



Department of
**Agriculture,
Food and the Marine**
An Roinn
**Talmhaíochta,
Bia agus Mara**

Agriculture, Food and GHGs



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**CLIMATE CHANGE DIVISION
DEPARTMENT OF AGRICULTURE, FOOD AND
THE MARINE**

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Brief overview of Irish Agriculture



- Ireland is a country well suited to sustainability. Our climate is temperate; our lush, green countryside is perfect for farming; our seas are teeming with fish.
- 90% of agricultural land is grassland.
- We export 90% of our beef and 80% of our dairy production. Ireland is also a world leader in baby formula (1/6th of world production).
- in a world facing water shortages, and agriculture requiring 70% of freshwater supplies for irrigation, our water stress index, unsurprisingly is one of the lowest in the world.

Agriculture and the national economy



- 8% of total employment is in agriculture
- 7.1% of GVA
- 10.8% of our exports - worth €9 billion to the economy.

Irish agriculture and land use



Agricultural land 4.2m ha

- Grassland (90%) 3.8m ha – mainly permanent
- Crops (10%) 0.42m ha

Forestry 0.75m ha

Livestock

- 6.7 million cattle
- 5.1 million sheep
- 1.6 million pigs

Agri food in the Economy

- 7.7% GVA
- 7.9% of total employment
- 10.6% of exports

Important Issues – Agriculture and Climate Change

- Over 30% of national GHG emissions are from agriculture

EU is approx. 9%



- EU target of 80% reductions in EU emissions by 2050

Very difficult with high ag emissions



- Ambition to increase agriculture production while mitigating GHG emissions

FH2020, and feeding a bigger world population



- Adaption challenges

Pests, diseases and possible water shortages



Sustainability of Irish Agriculture

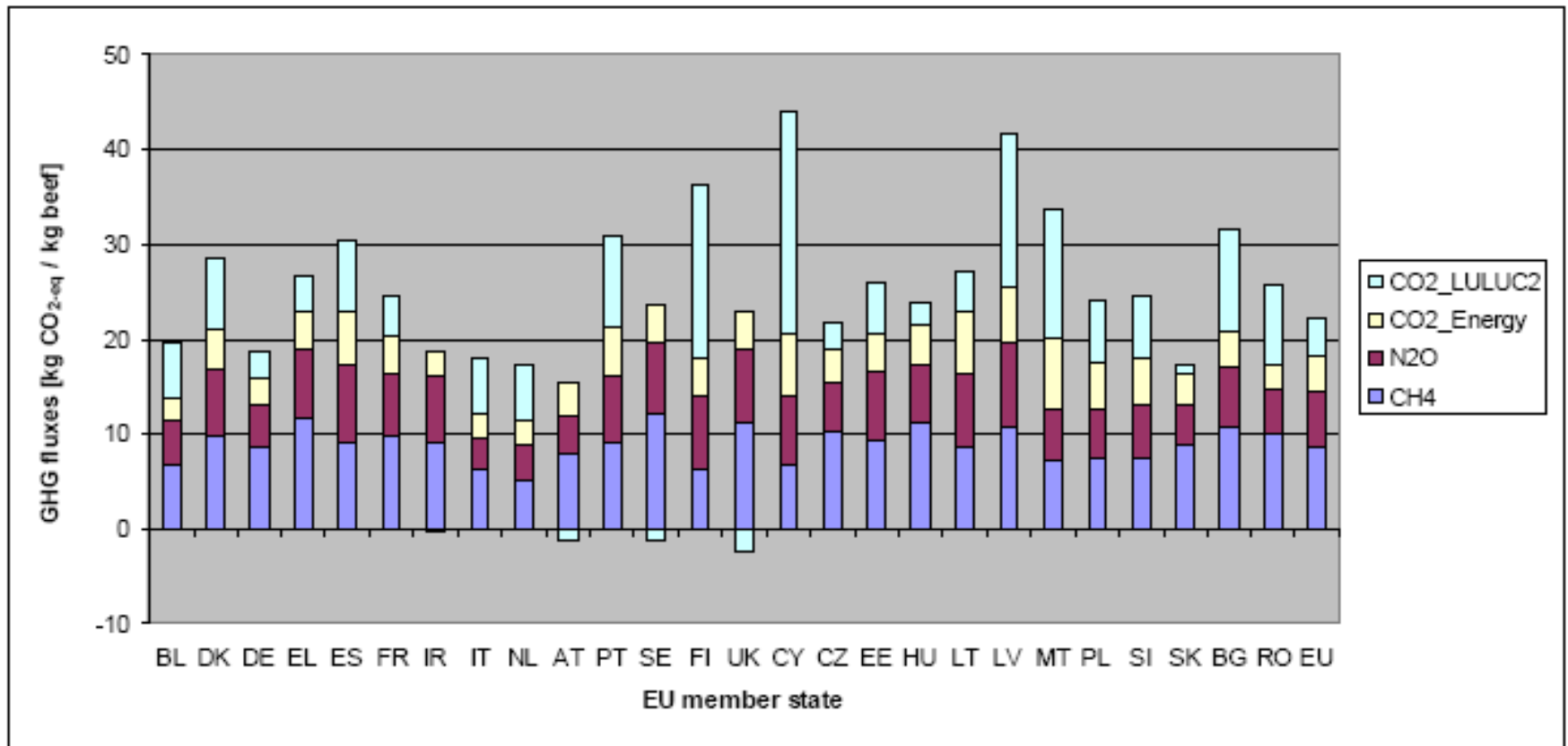


Among the most
efficient in the EU
on a unit of
production basis

Lowest carbon
footprint for milk,
pork and poultry
products

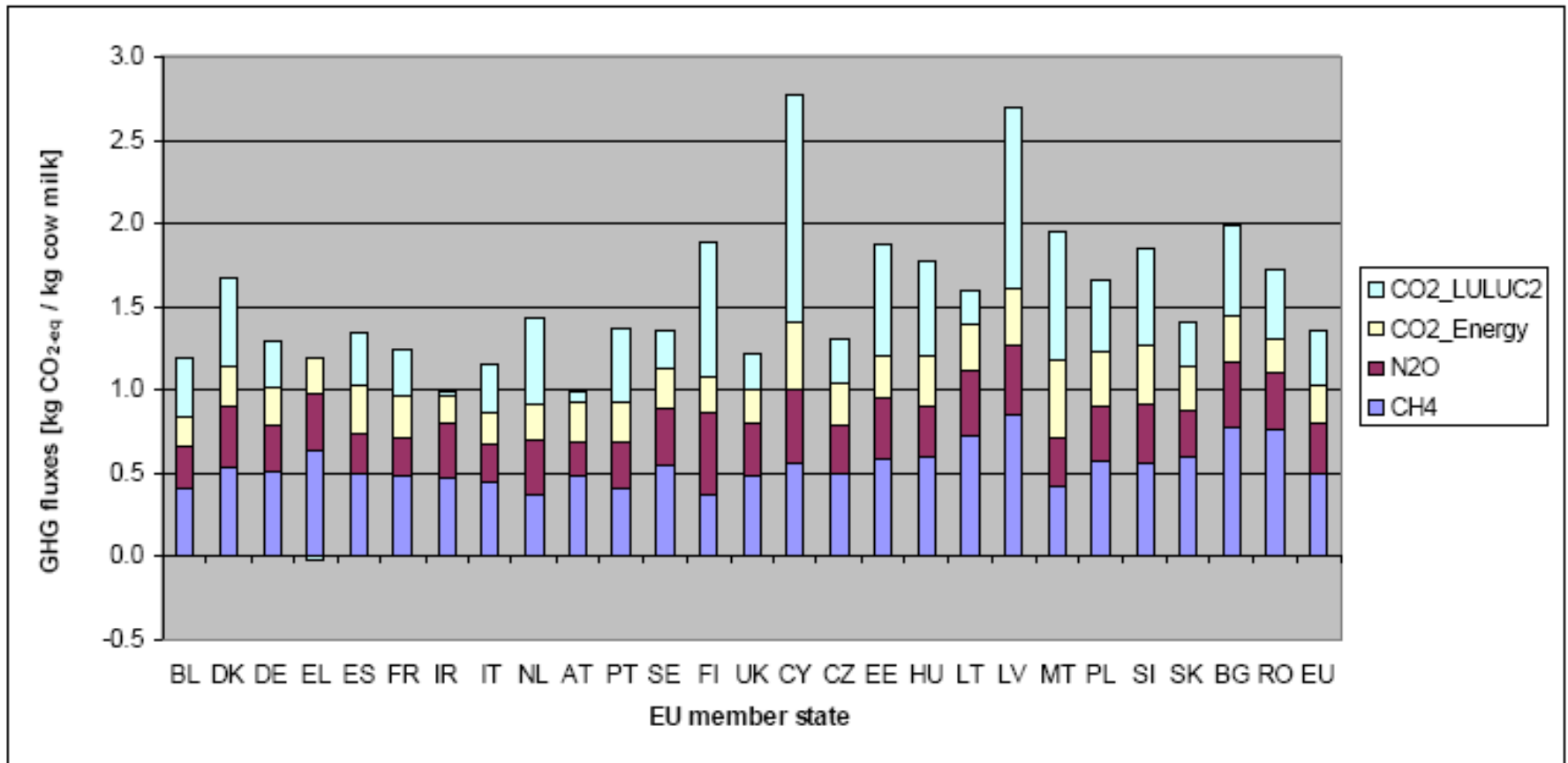
5th for Irish beef –
below the EU
average

Carbon Footprint of Irish Beef (JRC 2011)



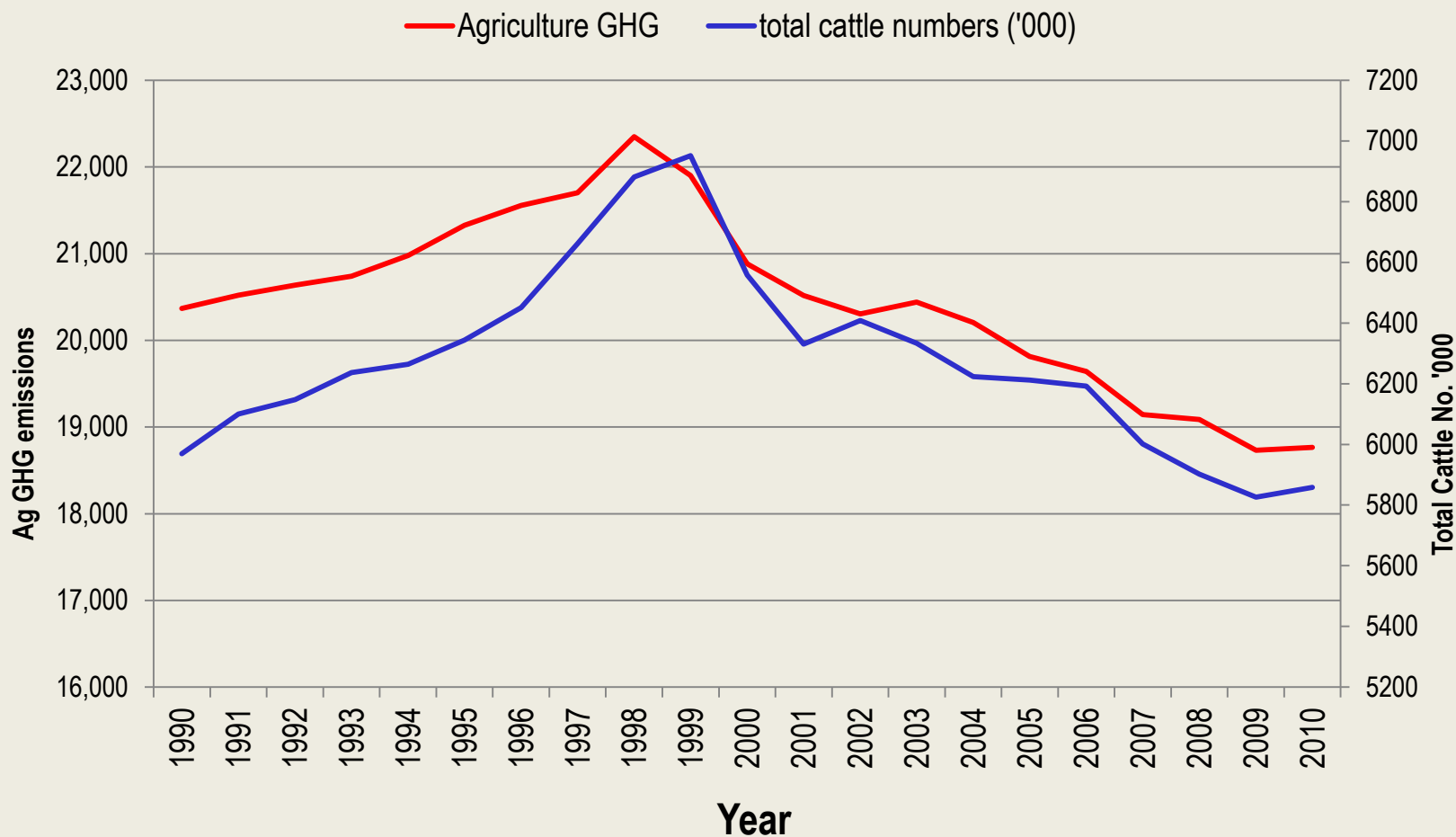
Total GHG fluxes of Beef Production in kg CO₂-eq per kg Beef by EU member states and Greenhouse Gases

Carbon footprint of Irish Milk (JRC 2011)

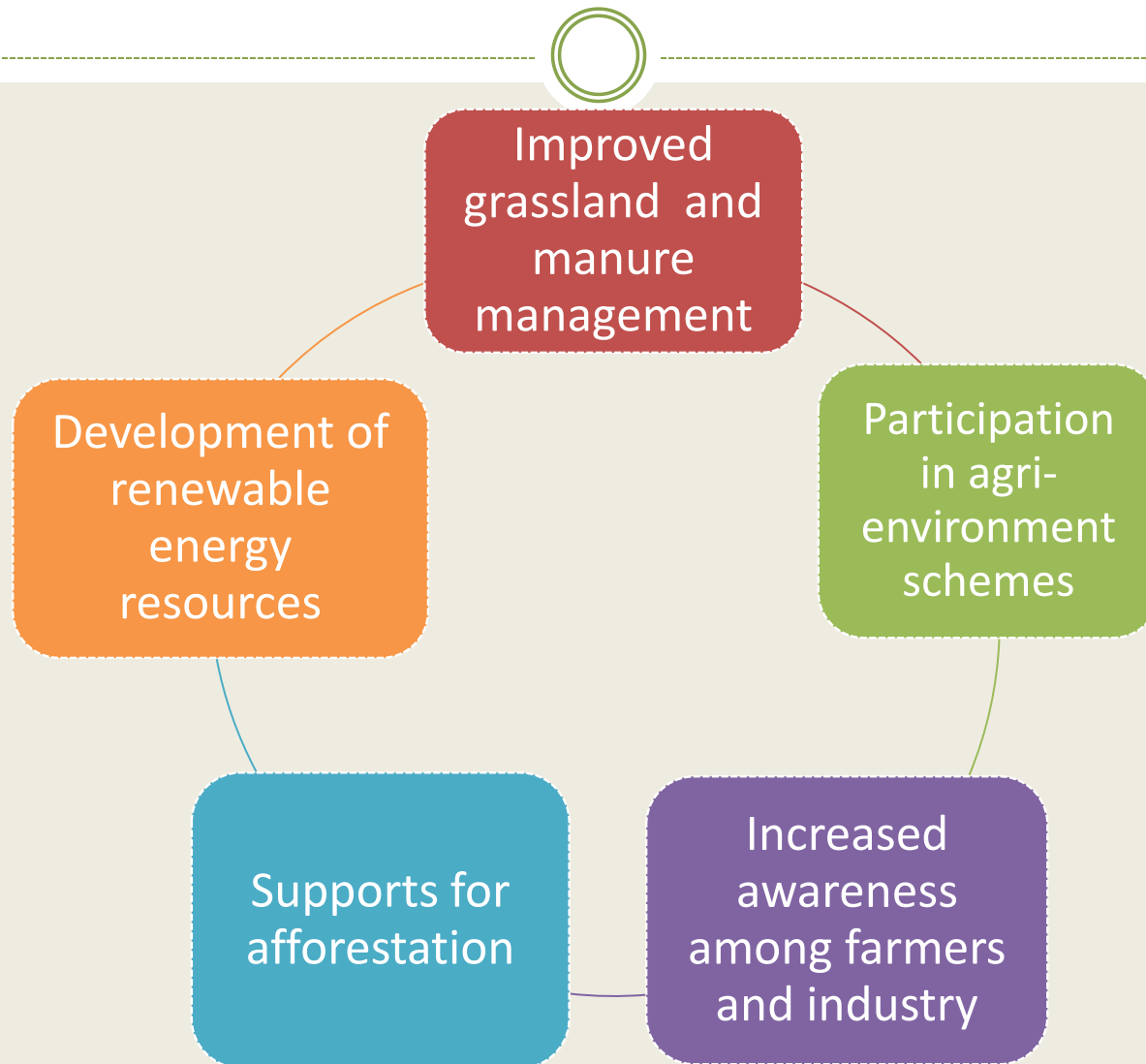


Total GHG fluxes of Cow Milk Production in kg CO₂-eq per kg Milk by EU member states and Greenhouse Gases

Irish Ag GHG emissions versus total cattle numbers (1990-2010)



Successes so far



Research and Knowledge Transfer



FAO Partnership on Benchmarking and Monitoring the Environmental Performance of Livestock Supply Chains

Global Research Alliance on Agricultural GHG Emissions

Joint Programming Initiative (JPI/FACCE)

National Research Prioritisation Report

DAFM research agenda and expenditure on climate change projects

Bioenergy



- Energy crops have the potential to be an ideal feedstock for renewable heat.
- The Bioenergy Scheme supports the planting of miscanthus and willow for energy generation. Since 2007 3,000 hectares have been planted.
- Anaerobic Digestion also has significant potential in this regard.
- The potential for providing supports for the bioenergy sector from the RDP 2014-2020 is currently being examined.



The Role of the Forest Sector

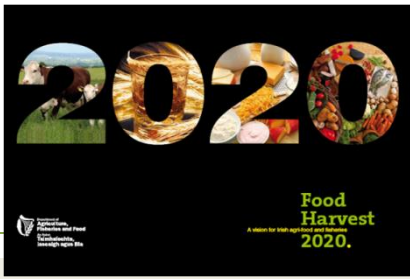


The removal
of GHGs
from the
atmosphere

Provides a
growing
carbon sink

Removal of
4-5m tonnes
CO₂ per
annum by
2020

Continued
expansion to
further
realise
benefits



Food Harvest 2020



SMART

- Embracing innovation
- Embracing new technology
- Improving cost competitiveness

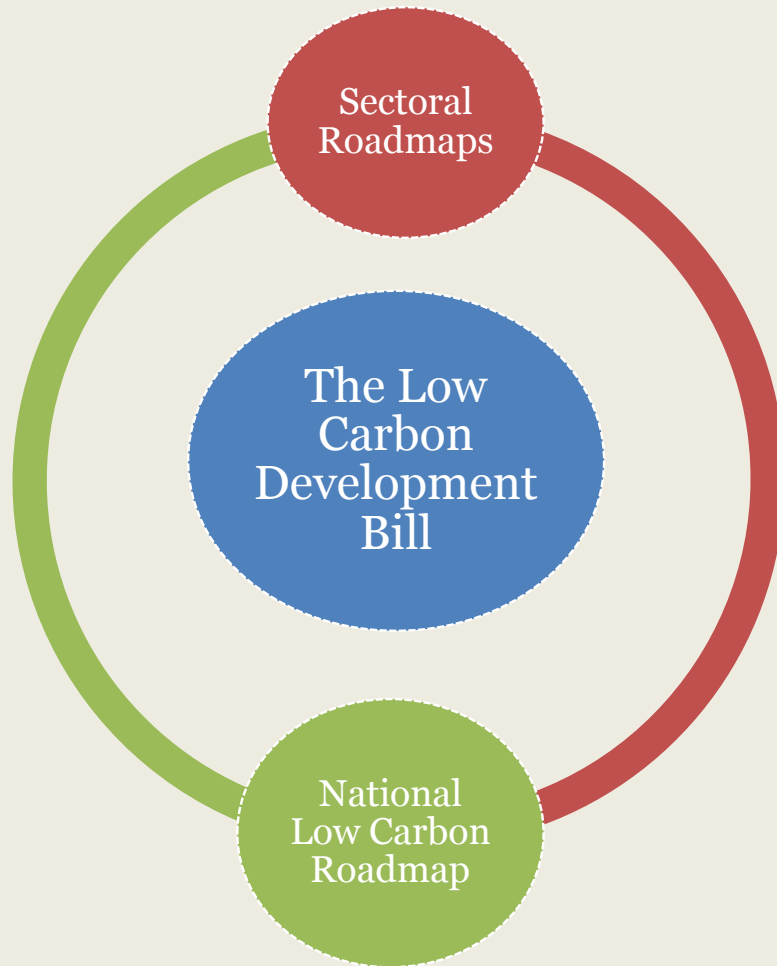
GREEN

- Clearly demonstrating and capitalising on Ireland's green credentials

GROWTH

- Efficient production
- Environmentally sustainable production

The Low Carbon Development Bill



Principal Focus:

On the challenge facing Ireland in meeting the 2020 targets.

Secondary Focus:

Take a long term view of how the agricultural sector will develop and adapt out to 2050

Marginal Abatement Cost Curve (IPCC)

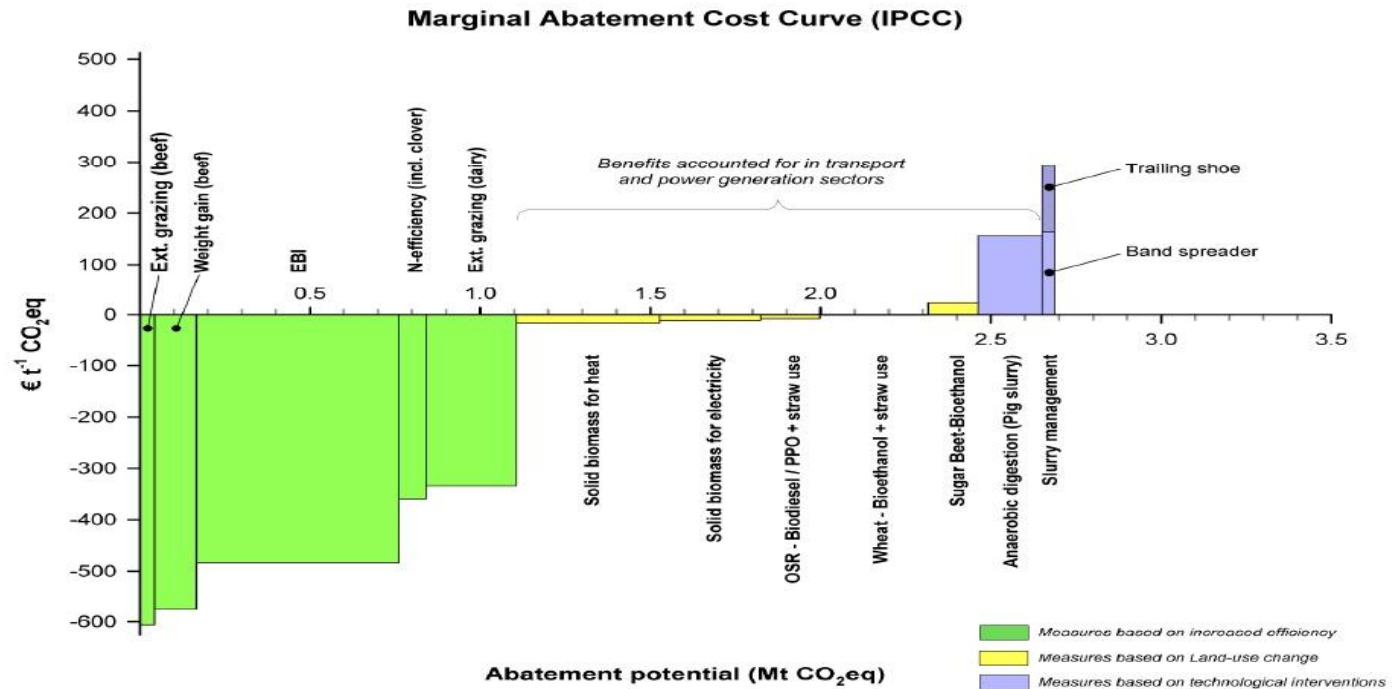
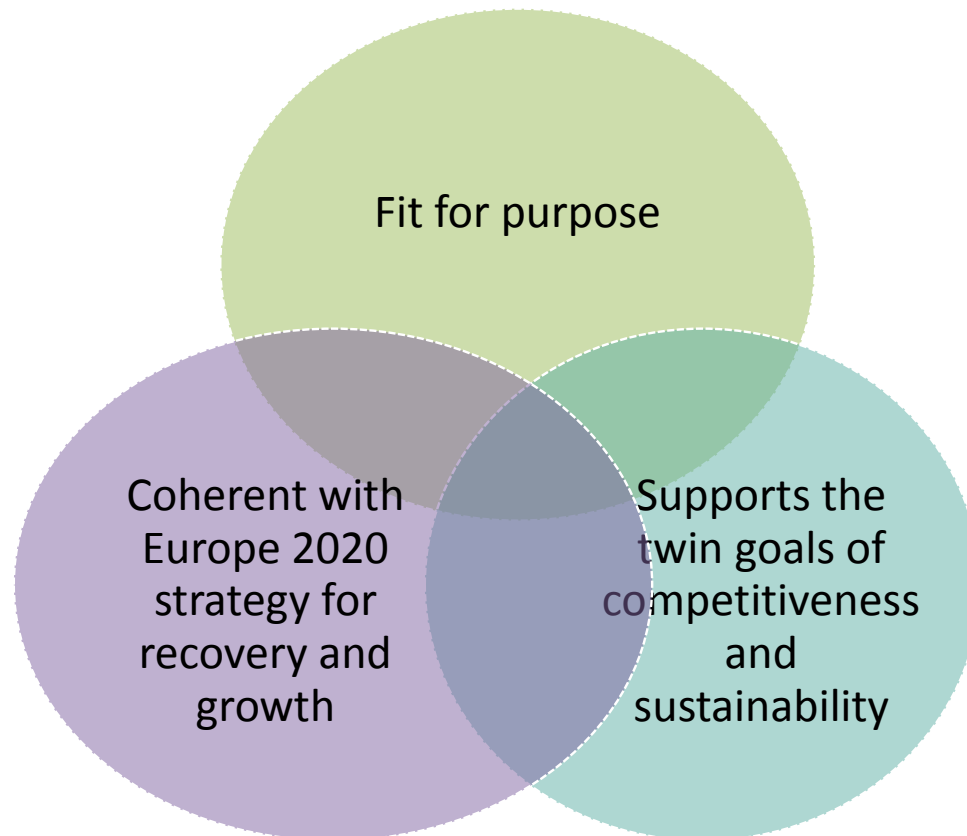


Figure 3.2: Marginal Abatement Cost Curve for Irish Agriculture, using IPCC analysis. Colours indicate measures based on efficiency (green), land use change (yellow) and technological interventions (blue).

CAP Reform



The challenges:



Policy Development



United Nations Framework Convention on Climate Change

Article 2

- *“The ultimate objective of this Convention ... is to achieve,, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system ” .*
- *“Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner”.*

Conclusions



Emissions have
being falling
slowing but
steadily since
1990s



Agricultural
outputs have
been increasing



Low carbon footprint



Conclusions (contd..)



The aim of our Department :

Contain
emissions

- Utilising existing best practice
- Developing high efficiency farm practices/ models
- Further utilise our unique grass based productions systems

Sustainable
production

- Support knowledge transfer to farmers
- Continue to assess and review how to produce food more sustainably
- Ensure the security of food is secured

FH2020
targets

- Avail of opportunities in the RDP and NAP to ensure that all funded measures are complementary to reducing GHG emissions



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THANK YOU



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