



Rialtas na hÉireann
Government of Ireland



Irish Government Economic and Evaluation Service

Supporting evidence informed policy-making: Examples of analytical work on environmental policy

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Overview



IGEES

Frameworks

- Public Spending Code
- Green Budgeting

Policy analysis

- Taxation
- EVs
- Agri-environmental schemes (BDGP, GLÁS)

IGEES



- Established 2012
- Integrated cross-government service
- Evidence informed policy making
- Capacity building: Skills, data and analysis
- 200+ analysts in 17 Departments
- 300+ papers

Frameworks: Public Spending Code



- Set of rules and procedures for spending public money
- Guidance in relation to the economic appraisal and evaluation of public expenditure and policies
- Consistency in terms of central technical appraisal parameters
- Parameters review
- Literature and international practice review, empirical evidence

Social Discount rate

- Social Rate of Time Preference methodology (time preference, elasticity of the marginal utility of C, annual growth in C),
- Social Discount Rate set at 4% (1 pp decrease)
- Declining term structure over long time horizons 2.5% after 100 years – environmental impact

Frameworks: Public Spending Code



Shadow price of carbon

- Used to monetise the value of emissions from the “basket of seven” GHGs (expressed in) CO₂e
- Estimates based on the abatement cost values needed to reach the climate targets (the National Mitigation Plan estimated abatement costs for the energy sector)
- New shadow price of carbon for non-ETS emissions of €32 per tonne in 2020, rising by €6.80 a year to reach €100 per tonne by 2030 (ETS emissions in 2019: €23.60)
- Given uncertainty, shadow price of carbon beyond 2030 to rise by 5% a year (€265 in 2050)

Frameworks: Green Budgeting



An Introduction to the Implementation of Green Budgeting in Ireland

- Paris Agreement (UNFCCC): national policy frameworks and financial flows aligned with low GHG emissions and climate-resilient development
- DPER: implementation of green budgeting through the budgetary and estimates process
- Green budgeting: use of the budgetary system to promote and achieve improved environmental outcomes
- Recognition that budgetary process is not a neutral process; reflects societal choices re resource allocation
- Iterative process which will take place over several budgetary cycles
- First step: 2019 Exchequer climate-related expenditure identified and published
- *Climate-related: Any expenditure which promotes, in whole or in part and whether directly or indirectly, Ireland's transition to a low carbon, climate-resilient and environmentally sustainable economy*
- Climate-related expenditure estimated at over €1.6 billion 2019
- Includes funding for energy efficiency, agri-env. schemes, public transport and flood risk management
- Ongoing basis: The Revised Estimates for Public Services Volume

Policy analysis: Taxation



- Joint Research Programme – DF and ESRI
- *The economic and distributional impacts of an increased carbon tax with different revenue recycling schemes (2020)*
 - *Tax alone not sufficient to achieve EU emissions targets*
 - *Subject to the revenue recycling measure chosen*
 - *Recycling through transfers reduces the regressive impacts of carbon tax*
- I3E model (Ireland Environment, Energy and Economy) – ESRI, DF and DCCAEE
 - *Tool to analyse climate policy in terms of environmental and economic impacts*
 - *The Impacts of Removing Fossil Fuel Subsidies and Increasing Carbon Tax in Ireland*
- *DFAgri-taxation Review*
- *Review of the Accelerated Capital Allowance scheme for Energy Efficient Equipment*

Policy analysis: Taxation



The Use of Carbon Tax Funds 2020

- Details the use of the additional revenues raised by the €6 increase in the Carbon Tax announced in Budget 2020
- Additional €90m in revenue in 2020
 - *Protecting the vulnerable (fuel allowance, energy poverty efficiency upgrades),*
 - *A just transition (household upgrade, peatlands restoration, just transition fund);*
 - *Investing in low carbon transition (greenways/urban cycling, EV grants, charging infrastructure, green agricultural plots)*
- Ex-ante performance metrics for programmes in receipt of additional funding via the carbon tax increase; links with SDGs
- Ex-post assessment against performance metrics intended for inclusion in the Revised Estimates for Public Services

Policy analysis: Electric Vehicles



Incentives for personal Electric Vehicle purchase, Spending Review 2019

- Climate Action Plan - target of 840,000 passenger electric vehicles (EVs) by 2030
- €200m allocated in Project Ireland
- Supports: purchase grant, VRT relief, toll incentive, charger grant, reduced motor tax)
- Average EV direct subsidy estimated between €10,141 and €13,616
- Expenditure increases accelerating
- Estimated cost for every 100,000 new EVs: €1.14 - €1.36 billion
- Estimated reduction in revenues (motor tax, VAT and fuel tax): €1.5 billion by 2030 (DTTAS estimates out to 2050)
- Regressive: tend to benefit the wealthier in society
- Challenge regarding sustainability, as well as cost relative to other measures for reduction in GHGs

Policy analysis: Beef Data Genomics



Beef data genomics Programme, Spending Review 2019

- One of sustainability actions under the Rural Development Programme (RDP) 2014-2020, EU CAP
- Objectives :
 - *To improve the genetic merits of the national beef herd through the collection of data and genotypes*
 - *To lower the intensity of GHG emissions by improving the quality and efficiency of the national beef herd*
- A centralised database and genomics based index (Euro star rating system)
- Animals are ranked according to their efficiency on a scale of 1 to 5
- Improvement of existing herds by replacing cattle of lower genetic merit (i.e. 1 or 2 stars) with higher (4 or 5 stars)
- The proportion of higher rated animals in the national herd has increased
 - *Reduction in calving interval days (-20 days);*
 - *Increase in the number of calves per cow per year (+0.08)*
 - *Increased share of births with known sire (+8%) and AI bred (+2%)*
 - *Less CO₂ emissions per animal*

Policy analysis: GLÁS



The Green, Low-carbon Agri-environment Scheme SR 2019

- Payment based agri-environment scheme under RDP 2014-2020
- €232 million in 2018 with 48,800 participants
- Average payment €4,204 (2017)
- Highest take-up among lower output farms: sheep farms (52%); dairy farms (13%)
- Dairy farms more environmentally impactful: highest GHG emissions (8.6 t CO₂e/ha); surplus of N in the soil (171 kg/ha)
- Attracts lower output (e.g. non-dairy farms) farms as a source of non-market income
- Low additionality (20%-67%): some actions already in place
- Network of green schemes: Basic Payment Scheme (BPS), Greening Payment, GLAS
- Additional impact of the individual schemes difficult to measure

Conclusion



- Complex policy area
- Myriad of policy interventions
- Importance of policy analysis