The sustainability of Irish agriculture:

Credentials to date and the need for harmonised indicators

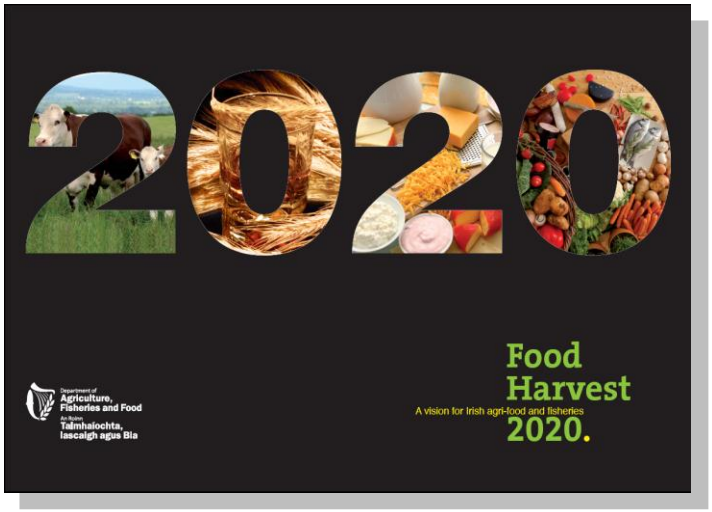



Dr Frank O'Mara, Director of Research, Teagasc

"Proof and Prospects: establishing agriculture's green credentials"

FH 2020: A brighter shade of green?

- Food Harvest 2020: industry-led strategy for agri-food sector
- Sustainability at heart of Food Harvest 2020
- Mainstreamed throughout agri-food sector
- Driven by consumer preferences / retailers
- International selling point (Bord Bia: Origin Green)



Act **smart**	Think **green**	Achieve **growth**
Prioritise R&D	Prioritise environmental protection	Increase the value of primary output in the agriculture and fisheries sector by €1.5 billion by 2020
Improve skill levels	Capitalise on natural advantages and resources	
Maximise adoption of best practice	Build environmental credibility through research and actions	
Foster creativity and entrepreneurship	Develop an umbrella 'Brand Ireland'	Increase value-added output by €3 billion by 2020
Rationalise and collaborate at industry level	Satisfy consumer requirements and preferences	
Improve focus on consumer preferences	Conserve biodiversity	
Review institutional support and regulatory burden	Align sustainability across the supply chain	Achieve an export target of €12 billion by 2020

What does sustainability mean?

A method of farming that is "future proof":

- as productive and efficient in 20 years time as it is today
- maintaining the countryside as a high-quality place to live and work

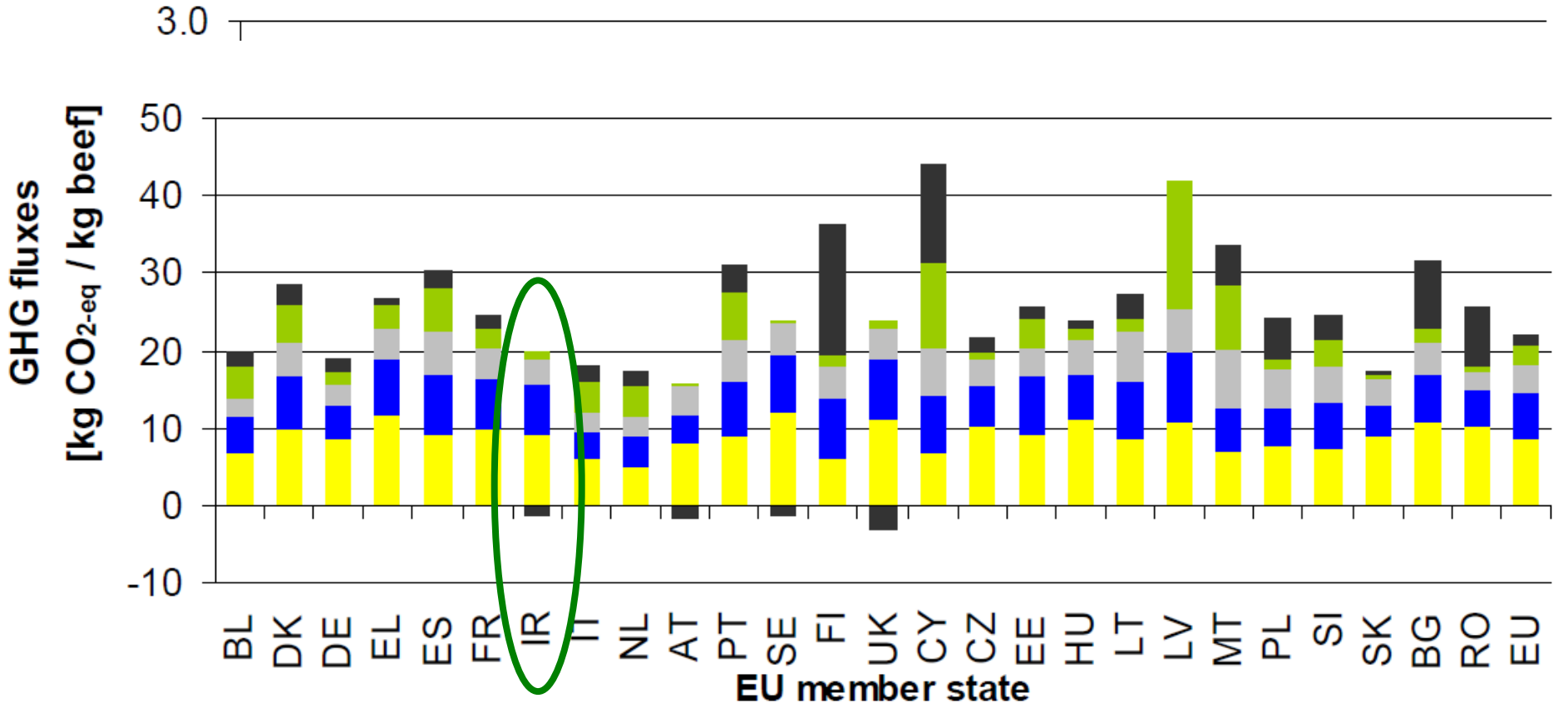
Sustainability means:

- Economic sustainability
- Social sustainability
- Animal Welfare
- Environmental sustainability

Ireland's comparative advantage

Good starting point…

- Lowest Carbon-footprint of milk in EU

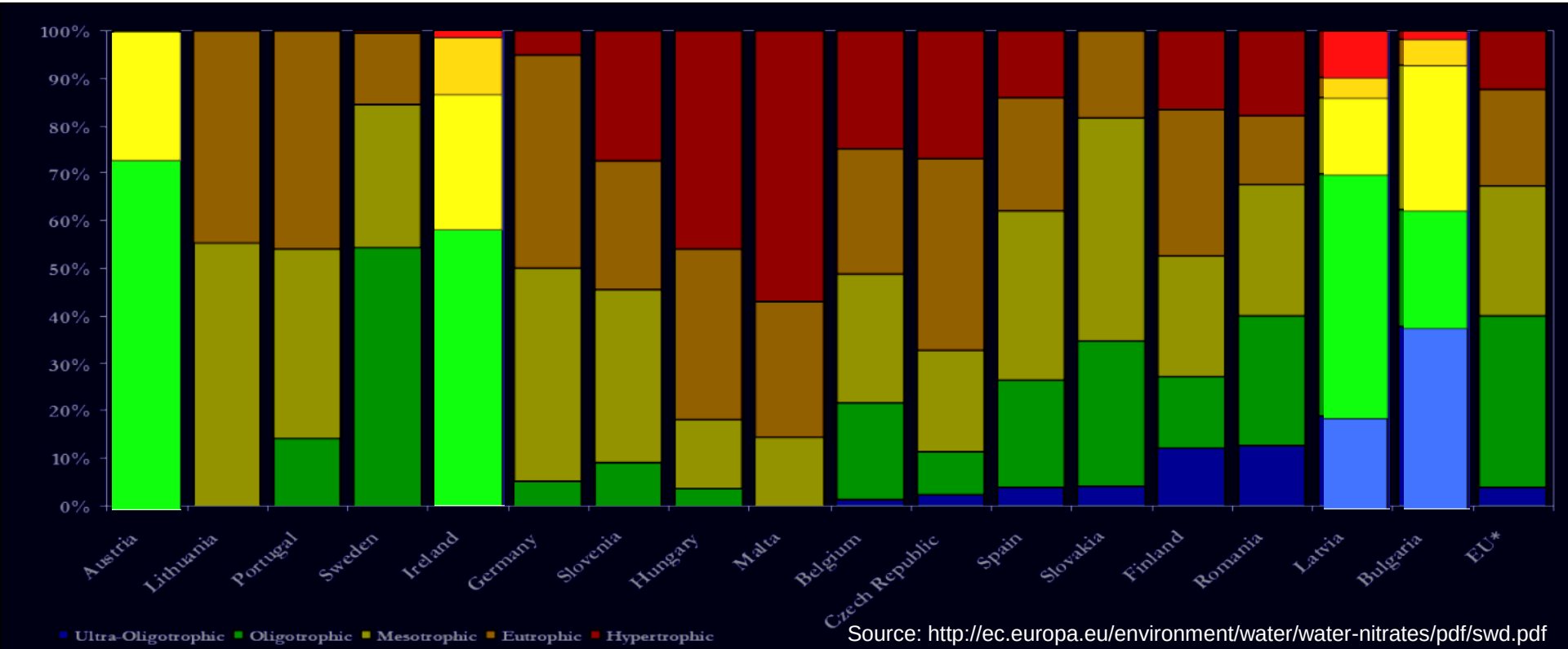


Source: http://ec.europa.eu/agriculture/analysis/external/livestock-gas/full_text_en.pdf

Ireland's comparative advantage

Good starting point…

- Lowest Carbon-footprint of milk in EU
- 5th lowest C-footprint of beef in EU
- 4th highest proportion of "good" water quality



Source: http://ec.europa.eu/environment/water/water-nitrates/pdf/swd.pdf

Ireland's comparative advantage

Good starting point…

- Lowest Carbon-footprint of milk in EU
- 5th lowest C-footprint of beef in EU
- 4th highest proportion of "good" water quality
- Most soils are high in organic matter
- Inherited rich biodiversity

Preliminary Teagasc study:

"In the short-term, it is possible to meet Food Harvest targets and environmental targets"

Ireland's comparative advantage

But targets are becoming increasingly stringent...

- Water Framework Directive: all waters must be of good quality, pristine waters must be maintained as pristine
- Nitrates Directive: Ireland must prove to Brussels that nitrates derogation does not harm the environment

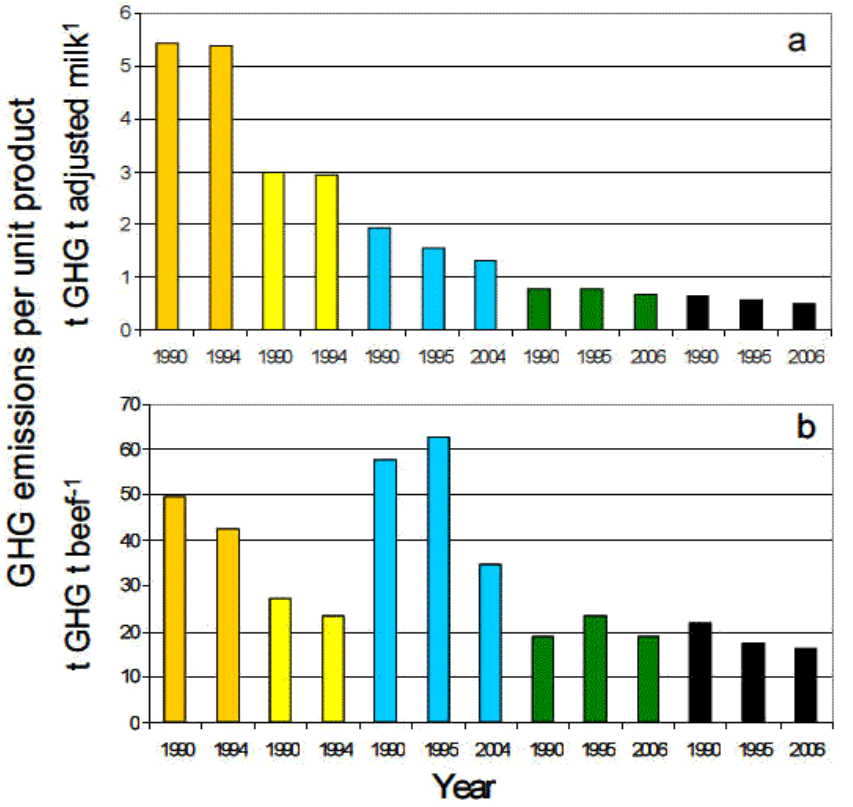
- Short-term (2020): increase production without increasing GHGs
- Long-term (2050): carbon-neutral agriculture? (NESC)

- Insufficient measures for protection of High Nature Value farmland outside designated areas

- GAEC regulations
- Pending Soil Framework Directive?

Ireland's comparative advantage

… and other countries are catching up…



Source: Lanigan *et al.*, 2008 www.teagasc.ie/publications/2008/20081110/reps2008_paper02.asp

"We must first <u>prove</u> Ireland's green credentials,

then <u>improve</u> them"

Teagasc key capabilities

Nutrient efficiency

Water quality

Greenhouse gases

Soil quality

Biodiversity

Environmental economics

Behavioural modelling

Staff

- Research Programme:
  - 26 researchers
  - >20 postgrads
  - >50 support staff
- KT: 5 Environmental Specialists
- 26 new Soils & Environment Advisors

Expenditure

2013: Total expenditure on sustainability = c. €10m

Teagasc approach

Sustainability = Efficiency

- Efficient use of resources = reduced losses + reduced cost
- Cost-effectiveness: which measures are most cost-effective?

Research + Knowledge Transfer

- Research (medium-term): develop new solutions
- KT (now): close the gap between the top 10% most efficient producers and the "peloton", using proven solutions

Knowledge Transfer

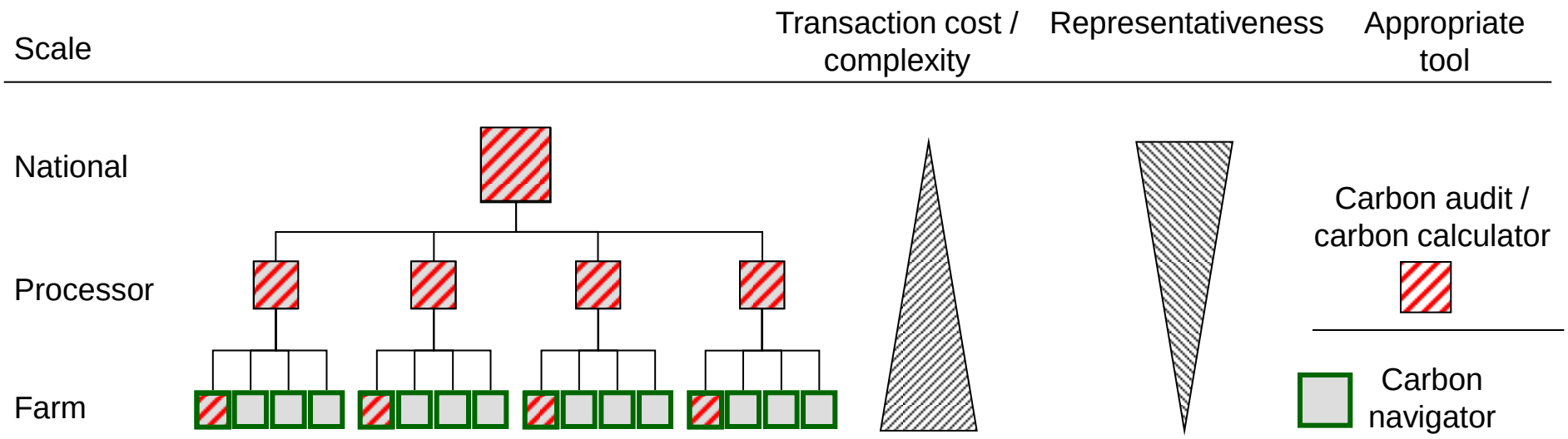
Proving Ireland's credentials
(Ex: Greenhouse Gases)

Linked into FAO partnership on environmental benchmarking

Teagasc is developing indicators of sustainability (e.g. carbon)

- National / processor level: developing methodology for sustainability assessments on representative sample of farms
- Farm level: focussed on practice adoption: the Carbon Navigator
- See Teagasc's briefing note on Carbon-audits: www.teagasc.ie/publications/submissions.asp

Feeding in to Bord Bia Quality Assurance Schemes



Collaboration

- Sustainability is a big challenge – involves full agri-food chain

- Requires coherent approach by all actors in agri-food industry

- Teagasc collaboration with:
  - Universities (Ireland and abroad)
  - Departments
  - State Agencies: Bord Bia, EPA
  - International bodies: FAO, EU, JRC, Global Research Alliance, FACCE-JPI
  - Stakeholders
  - Industry (in Ireland and abroad)

Objectives for today

Morning: "Proof"

What indicators are developed at:

- farm level
- national level
- international level

How can we ensure that these indicators are coherent and representative?

Afternoon: "Prospects"

What is the role of agriculture's "green credentials" in growing the industry?

What will agriculture look like by 2030?

How is Teagasc responding to this in training the next generation of farmers?