

# Managing risks to the Environment from Agriculture



Mr. Joe Crockett

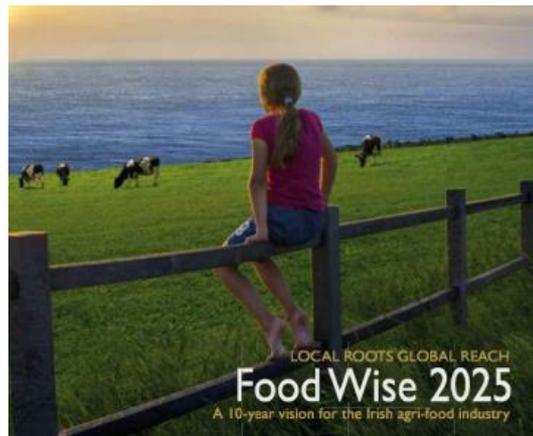
8 December 2017

# Overview

- Economic context,
- Water quality nutrient concentrations and trends,
- Water quality summary position,
- New collaborative approach to sustainability,
- EU climate change requirements, and need for new approach.

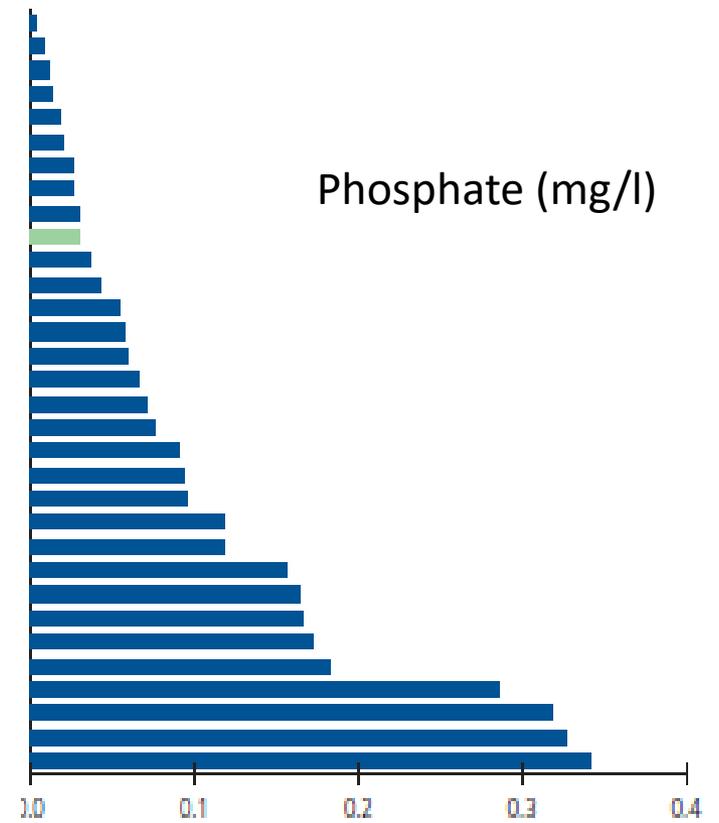
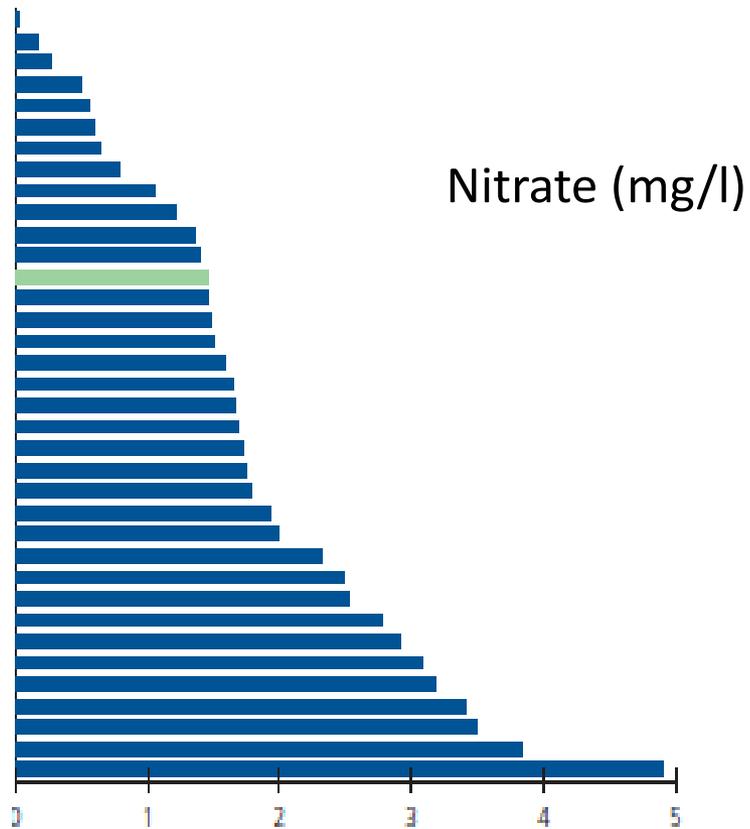
# Agri- Food in Ireland

- The agrifood sector supports **300,000** jobs in rural communities in Ireland and is the largest indigenous industry with food and drink exports reaching nearly €11.5bn in 2016, and are estimated to reach over **€12bn in 2017**.



# Nitrate and phosphate concentrations in Irish rivers in a European context

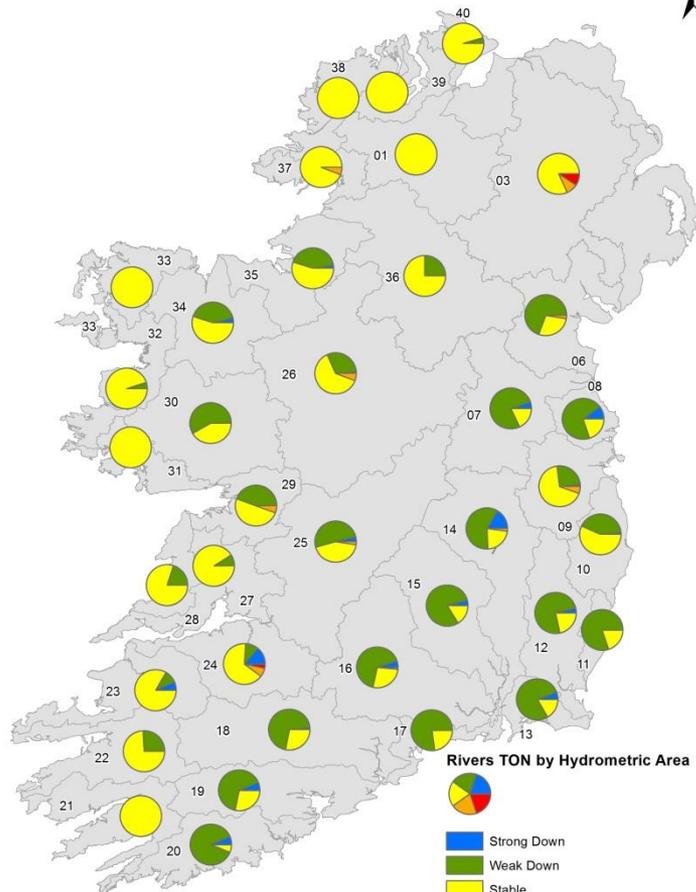
Countries





# Regional trends in phosphorus and TON concentrations in rivers (2006 - 2015)

TON Trend Rivers (2006-2015) per Hydrometric Area



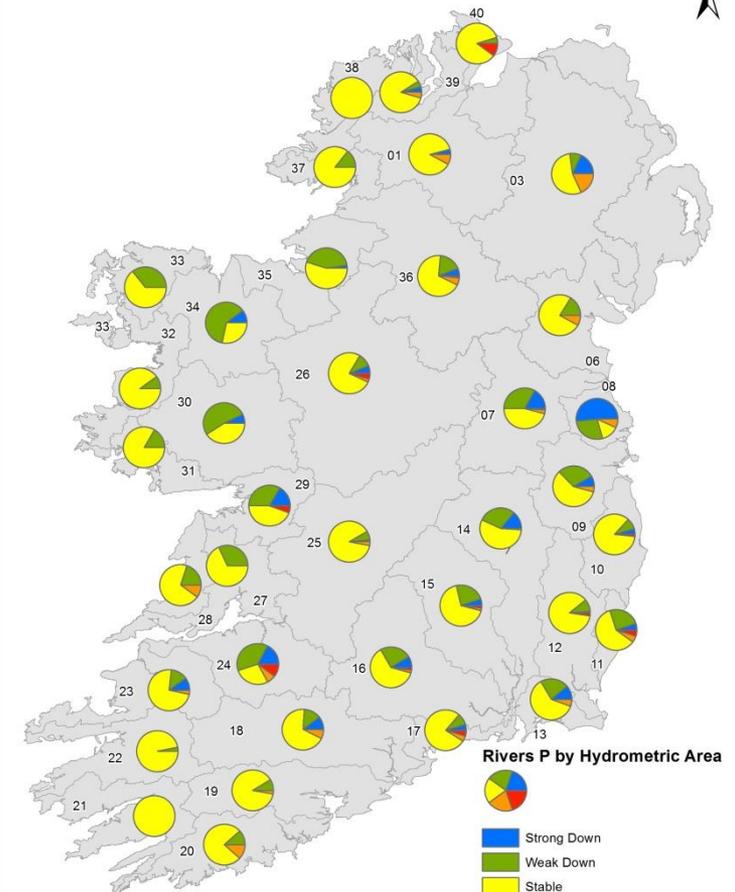
0 25 50 100 Km

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N  
←

P  
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P Trend Rivers (2006-2015) per Hydrometric Area



0 25 50 100 Km

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# Water Quality Summary

- Water quality is generally good overall compared to the rest of Europe. Agriculture is a significant pressure on water quality in some areas, although not the only one.
- Major dairy expansion under way – pasture based, 300,000 extra cows in past 4 years. EU legal requirements re good water standards must be met.
- Ireland needs a new innovative approach to sustainability that compliments the regulatory regime.
- Collaboration between public and private bodies, and farmers, is essential
- The dairy sector is committed to achieving environmental and economic sustainability which are inter-related;
  - Dairy Sustainability Initiative (resourcing, working in partnership, internal change programme and communications strategy).
  - Piloting and expansion of best environmental practices, promotion of the new regulatory and developmental approaches.
- There are both environmental and economics gains to be had with the collaborative approach. Irish grassland at 10% peak fertility, significant room to improve,

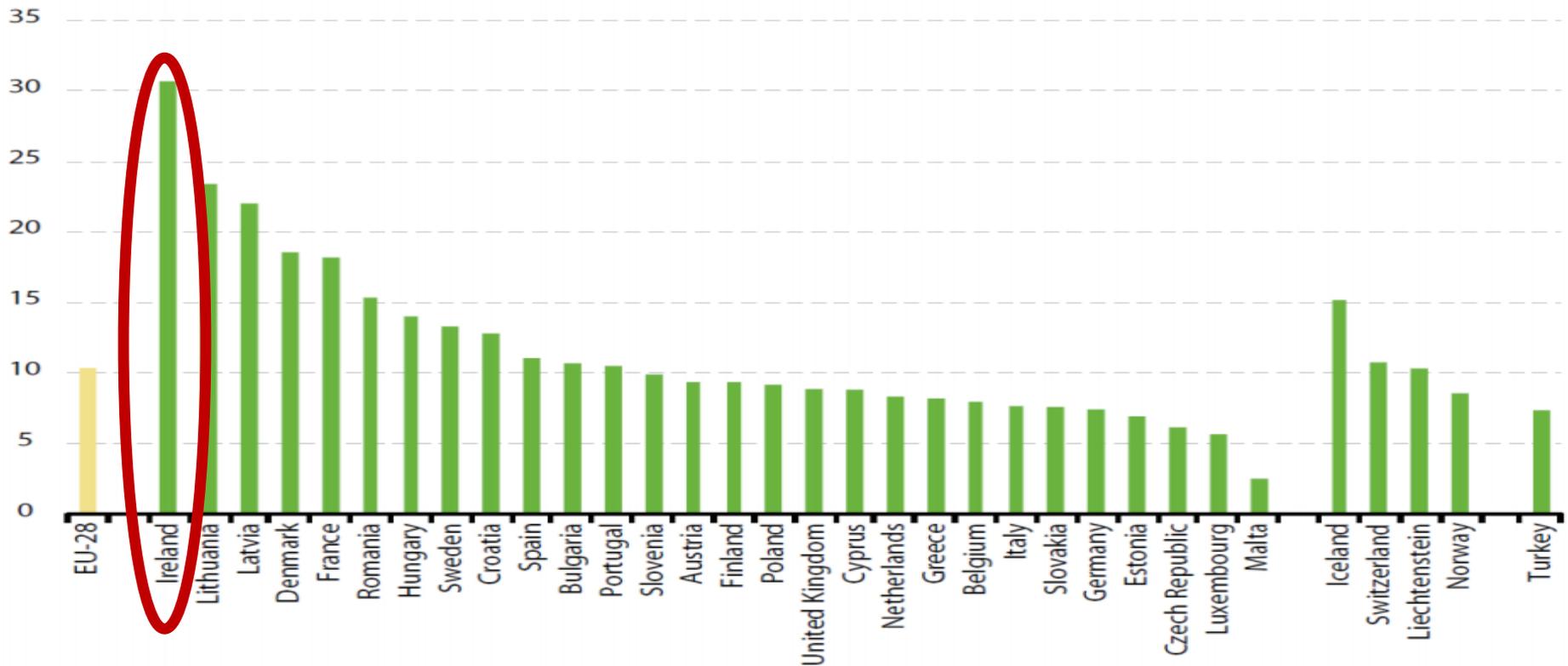
# A new and innovative approach

- Whole-of-government and whole-of-sector response to challenges,
- Sustainability Support and Advisory Programme for farmers set up Nov 17,
- Aimed at driving behavioural change towards best sustainable practices,
- Prioritised risk Critical Source Areas (CSAs) on farms,
- Purpose is to protect and improve water quality contributing to meeting obligations under EU law - the Nitrates Directive and Water Framework Directive,
- National Policy Expansion goals/Foodwise 2025 goals must be managed responsibly and sustainably to achieve these objectives.
- Can new technological approaches help achieve these environmental and economic objectives re Nutrient Mgt generally and in Critical Source areas?

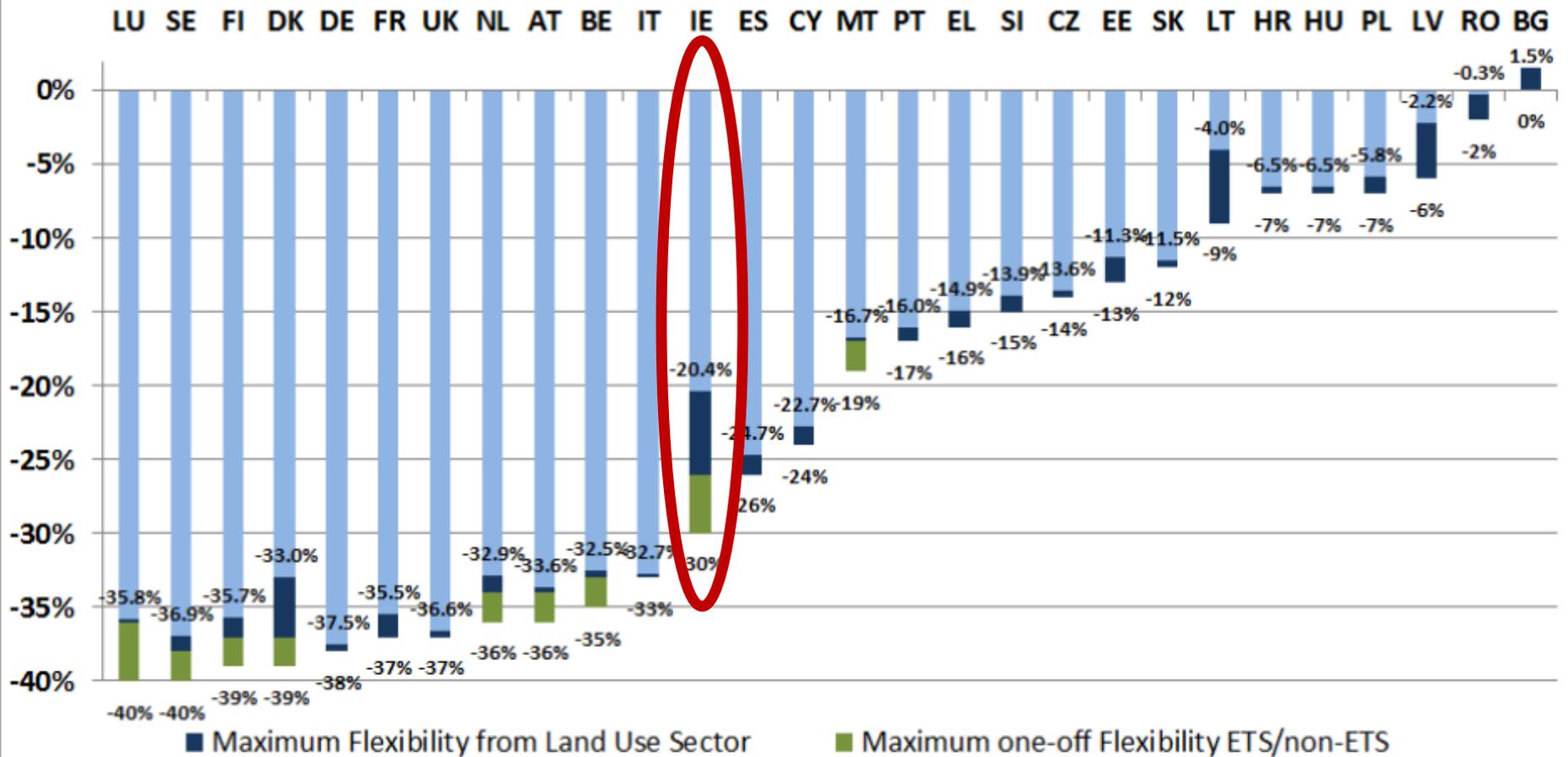
# Agriculture emissions



**Figure 5.17:** Greenhouse gas emissions from agriculture, 2012  
(% of total greenhouse gas emissions)



# ESR targets and maximum one-off ETS/non-ETS and land use flexibilities



# EU Climate Change Requirements

- Agriculture remains the largest contributor to Irelands overall emissions at 32% of the total, with transport and energy industries the next largest contributors at 20% and 21% respectively. (No heavy industry in Irl compared to EU)
- Agriculture emissions increased by 2.7% in 2016 reflecting the expansion of the dairy herd post quotas with dairy cow numbers increasing by 22% and milk production by 27% over the 2012-2016 period. Significant dairy efficiencies per litre, low carbon footprint compared to EU.
- Significant new approaches needed.
- What can Technology offer?



# EU Climate Change Requirements

- New approaches potentially as follows:- new focus on on-farm renewables, additional forestry and bio-mass, protected urea rather than CAN fertilizer use, new grass types re lower methane, co-benefits from improved nutrient mgt, additives to diets, more needed
- Technological solutions welcome.

