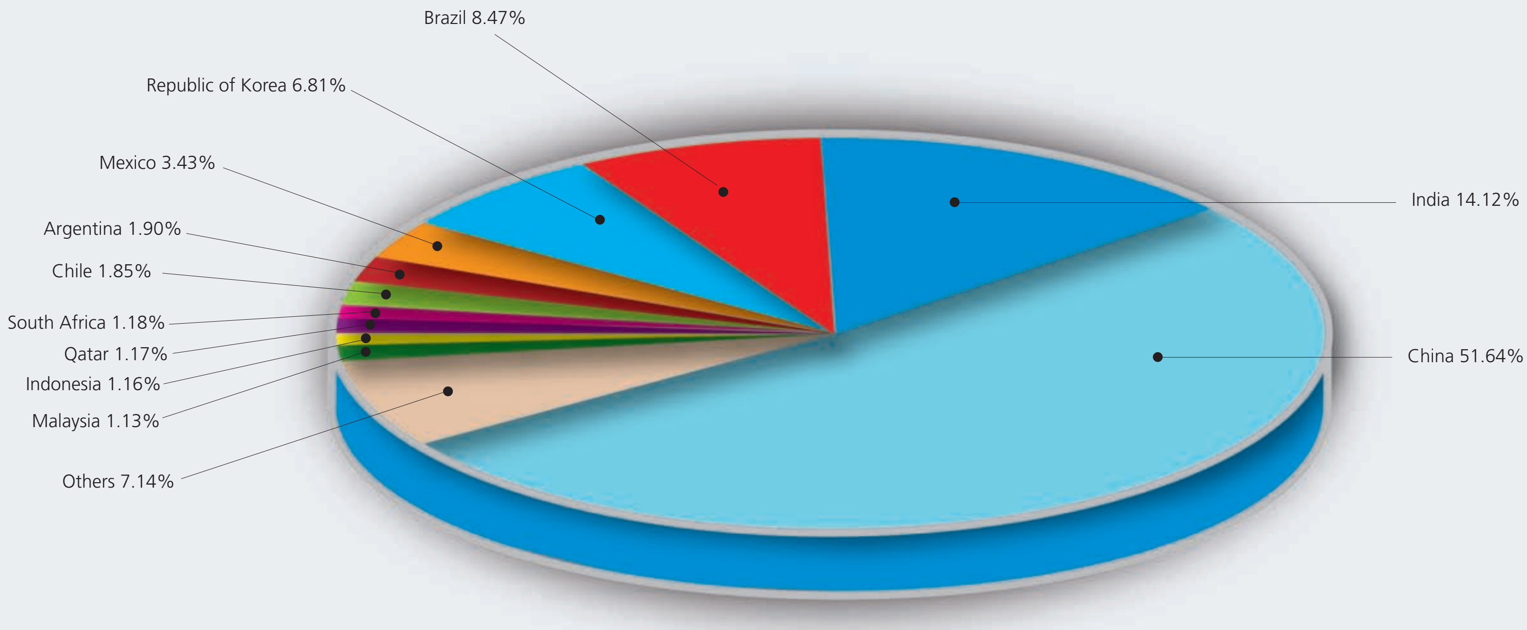
CERs can be acquired by investing directly in projects, or in funds that invest in projects, or by purchasing CERs which have already been issued and certified by the CDM Executive Board. Investment in a project at an early stage of its development involves a risk that the project may not be approved or that the number of certified units generated from it may be less than anticipated. So as 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.

A major problem that has hindered the development of the CER market is the need to complete the **International Transaction Log (ITL).** Each country has a designated register where the owners of carbon credits are recorded.[14] It is by reference to its holding of carbon credits in the Irish register that Ireland will fulfil its obligations under the Kyoto Protocol. The ITL, which allows the transfer of carbon credits between the different national registers, is not yet operational in the EU and so it is not possible to take delivery of carbon credits into the national registers. It is expected that the ITL will be operational by the autumn of 2008, and that will be a further boost to the market. Some participants have been reluctant to purchase credits before the delivery mechanism is operational.

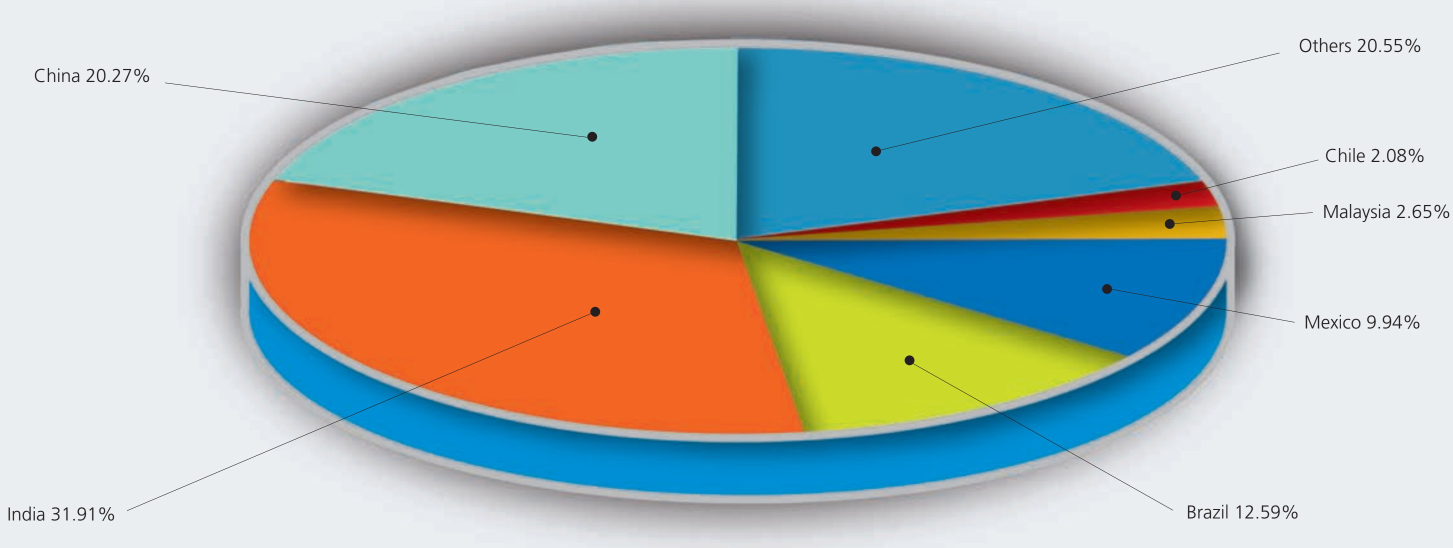
The market in carbon credits should continue to develop in liquidity and depth over the coming year as more units are approved and the ITL issue is resolved. Furthermore, participants will increasingly look to the post 2012 period and the proposed targets for carbon reductions in that commitment period. Given that surplus carbon credits from the 2008–2012 commitment period may be carried forward to the post 2012 period, the targets for the 2013–2020 commitment period will have a major impact on the development of prices in the carbon market.

11 See the UN website http://cdm.unfccc.int/Issuance/index.html for more details
12 Source: UN Framework Convention on Climate Change – Secretariat, 14 April 2008
13 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
14 The Environmental Protection Agency is designated Ireland's national register administrator.

Distribution of the total expected average annual CERs from registered projects by host country



Distribution of registered CDM projects by host country



Source: UNFCCC

Investments by Ireland

To date, the Government has undertaken investments in three funds which invest in projects to achieve carbon emissions reductions. The first was an investment of €20 million made in December 2006[15] in the **Multilateral Carbon Credit Fund (MCCF)**[16] of the European Bank for Reconstruction and Development (EBRD). Two further commitments of €10 million and $12.88 million (€8.8 million approximately) were made respectively to the **World Bank Carbon Fund for Europe** and the **World Bank 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".[17] Projects are located in the 27 EBRD countries in central and eastern Europe and the Commonwealth of Independent States.[18] The full €20 million committed has been paid over to the EBRD.

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, Luxembourg, Portugal, the Flemish Region of Belgium and Stakraft Carbon Invest AS (Norway). Of the €10 million committed to this Fund, €2.2 million has been paid over in the period ended 31 December 2007.

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

(a) to provide resources for projects which are intended to

 (i) generate emissions 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) to 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) to disseminate broadly the knowledge gained in the development of the Fund and the implementation of projects.

Projects under development are in China, India, the Kyrgyz Republic, Moldova and the Republic of Panama. Ireland is committed to investing US$12.88 million in the second tranche of the BioCarbon Fund which commenced operations in March 2007 and has a total capital of US$38.1 million. Just over US$1.5 million of this commitment was paid over in 2007.

15 This was before the establishment of the Irish Carbon Fund by the Carbon Fund Act 2007.
16 The European Investment Bank is partnering the EBRD in managing the MCCF; Ireland's agreement is only with the EBRD.
17 Quotation from EBRD President Jean Lemierre at the launch of the Fund, 22 May 2006.
18 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.

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+	92
Belgium+	92
Bulgaria*	92
Canada	94
Crotia*	95
Czech Republic*	92
Denmark+	92
Estonia*	92
European Union (EU-!5)	92
Finland+	92
France+	92
Germany+	92
Greece+	92
Hungary*	94
Iceland	110
Ireland+	92
Italy+	92
Japan	94
Latvia*	92
Liechtenstein	92
Lithuania*	92
Luxembourg+	92
Monaco	92
Netherlands+	92
New Zealand	100
Norway	101
Poland*	94
Portugal+	92
Romania*	92
Russian Federation*	100
Slovakia*	92
Slovenia*	92
Spain+	92
Sweden+	92
Switzerland	92
Ukraine*	100
United Kingdom+	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

+ See page 7 for details of the burden sharing agreement by the EU-15 countries.

Appendix 2

Annex 3 of the *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[19] 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, 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).

International Emissions Trading: provided for under Article 17 of the Kyoto Protocol,[20] 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.

19 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 at some point in the future.

20 Emissions trading under Article 17 of the Kyoto Protocol is 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.

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 emissions 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

AAUs	See Assigned Amount Units
Additionality	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".
Annex B Countries	Countries listed in Annex B of the Kyoto Protocol. Annex B countries have quantified emission limitation or reduction commitments (see Appendix 1).
Assigned Amount Units (AAUs)	These are the units allocated to each Annex B country representing the total allowed level of emissions for a country under the Kyoto Protocol.
Burden Sharing Agreement	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 emission reductions.
Bubble	Collective scheme for countries allowed under the Kyoto Protocol. See Burden Sharing Agreement.
CDM	See Clean Development Mechanism.
CDM Executive Board (CDM EB)	The CDM EB registers validated project activities as CDM projects, issues Certified Emission Reductions (CERs) 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.
CERs	See Certified Emission Reductions.
Certified Emission Reductions (CERs)	Carbon credits produced through the Clean Development Mechanism.
Clean Development Mechanism (CDM)	One of the Flexible Mechanisms allowed under the Kyoto Protocol. The Clean Development Mechanism generates credits by sponsoring greenhouse gas reducing projects in developing countries.
CO_2 equivalents	Where gases other than CO_2 are referred to, for comparison purposes these are converted to their equivalence in Global Warming Terms (GWP – see reference) to CO_2.
Conference of the Parties (COP)	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 COP-7. COP-14 will take place in Poznan, Poland in Dec. 2008.
COP	See Conference of the Parties.
Emission Reduction Units (ERUs)	Carbon credits produced though the Joint Implementation (JI) Mechanism.
Emission Units	All emission units under the Kyoto Protocol are equivalent to one tonne of Carbon Dioxide emitted.
Emissions trading	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.
ERU	See Emission Reduction Units.

EU Emissions Trading Scheme	"Cap and Trade" scheme within the EU-15 for the major polluters.
EU ETS	See EU Emissions Trading Scheme.
EUA	See European Union Allowances.
European Union Allowances (EUAs)	Credits allocated to companies in the EU ETS. These credits come from a country's AAUs.
Flexible Mechanisms	The Flexible Mechanisms provided under the Kyoto Protocol i.e. Emissions Trading, Joint Implementation and the Clean Development Mechanism.
Global Warming Potential (GWP)	To compare the different greenhouse gases, emissions are calculated over a normalised time horizon, giving a measure of their relative heating effect in the atmosphere. The 100 year time horizon is generally used. CO_2 is the basic unit. See footnote 1, page 5.
Intergovernmental Panel on Climate Change (IPCC)	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: www.ipcc.ch
International Transaction Log (ITL)	The ITL is the centralised database of all tradable credits under the Kyoto Protocol that verifies international transactions and their compliance with Kyoto rules and policies.
IPCC	See Intergovernmental Panel on Climate Change.
JI	See Joint Implementation.
JISC	See Joint Implementation Supervisory Committee.
Joint Implementation (JI)	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.
Joint Implementation Supervisory Committee (JISC)	This body supervises the verification of ERUs generated by JI projects.
Kyoto Protocol	The Protocol to the Framework Convention on Climate Change which was agreed in Kyoto, Japan in December 1997 and came into force on the 16 February 2005. It specifies emission obligations for Annex B countries and defines the three Kyoto Flexible Mechanisms: JI, CDM, and Emissions Trading.
Kyoto Unit	A unit of emissions equivalent to one tonne of CO_2 emitted.
Marrakesh Accords	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.
UN Framework Convention on Climate Change (UNFCCC)	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 PERIOD ENDED 31 DECEMBER 2007

Contents

Statement of Agency's Responsibilities

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

In preparing those statements, the Agency is required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- prepare the financial statements on the going concern basis unless it is inappropriate;
- disclose and explain 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, Heritage and Local Government with the consent of the Minister for Finance all proper and usual accounts of all moneys received or expended by it and for maintaining accounting records which disclose with reasonable accuracy at any time the financial position of the Agency.

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.

Michael J. Somers
Chief Executive
26 June 2008

Report of the Comptroller and Auditor General for presentation to the Houses of the Oireachtas

I have audited the financial statements of the Carbon Fund for the year ended 31 December 2007 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.

Respective Responsibilities of the Agency and the Comptroller and Auditor General

The Agency is responsible for preparing the financial statements in accordance with the Carbon Fund Act 2007, and for ensuring the regularity of transactions. The Agency prepares the financial statements in accordance with Generally Accepted Accounting Practice in Ireland. The accounting responsibilities of the Agency are set out in the Statement of Agency's Responsibilities.

My responsibility is to audit the financial statements in accordance with relevant legal and regulatory requirements and International Standards on Auditing (UK and Ireland).

I report my opinion as to whether the financial statements properly present, in accordance with Generally Accepted Accounting Practice in Ireland, the results of the Fund's operations for the year and its balances at year-end. I also report whether in my opinion proper books of account have been kept. In addition, I state whether the financial statements are in agreement with the books of account.

I report any material instance where moneys have not been applied for the purposes intended or where the transactions do not conform to the authorities governing them.

I also report if I have not obtained all the information and explanations necessary for the purposes of my audit.

I read other information contained in the Annual Report, and consider whether it is consistent with the audited financial statements. I consider the implications for my report if I become aware of any apparent misstatements or material inconsistencies with the financial statements.

Basis of Audit Opinion

In the exercise of my function as Comptroller and Auditor General, I conducted my audit of the financial statements in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board and by reference to the special considerations which attach to State bodies in relation to their management and operation. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures and regularity of the financial transactions included in the financial statements. It also includes an assessment of the significant estimates and judgments made in the preparation of the financial statements, and of whether the accounting policies are appropriate to the Fund's circumstances, consistently applied and adequately disclosed.

I planned and performed my audit so as to obtain all the information and explanations that I considered necessary in order to provide me with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error. In forming my opinion I also evaluated the overall adequacy of the presentation of information in the financial statements.

Opinion

In my opinion, the financial statements properly present, in accordance with Generally Accepted Accounting Practice in Ireland, the results of the Fund's operations for the year ended 31 December 2007 and its balances at that date.

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

John Buckley
Comptroller and Auditor General
30 June 2008

Accounting Policies

The Carbon Fund was established under the Carbon Fund Act 2007 for the acquisition of Kyoto Units 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 (NTMA) has been designated as the Purchasing Agent on behalf of the State and will administer and manage purchases of Kyoto Units.

The NTMA 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

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, Heritage and Local Government*] *and the Minister for Finance and on such terms as they may specify"*.

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, Heritage and Local Government.

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

Reporting Period

The first reporting period is from 14 April to 31 December 2007.

Reporting Currency

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

Valuation of Carbon Fund Assets

Investments are recorded on a trade date at cost of acquisition and are stated on the following basis:

<u>Direct Holdings</u>
Kyoto Units purchased are recorded at cost of acquisition.

<u>Investments in Indirect Kyoto Units</u>
Investments in indirect units are made in managed funds. Investments in these funds are recorded at cost of acquisition. Such investments relate to carbon reducing projects that may or may not produce Kyoto Units. The number of units is usually not quantifiable until a future period.

Accounting Policies (continued)

Gains and Losses on Carbon Fund Assets

As the Kyoto Units are acquired with the intention to hold them to meet Ireland's obligation at the end of 2012, at which time they will be surrendered, there will be no realised gains or losses on these assets.

Expenses

Expenses are accounted for in the year in which they fall due.

Foreign Currencies

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

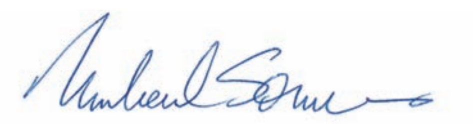
Taxation

The income and profits of the Carbon Fund are exempt from Irish corporation tax. The purchase of Kyoto Units by the Carbon Fund is liable to Value Added Tax on a Fourth Schedule VAT basis as the transaction will be regarded as a supply of a service, as defined by Section 5(1) Value Added Tax Act 1972.

FUND ACCOUNT for the period ended 31 December 2007

	Notes	Period Ended 31 December 2007 €
New Funding in period	1	3,722,839
Total for the period		3,722,839
Taxation	4	-
Increase / (Decrease) in Fund during the period		3,722,839
Net Assets of Fund at start of period		-
Net Assets of Fund at end of period		3,722,839

The statement of accounting policies and notes 1 to 9 form part of these accounts.



Michael J. Somers
Chief Executive
26 June 2008

NET ASSETS STATEMENT, 31 December 2007

	Notes	2007 €
Carbon Fund Assets	3	3,722,839
Current Assets	6	3,722,839
Cash at Bank		-
Current Liabilities	7	(3,722,839)
Net Assets of Fund at 31 December 2007		3,722,839

The statement of accounting policies and notes 1 to 9 form part of these accounts.

Michael J. Somers
Chief Executive
26 June 2008

NOTES TO THE ACCOUNTS

1. Contributions

	Period Ended 31 December 2007 €
Amounts Receivable from the Department of the Environment, Heritage & Local Government	3,722,839

This represents funding recoverable from the Department of the Environment, Heritage & Local Government in respect of advances made by the Central Fund.

2. Administration Costs

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

3. Carbon Fund Assets

(a) Summary of Assets

	2007 €
Indirect Holdings	
- Cost	3,722,839
Direct Holdings	
- Cost of acquisition	-
	3,722,839

(b) Analysis by Currency of Assets

	2007 €
Euro	2,200,000
US Dollar	1,522,839
	3,722,839

3. **Carbon Fund Assets (Continued)**

		2007
(c)	The carbon assets of the Fund are held as follows:	€
	Investment Funds	
	World Bank – Carbon Fund for Europe	2,200,000
	World Bank – BioCarbon Fund	1,522,839
		3,722,839

(d) The number of credits acquired at 31 December 2007 is Nil.

4. **Taxation**

The income and profits of the Carbon Fund are exempt from Irish corporation tax.

5. **Commitments**

Carbon Fund Investments
Prior to the establishment of the Carbon Fund, the Minister for the Environment, Heritage and Local Government entered into commitments with the European Bank for Reconstruction and Development (EBRD) and the World Bank. The Minister for the Environment, Heritage and Local Government paid €20 million into an escrow account with the EBRD in December 2006 prior to the establishment of the Carbon Fund in April 2007.

The NTMA has administered payments on behalf of the Minister for the Environment, Heritage and Local Government in respect of the World Bank funds. Investments in these funds relate to projects which can expect to yield Kyoto Units but this will not be known until a future date.

At 31 December 2007, the uncalled capital commitments in respect of these investments amounted to:

		Total Commitment of the State		Paid to date	Unfunded to date
		Local Currency	Euro equivalent		
			€	€	€
EBRD	Multilateral Carbon Credit Fund	€20m	20,000,000	20,000,000	Nil
World Bank	Carbon Fund for Europe	€10m	10,000,000	2,200,000	7,800,000
World Bank	BioCarbon Fund	US$12.88m	8,867,828	1,522,839	7,344,989
			38,867,828	23,722,839	15,144,989

6. Current Assets

This amount represents the amount owed to the Carbon Fund by the Department of the Environment, Heritage and Local Government Vote under Section 3 (4) of the Carbon Fund Act 2007.

7. Current Liabilities

This amount represents the amount owed to the Central Fund by the Carbon Fund under Section 3 (4) of the Carbon Fund Act 2007.

8. Financial Risk Management

The Fund is exposed to market price risk and currency risk arising from the financial instruments it holds as investment assets.
The risk management policies employed by the Fund to manage these risks are discussed below.

Market Price Risk

The Fund's financial instruments including investment funds may be susceptible to market price risk arising from uncertainties about the future prices of these instruments.

Currency Risk

Part of the Fund's assets are denominated in currencies other than the euro, the Fund's functional currency. The Fund is therefore exposed to currency risk, as the value of the investments denominated in other currencies will fluctuate due to changes in exchange rates. The Fund does not hedge its currency risk through the use of a currency hedge.

9. Related Parties

(a) Minister for Finance

As set out in note 1, contributions to the Carbon Fund are to be made by the Minister for Finance by a charge on the Central Fund under section 3(1) of the Carbon Fund Act 2007.

(b) Minister for the Environment, Heritage and Local Government

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

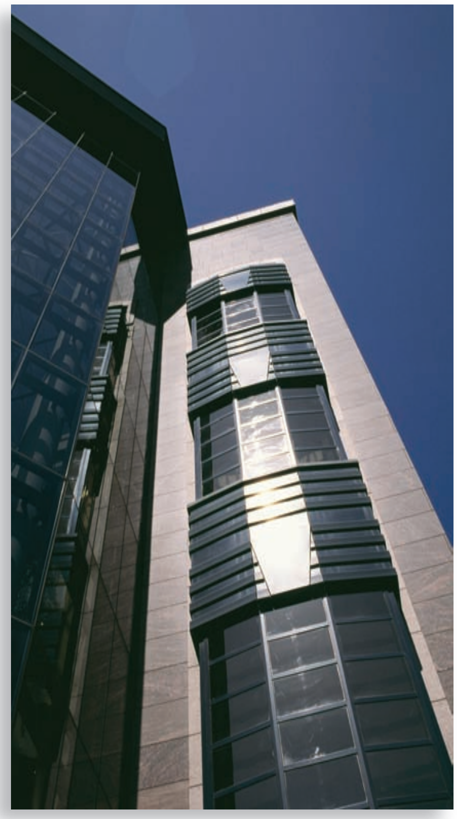
(c) National Treasury Management Agency

Under section 2(4) of the Carbon Fund Act 2007, the National Treasury Management Agency was appointed as Manager of the Fund.

National Treasury Management Agency
Treasury Building
Grand Canal Street
Dublin 2
Ireland

Tel +353 1 664 0800
Fax +353 1 664 0890

www.ntma.ie



National Treasury Management Agency