

Irish Sovereign Green Bonds Syndication Announcement January 2023



Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

Irish Sovereign Green Bonds (ISGBs)

Green Bond Framework

- [Framework](#) approved by Government decision in 2018.
- Based on ICMA Green Bond Principles – use of proceeds model
- Governed by a Working Group of government departments chaired by the Department of Finance
- Compliance reviews and [Second Party Opinion](#) by Sustainalytics
- Four annual allocation reports and three annual impact reports published to date



Existing ISGB – 1.35% 18 March 2031

Allocation Summary - €7.34bn allocated to eligible green projects since launch in 2018

- €6.85bn nominal outstanding (€7.34bn cash equivalent)
- All proceeds raised have been fully allocated as per table:

| Year | 2017/8 | 2019 | 2020 | 2021 |
|--|---------------|---------------|---------------|---------------|
| Starting balance (1) | Nil | 1,034,361,382 | 1,317,704,382 | 197,572,652 |
| Proceeds from sales of ISGBs (2) | 2,983,410,000 | 2,252,380,000 | 1,268,980,270 | 838,844,500 |
| Total proceeds for allocation (3) (1 + 2) | 2,983,410,000 | 3,286,741,382 | 2,586,684,652 | 1,036,417,152 |
| Allocations to eligible green projects (4) | 1,949,048,618 | 1,969,037,000 | 2,389,112,000 | 1,036,417,152 |
| End year balance (3- 4) | 1,034,361,382 | 1,317,704,382 | 197,572,652 | Nil |
| Nominal Outstanding at year-end | 3,000,000,000 | 5,000,000,000 | 6,100,590,000 | 6,848,090,000 |



New ISGB

Builds out the ISGB curve

- To be launched in the near future
- Based on the existing ISGB Framework
- Approximately €1.5bn of lookback available for 2021
- At least €2.5bn of allocations available for 2022.
- Expected at least €2.5bn of allocations will be available in 2023



Highlights - Recent Allocation & Impact Reports

Sample impacts from allocations made to projects in 2020

➤ Built Environment/ Energy Efficiency

- Energy saving (GigaWattHours) : 156
- Number of homes renovated : 19,086
- EV home charger grants provided: 2,523

➤ Clean Transportation

- Number of public transport passenger journeys: 137.7 million
- Greenway users: 725,191
- Take-up of Grant Schemes/ Tax foregone provided (number of vehicles) : 24,122

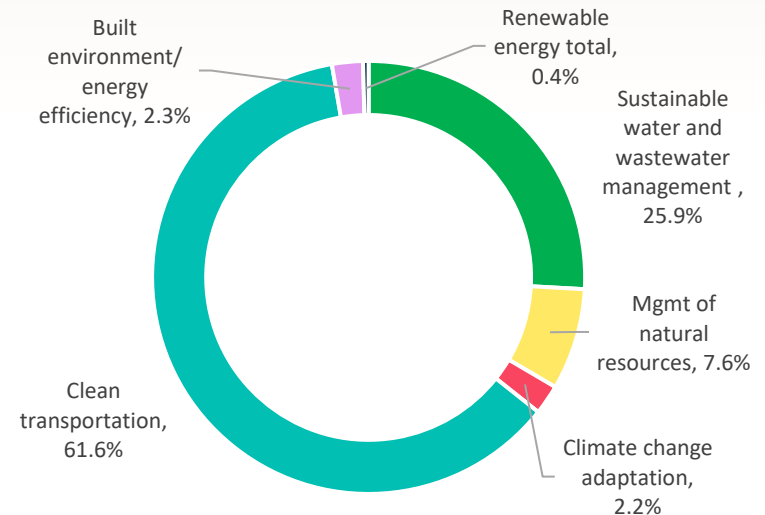
➤ Climate Change Adaptation

- 16 major Flood relief projects at planning, development or construction phase.
- 8,296 properties protected on completion



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Allocation of ISGB proceeds 2021

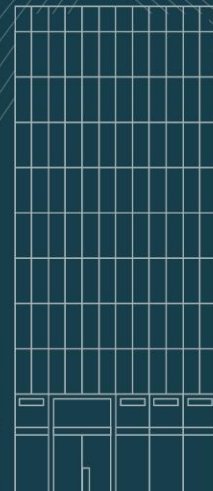
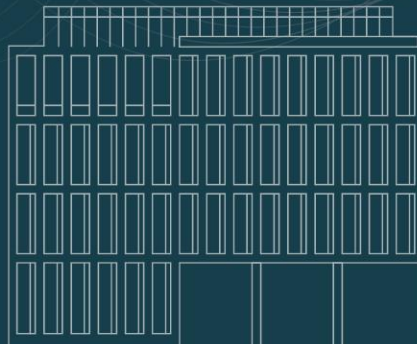


ESG - Appendix

Issuance & government policy
demonstrate Ireland's green commitment



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Ireland's Climate Action Plan 2023

[Click here for link to CAP 2023](#)

The Six Vital High Impact Sectors

Powering renewables

75%

reduction in emissions
by 2030

We will facilitate a large-scale deployment of renewables that will be critical to decarbonising the power sector as well as enabling the electrification of other technologies.

Accelerate the delivery of onshore wind, offshore wind, and solar.

Dial up to 9 GW onshore wind, 8 GW solar, and at least 7 GW of offshore wind by 2030 (with 2 GW earmarked for green hydrogen production).

Support at least 500 MW of local community-based renewable energy projects and increased levels of new micro-generation and small-scale generation.

Phase out and end the use of coal and peat in electricity generation.

New, dynamic Green Electricity Tariff will be developed by 2025 to incentivise people to use lower cost renewable electricity at times of high wind and solar generation.

Building better

commercial/public
45% residential
40%

reduction in emissions
by 2030

We will increase the energy efficiency of existing buildings, put in place policies to deliver zero-emissions new builds and continue to ramp up our retrofit programme.

Ramp up retrofitting to 120,000 dwellings to BER B2 by 2025, jumping to 500,000 by 2030.

Put heat pumps into 45,000 existing and 170,000 new dwellings by 2025, up to 400,000 existing and 280,000 new dwellings by 2030.

Generation up to 0.8 TWh of district heating by 2025 and up to 2.5 TWh by 2030.

Turning transport around

50%

reduction in emissions
by 2030

We will drive policies to reduce transport emissions by improving our town, cities and rural planning, and by adopting the Avoid-Shift-Improve approach: reducing or avoiding the need for travel, shifting to public transport, walking and cycling and improving the energy efficiency of vehicles.

Change the way we use our road space.

Reduce the total distance driven across all car journeys by 20%.

Walking, cycling and public transport to account for 50% of our journeys.

Nearly 1 in 3 private cars will be an Electric Vehicle.

Increase walking and cycling networks.

70% of people in rural Ireland will have buses that provide at least 3 trips to the nearby town daily by 2030.

Making family farms more sustainable

25%

reduction in emissions
by 2030

We will support farmers to continue to produce world-class, safe and nutritious food while also seeking to diversify income through tillage, energy generation and forestry.

Significantly reduce our use of chemical nitrogen as a fertilizer.

Increase uptake of protected urea on grassland farms to 90-100%.

Increase organic farming to up to 450,000 hectares, the area of tillage to up to 400,000 ha.

Expand the indigenous biomethane sector through anaerobic digestion, reaching up to 5.7 TWh of biomethane.

Contribute to delivery of the land use targets for afforestation and reduced management intensity of organic soils.

Greening business and enterprise

35%

reduction in emissions
by 2030

We're changing how we produce, consume, and design our goods and services by breaking the link between fossil fuels and economic progress. Decarbonising industry and enterprise is key to Ireland's economy and future competitiveness.

Reduce clinker content in cement and substitute products with lower carbon content for construction materials, ensuring 35% reduction in emissions by 2030 (against 2018).

Reduce fossil fuel use from 64% of final consumption (2021) to 45% by 2025 and further by 2030.

Increase total share of heating to carbon neutral to 50-55% by 2025, up to 70-75% by 2030.

Significantly grow the circular economy and bioeconomy.

Changing our land use

Exact reduction
target for this
sector is yet
to be determined.

The first phase of the land use review will tell us how we are using our land now. Then, we can map, with evidence, how it can be used most effectively to capture and store carbon and to produce better, greener food and energy.

Increase our annual afforestation rates to 8,000 hectares per annum from 2023 onwards.

Rethink our Forestry Programme and Vision. Promote forest management initiatives in both public and private forests to increase carbon sinks and stores.

Improve carbon sequestration of 450,000 ha of grasslands on mineral soils and reduce the management intensity of grasslands on 50,000 ha of drained organic soils.

Rehabilitate 77,600 hectares of peatlands.



Climate Action Legislation

The Climate Action & Low Carbon Development Act 2021 aims for Net Zero by 2050

Climate Action & Low Carbon Act:

- Carbon Budgeting: The Act embeds the process of carbon budgeting into law. It requires Government to adopt a series of economy-wide-five-year carbon budgets.
- 51% reduction: First carbon budgets will aim for a reduction of 51% of emissions by 2030.
- Climate Action Strategy: A national plan will be prepared every five years and actions for each sector will be update annually.
- All of Government approach: Local authorities are required to prepare a Climate Action Plan and public bodies obliged to conduct their functions in line with the national plan.

Carbon Budgets & Sectoral Ceilings

| Budget Period | 2021-2025 | 2026-2030 | 2031-2035 (provisional) |
|--------------------------|-----------|-----------|----------------------------|
| MtCO ₂ eq | 295 | 200 | 151 |
| Average Annual Reduction | 4.8% | 8.3% | 3.5% |

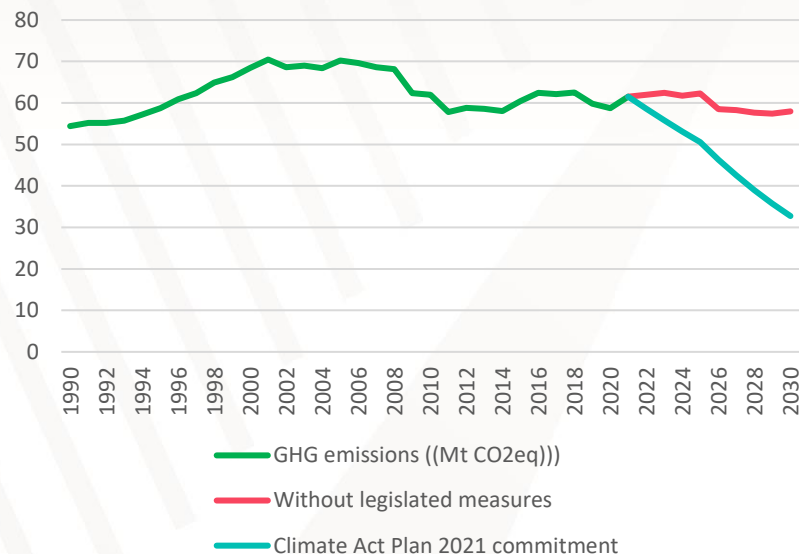
| Sector | % Reduction by 2030 relative to 2018 | GHG emissions 2030 Ceiling |
|-----------------------------------|---|-------------------------------|
| Electricity | 75% | 3 MtCO ₂ eq |
| Transport | 50% | 6 MtCO ₂ eq |
| Buildings (Commercial and Public) | 45% | 1 MtCO ₂ eq |
| Buildings (Residential) | 40% | 4 MtCO ₂ eq |
| Industry | 25% | 4 MtCO ₂ eq |
| Agriculture | 25% | 17.25 MtCO ₂ eq |
| Other* | 50% | 1 MtCO ₂ eq |



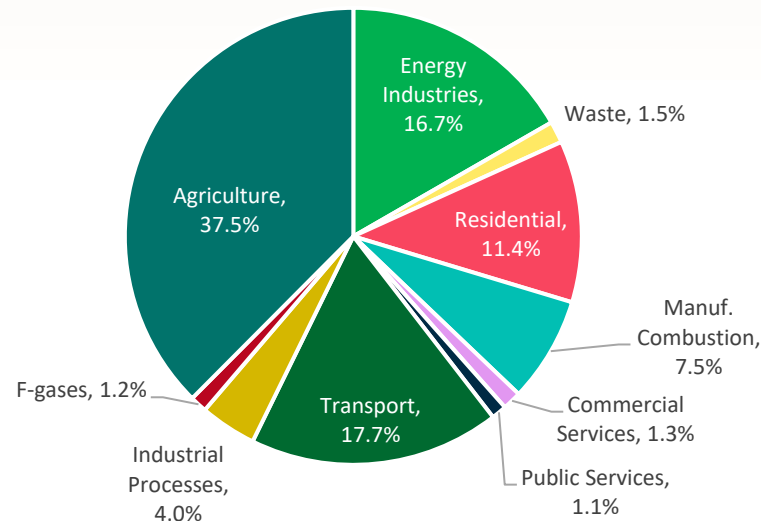
Ireland's Greenhouse Gas emissions

State of Play – emissions rose in 2021 after fall in Covid year

Ireland's emissions fell post financial crisis – but significant progress needs to be made by end of decade



Emissions from agriculture make up a significant portion of the total In Ireland (c. 10% in EU and US)



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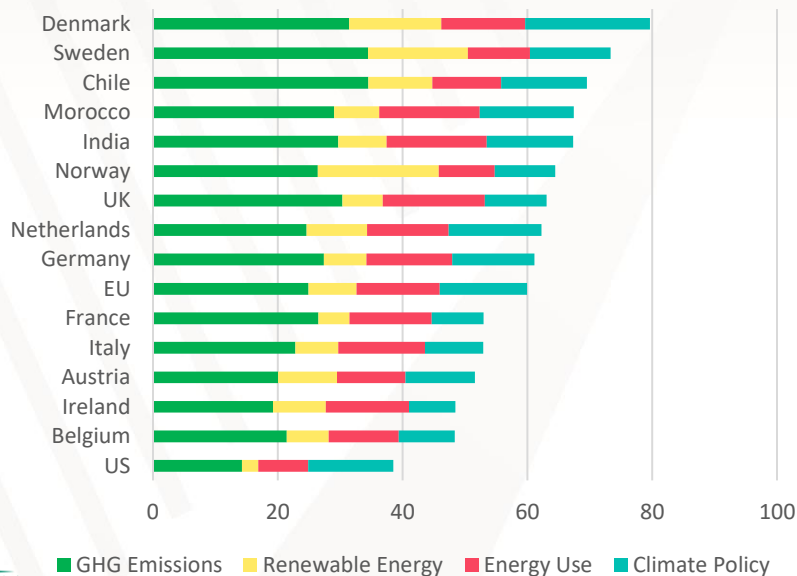
Source: Environment Protection Agency (Ireland), Climate Action Plan 2021

Note: Metric used is million tonnes carbon dioxide equivalent (Mt CO2eq)

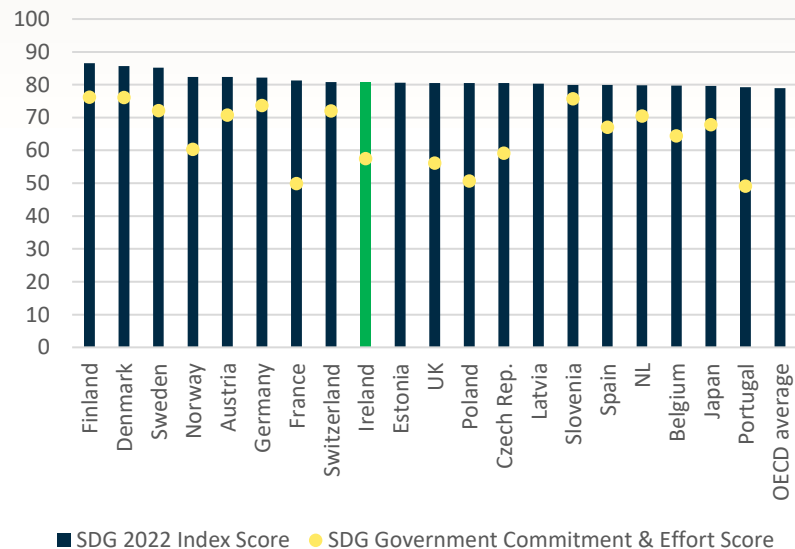
On the “E” of ESG, Ireland is currently behind

But we are viewed strongly on progress and commitment to SDG policy

Ireland ranks behind leaders like Denmark in current environmental metrics



Ireland ranked 9th globally on progress towards achieving the Sustainable Development Goals



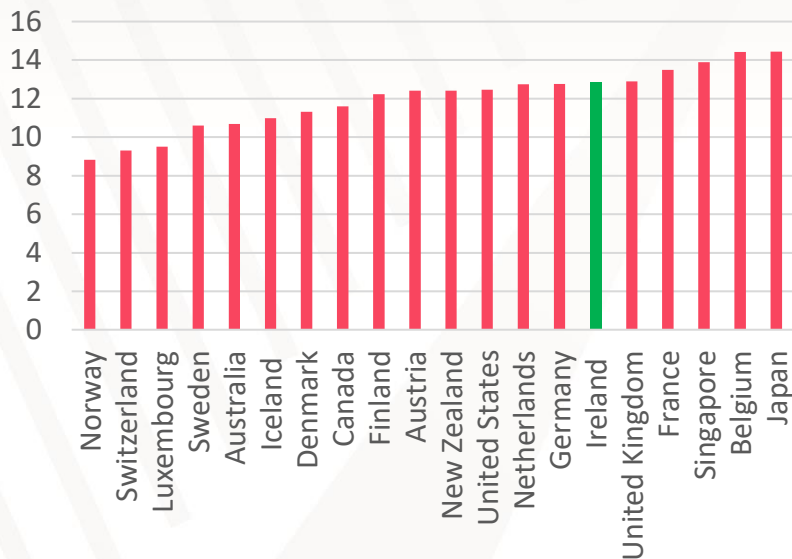
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Source: Climate Change Performance Index; OECD Sustainable development report 2022

Ireland in top 20 most sustainable countries

Ireland rated highly by Sustainalytics and rating agencies on ESG

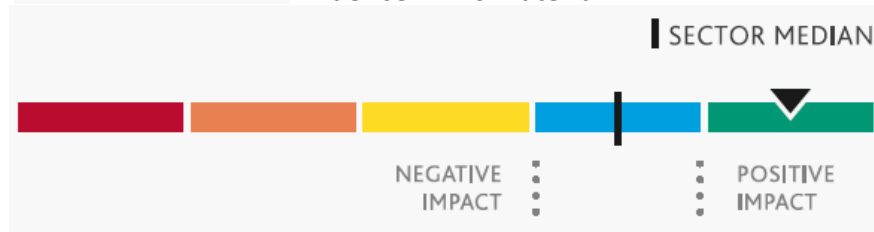
Ireland ranks 15th globally by Sustainalytics for ESG risk



Moody's view on Ireland much like other agencies – strong governance a key risk mitigant

CIS-1
Positive

“For an issuer CIS-1 (Positive), its ESG attributes are overall considered as having a positive impact on the rating. The overall influence... is material”.



Ireland's ESG Credit Impact Score:

“low exposure to environmental risk”

“a positive influence of its social considerations”

“very strong governance profile”



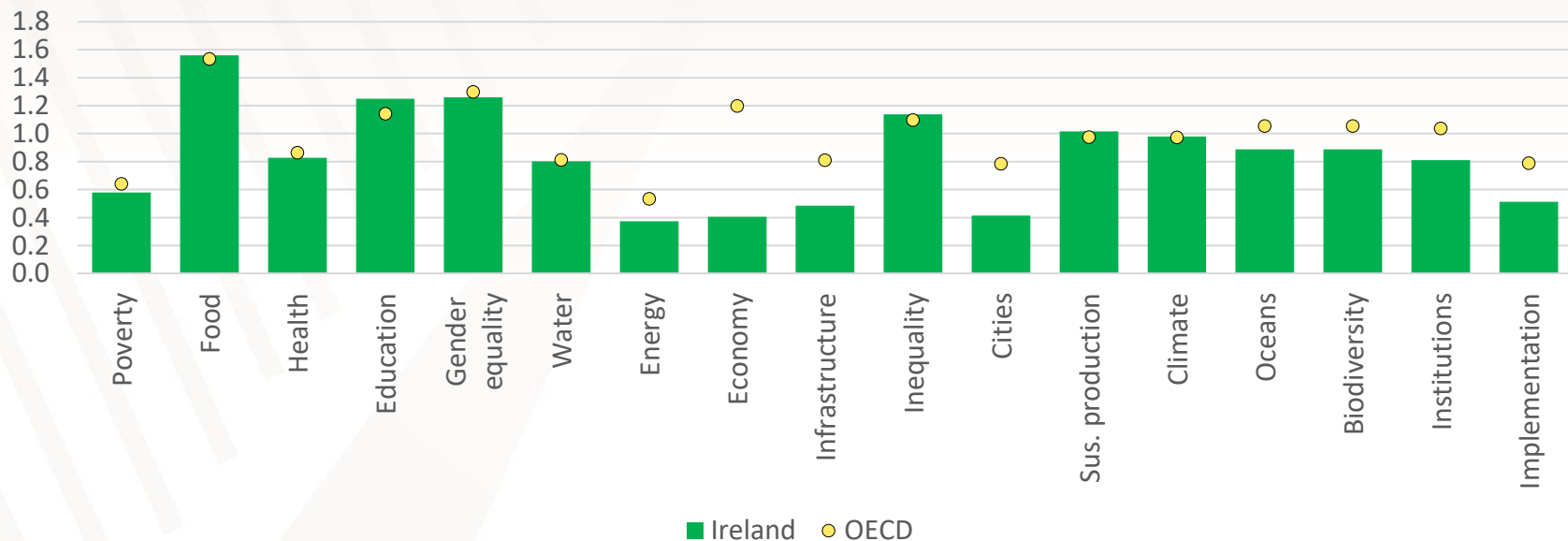
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Source: Sustainalytics (2021), Moody's

Note: Sustainalytics score is out of 100, closer to zero means less ESG risk

Ireland compares well to OECD on “S&G”

Based on the 17 Sustainable Development Goals of the United Nations



Source: OECD (2021)

Each bar shows “distance” country needs to travel to reach each SDG. Distances are measured in standardised units with 0 indicating that the level for 2030 has already been attained; and 3 is the distance most OECD countries have already travelled. Bars show the average country performance against all targets under the relevant Goal for which data are available, and diamonds show the OECD average.

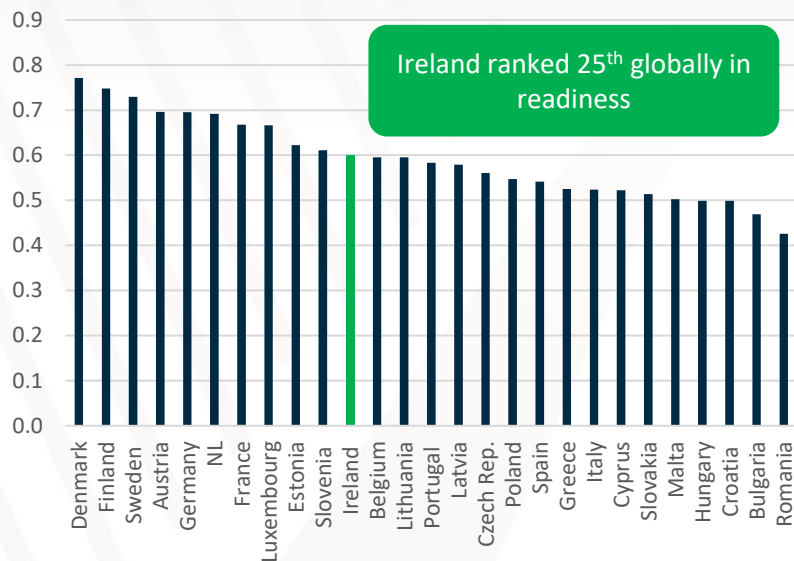


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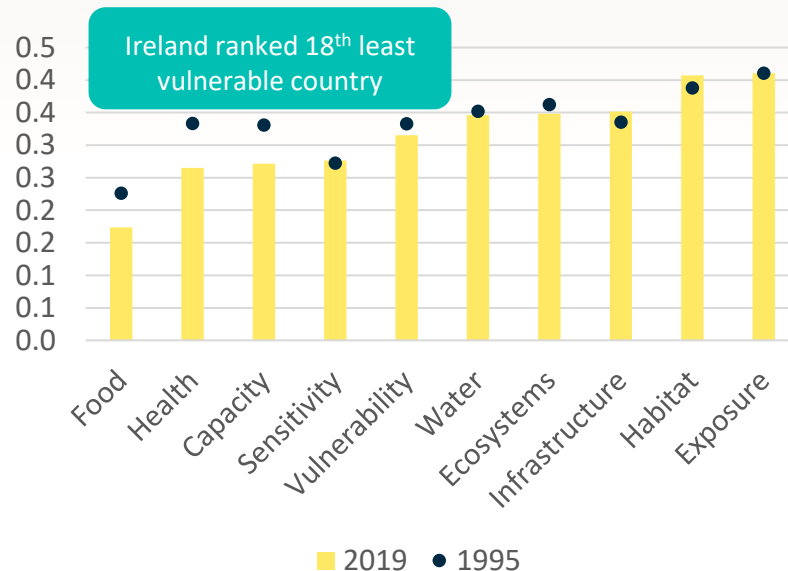
Readiness and vulnerability to climate change

Ireland's vulnerability to climate change and readiness to strengthen resilience have improved

Ireland ranked middle of the pack for readiness* when compared to EU27



Ireland's overall vulnerability** has decreased 5.3% from 1995-2019



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Source: Notre Dame Global Adaptation Initiative

*Readiness: Measures a country's ability to leverage investments and convert them to adaptation actions.

** Vulnerability: Measures a country's exposure, sensitivity and capacity to adapt to the negative effects of climate change.

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