



The gaseous emissions profile for the island of Ireland

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Project Background

Sustainable Nitrogen Fertiliser
Use & Disaggregated
Emissions of Nitrogen

- Expansion of Irish Agriculture (demand & quota)
 - Food Wise/Going for Growth increase production
 - Increasing costs
- Sustainable expansion (2030)
 - Greenhouse gases -30%
 - Ammonia emissions -5%
- Greenhouse gases
 - Methane CH_4
 - Nitrous Oxide N_2O
- Ammonia Emissions
 - NH_3 atmospheric pollutant
 - Also source of indirect N_2O emissions



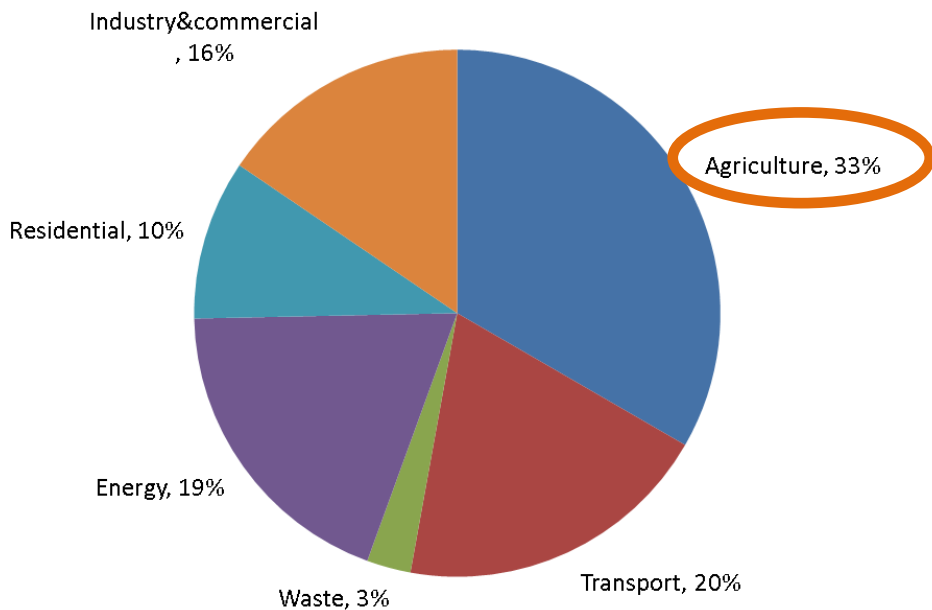
Data source: EPA, 2015

Data source: DEFRA, 2015

GHG emissions

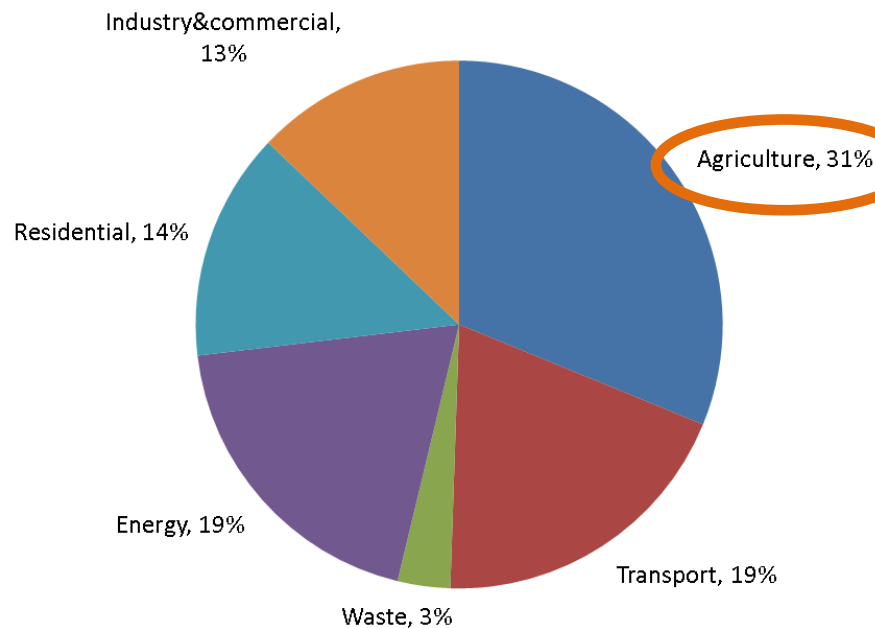
Sustainable Nitrogen Fertiliser
Use & Disaggregated
Emissions of Nitrogen

Republic of Ireland



CH₄=59% N₂O=33% CO₂=8%

Northern Ireland



CH₄=58% N₂O=34% CO₂= 8%

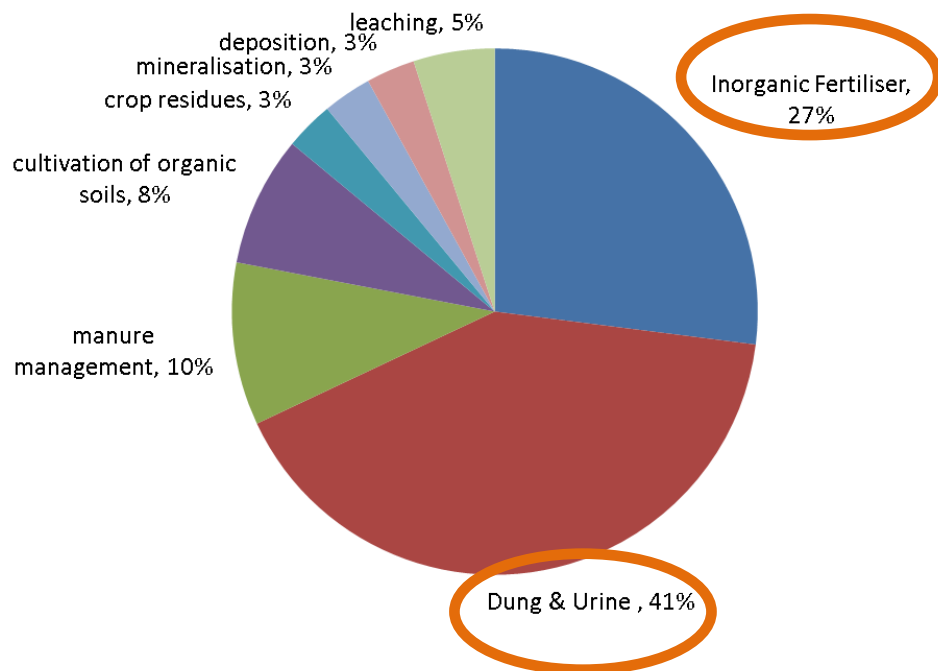
Data source: EPA, 2015

Data source: DEFRA, 2015

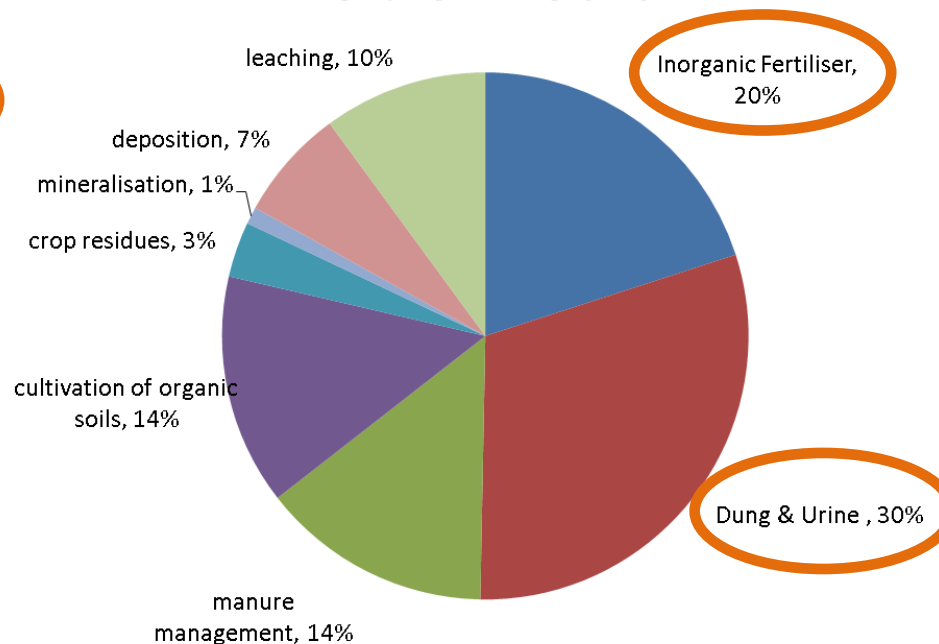
National N₂O

Sustainable Nitrogen Fertiliser
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Northern Ireland



Fertiliser+Dung/Urine 68%

50%

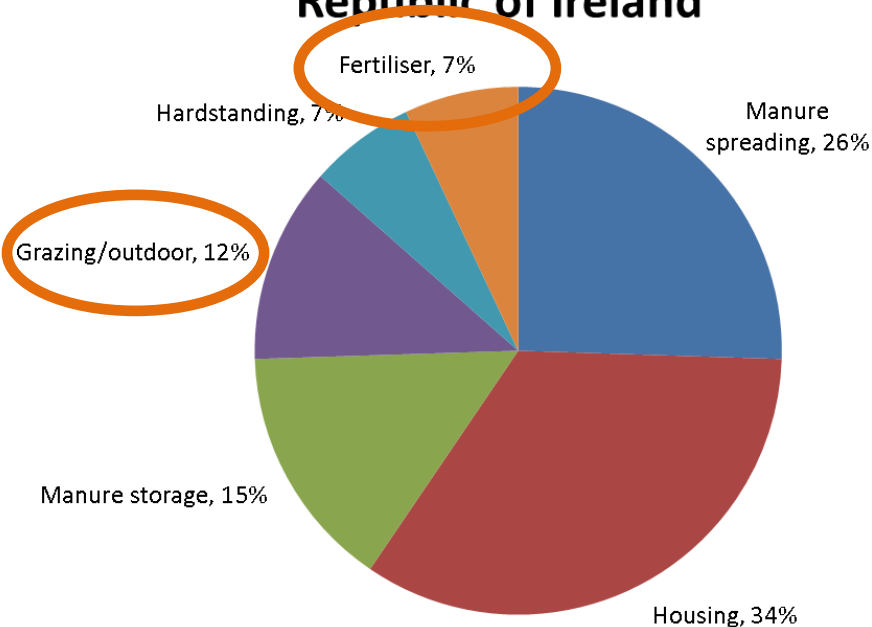
Data source: EPA, 2015

Data source: DEFRA, 2015

National NH₃

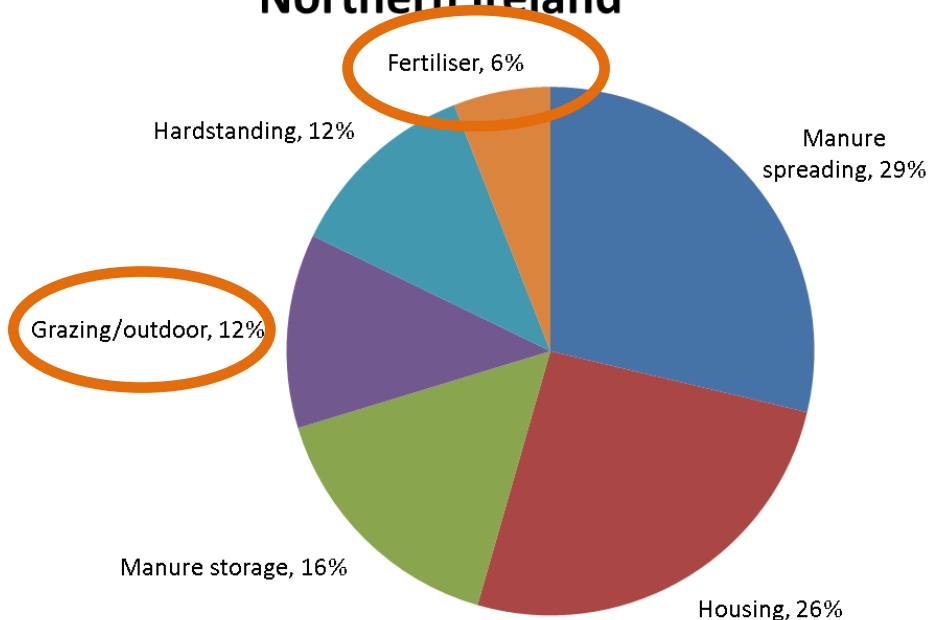
Sustainable Nitrogen Fertiliser
Use & Disaggregated
Emissions of Nitrogen

Republic of Ireland



Fertiliser+Dung/Urine 19%

Northern Ireland



18%

Data source: EPA, 2015

Data source: DEFRA, 2015

Project Objectives

- Refine N₂O Emission Factors
 - Fertiliser
 - Dung/urine
 - Soil type/land-use
- Test mitigation measures
 - Fertiliser formulation
 - Urine (Season)
 - Soil type
- Assess impact on
 - Agronomic Yield
 - NH₃ emissions



Thank you for your attention

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