

# Irish Climate Change Policy A Role for Local Authorities?



**Eoin Grealis<sup>1,2</sup>, Rowan Fealy<sup>1</sup>, Cathal O'Donoghue<sup>2</sup>, Reamonn Fealy<sup>2</sup>**



**NUI Maynooth <sup>1</sup> REDP, Teagasc<sup>2</sup>**





# Overview

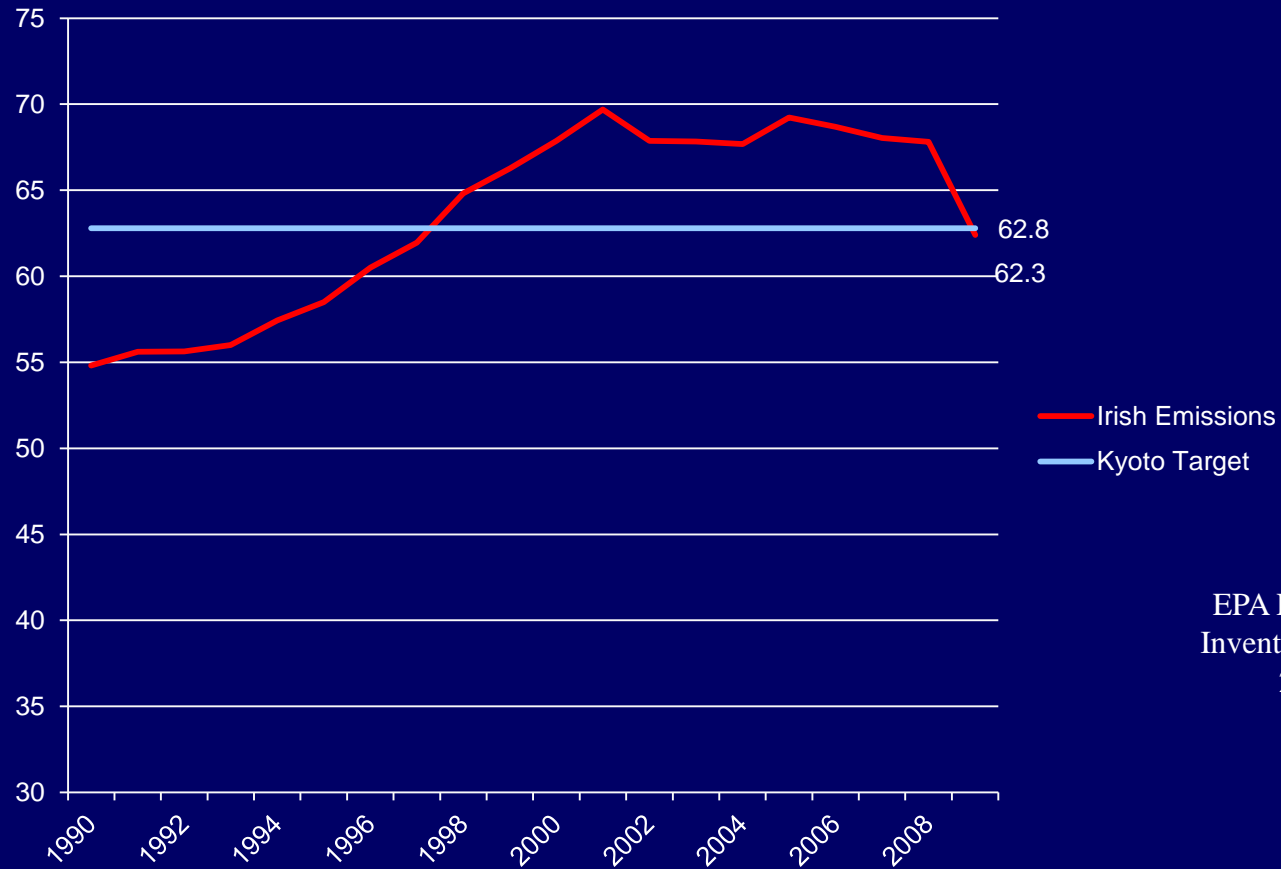
- Scale of our CC Challenge
- Role and Importance of Local Authorities/Agencies
- Barriers to Progress
- Proposal for Emissions Inventory at the Local level



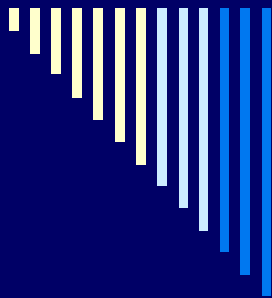
# Ireland's Climate Change Policy Framework

- Mixture of International, Regional (EU) and national objectives
- Key Targets
  - Kyoto- Limit 13% above 1990 levels in 2008-12
  - EU CARE Package 2008- allows for a 20% reduction in non-ETS traded sector by 2020

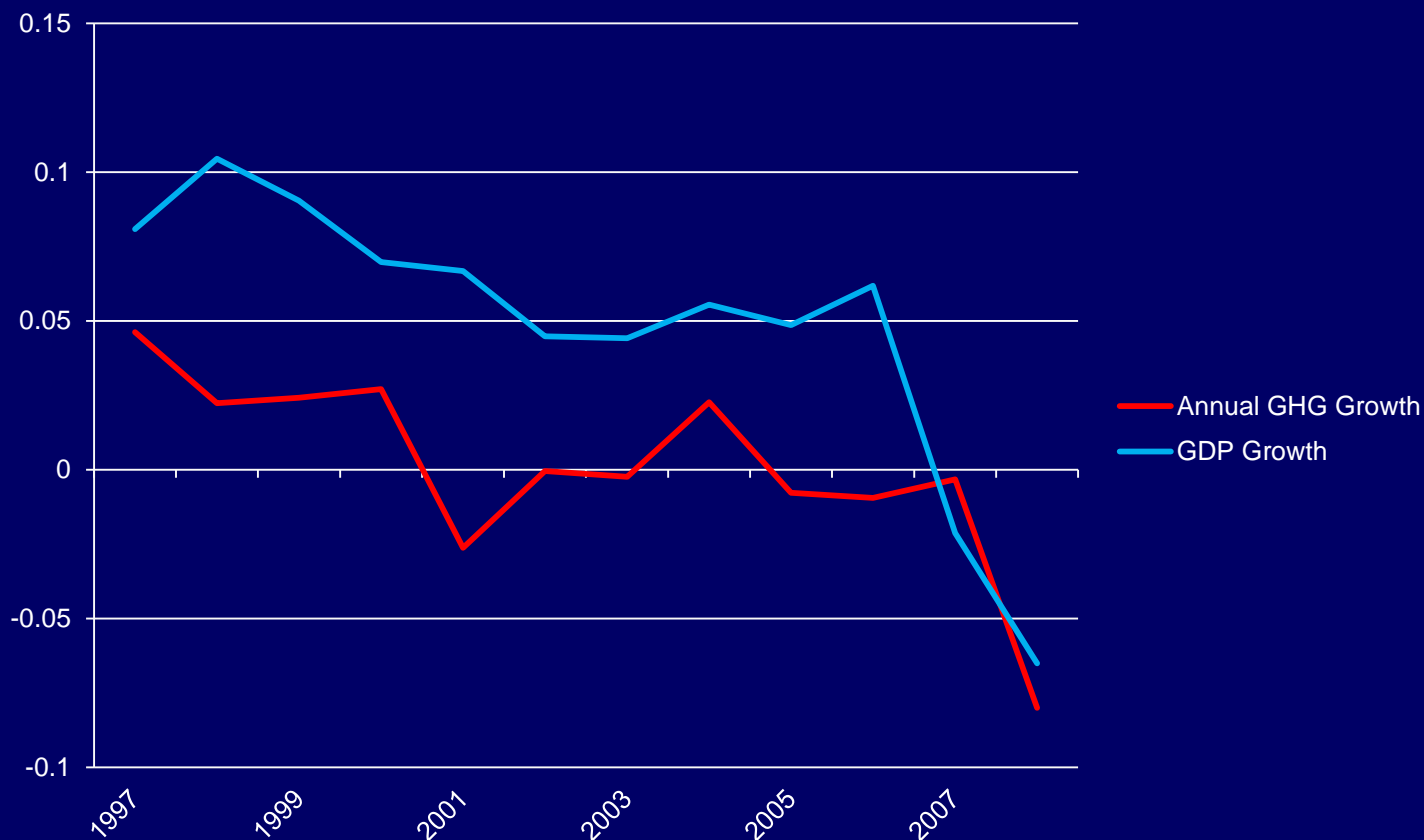
# Irish GHG Emissions MtCO<sub>2</sub>e



EPA Emissions  
Inventory Report  
2009



# GDP Vs GHG

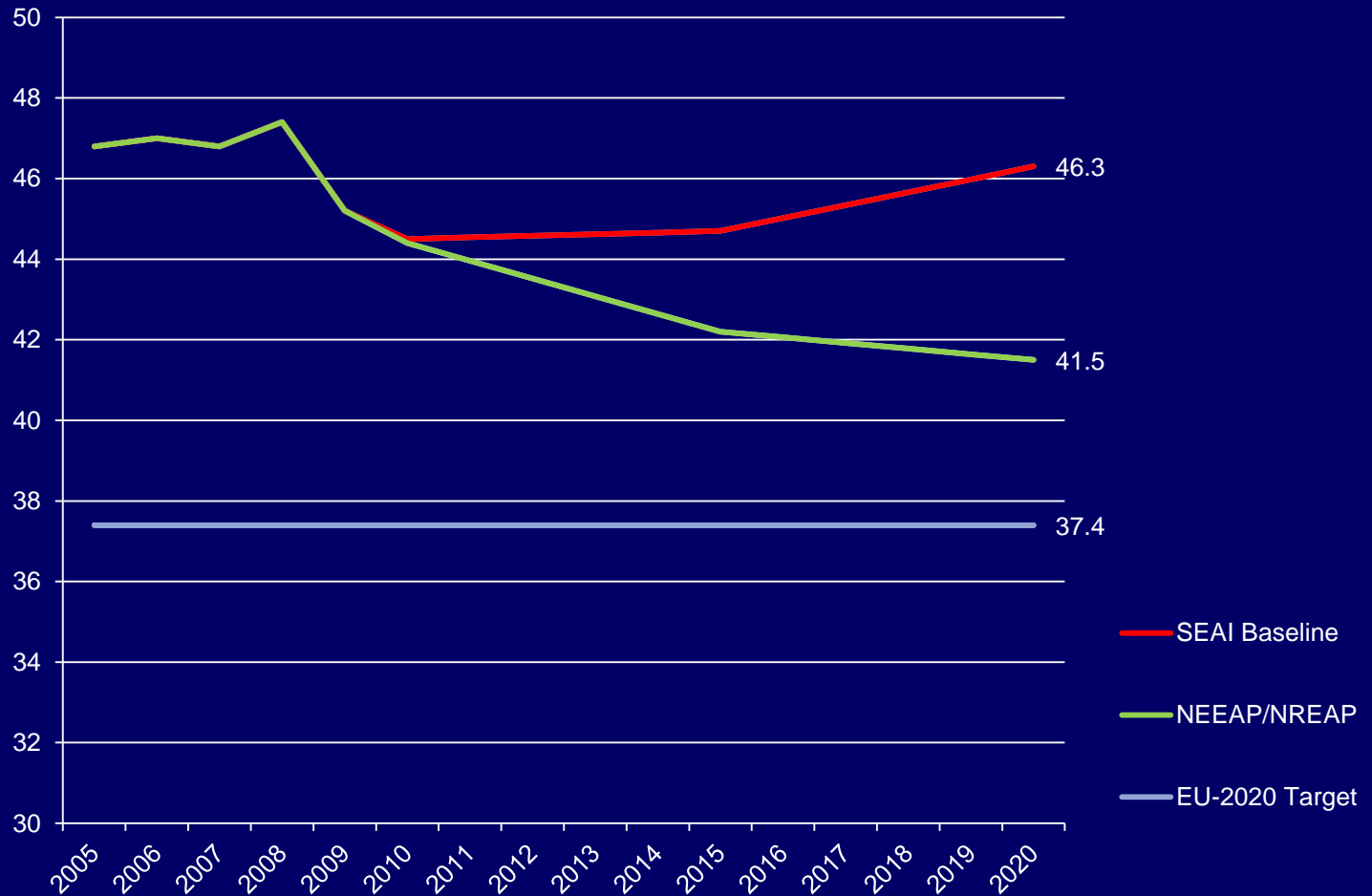




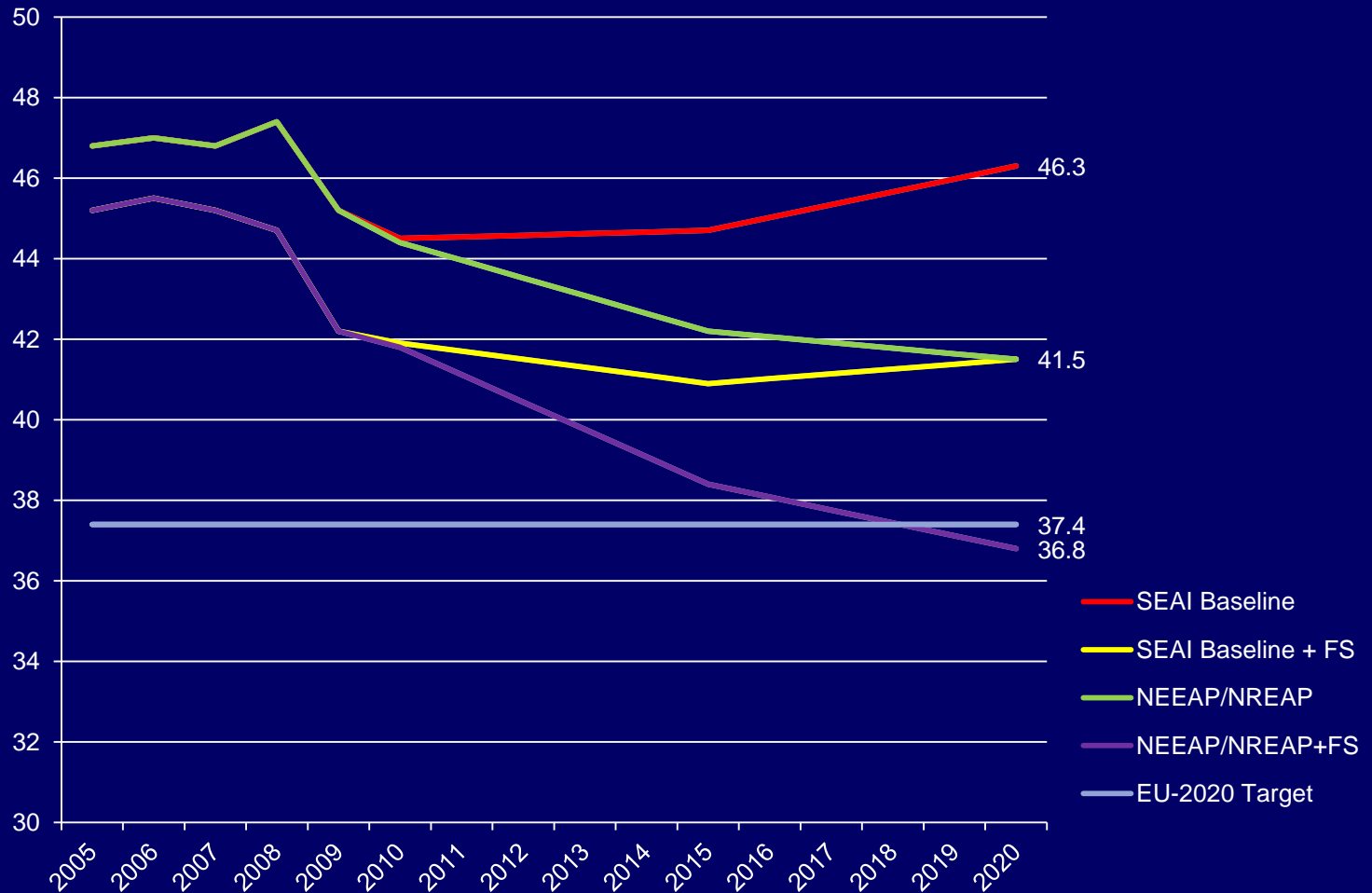
# EPA Projection Report 2010-2020

- *“Whilst the reduction in the distance to target [s]..is a positive outcome.. its occurrence is, primarily, a direct result of the current economic recession and economic outlook in the short term”*
- *“In order to meet future targets, Ireland cannot rely on a recession and needs to develop as a low carbon economy going forward”*

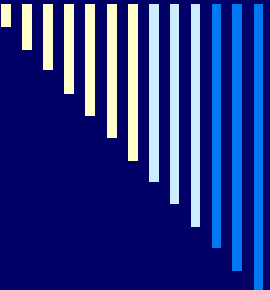
# Non-ETS Sector MtCO<sub>2</sub>e



# Inclusion of Forest Sinks?







# Adequacy of Current Climate Change Measures?

- Legislation related to Climate Change
  - 5 Acts, 8 S.I.'s
- National Climate Change Strategy
  - Challenge of cross-sector compliance?
  - Enforcement Mechanisms?
  - Climate Change Commission?
  - Annual Implementation Status Reports?
- Climate Change Bill 2010?



# Local Authorities Matter

- Local authorities are typically responsible for the construction, maintenance and operation of civil, social, economic and environmental infrastructure (United Nations, 1992)
- It is at the local level where greenhouse gas emission reductions and mitigation measures will ultimately take place (Kates *et al.*, 1998)
- Local Authorities are even identified as key actors in the NCCS



# Local Authorities Matter

- OLAM (2008) “*adopt a written climate change policy incorporating areas such as Energy Use, Housing/Building Projects, Waste Management, Transport, Planning Policies, Procurement Activities, Raising Awareness and other Statutory Functions...*”
- 1/3 of County Councils have dedicated climate change strategy
- Key agencies - potentially strong role to play yet no Climate Change Policy or strategy



# Barriers to Progress for LA's

- Allman et al. (2004)
  - 70% of English and Welsh LA's without dedicated CC Strategy
    - Lack of a statutory requirements/obligations
    - Accurate spatial energy use data unavailable



# Barriers for Irish LA's

- Davies (2005) *“Certainly the need for local actions for climate change must be given greater priority within Ireland, for an explicit discourse of climate change has yet to permeate local authority policy documents”*
- LA's and Agencies at the coal-face of policy dissemination



# Path to Progress?

- ICLEI's 5-Step Methodology
  - Conduct an Emissions Inventory
  - Establish a target,
  - Develop a local Action Plan,
  - Implement policies and measures and
  - Monitor and verify results.



# The Spatial Information Deficit-

- Laukkonen *et al.* (2009) - mitigation and adaptation not necessarily complementary
- Current methods for conducting cost-benefit analyses are likely to be overly onerous for poorly resourced authorities
- argues for a methodology/tool to help authorities in the decision making process



# Solving the Information Deficit

- Develop means of Spatially Modelling Multi-Sector GHG emissions at the HH level
- Baseline input for modelling the impacts of Policy implementation
- Allow national and local government to assess the likely effectiveness and distributive impacts of mitigation and adaptation policy options





# SMILE

- SMILE- Simulated Model of the Irish Local Economy
- Solves a practical data difficulty by using micro-simulation method called quota-sampling to spatially map socio-economic variable rich data sets to the Census SAPS totals. Farrell (2011) *forthcoming*



# How Does it Work?

## BASIC PRINCIPLE

CSO Census Data



(SAPS) Aggregate  
ED totals for HH  
no, age, sex  
education etc..



Fully Synthetic data  
set dis-aggregated  
to Ind/HH level

Micro-Simulation  
Technique

Target Totals  
for key  
variables in  
each ED



# Future Uses

- Enable us to model GHG at the local level providing greater information to LA's and Agencies
- Complement Efforts to develop sustainable household scenarios
- The achievement of sustainable living and consumption patterns which may provide the best strategy to breaking the link between GDP and GHG growth



Thank You

Questions?

[eoin.grealis@teagasc.ie](mailto:eoin.grealis@teagasc.ie)