An Phríomh-Oifig Staidrimh
Central Statistics Office

Ireland's innovative approach to Monitoring the Sustainable Development Goals (SDG) Indictors and COVID-19 outbreak through geospatial visualisation

Dr. Kevin McCormack

Head of SDG Division – Central Statistics Office

Member of the UN's Inter Agency Expert Group on SDGs (IAEG-SDG)

Co-chair of the IAEG-SDG's Working Group on Geospatial Information (WGGI)

Co-chair of the WHO/UN Technical Advisory Group on COVID-19 Mortality Assessment

Role of CSO

Focal Point for SDGs	Coordinate requests for SDG data from UN Orgs Data - GSBPM Identification, Management, Presentation SDG Road Map VNR for SDGs Data experts Liaison with Gov. Depts-provide data for DECC

Governance

1	**CSO, OSi, DECC, Esri Ireland** Weekly	SDG Data Hub Data uploads Story Maps	Government Initatives SDG Champions Civil Society, Academia
2	**Data Governance Board** All Gov. Depts, Organisations Quarterly	SDG Presentations metadata, business glossaries, lifecycle management data quality, GSBPM	
3	**SDG Civil Service Senior Officials Group** Annual	Official reports on progress toward SDGs Policy aspects of individual Goals Story Maps approved VNR	

UNSD/Esri – FIS for SDGs Programme

The Irish Central Statistics Office (CSO), in collaboration with Ordnance Survey Ireland (OSi) and Esri Ireland, are currently participating in the UNSD/Esri **Federated Information System (FIS) for the Sustainable Development Programme**. This is an exemplar of both inter agency and public-private sector partnerships

This programme commenced in May 2017 with a goal to develop and deploy a new approach for monitoring the UN SDGs using geographic information systems – “geospatial potential of statistical data.”

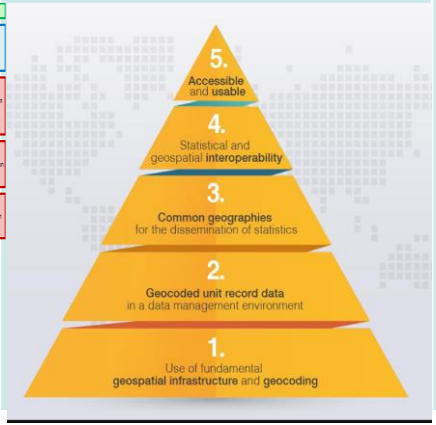
An Phríomh-Oifig Staidrimh Central Statistics Office

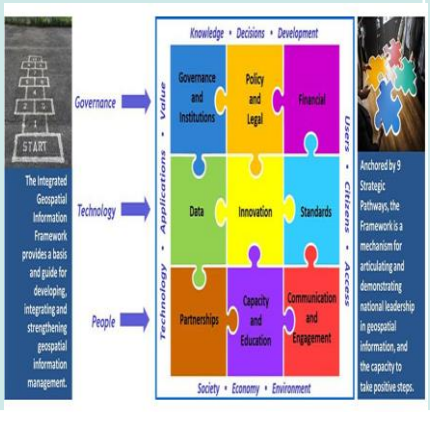
esri Ireland

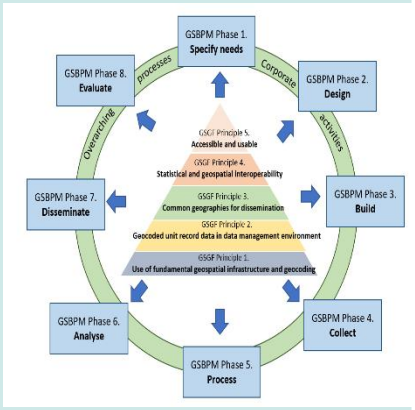
osi Ordnance Survey Ireland

Foundations of Ireland's approach

Generic Statistical Business Process Model GSBPM	The Global Statistical Geospatial Framework GSGF	UN-GGIM's Integrated Geospatial Information Framework - IGIF	GSBPM and GSGF Principles

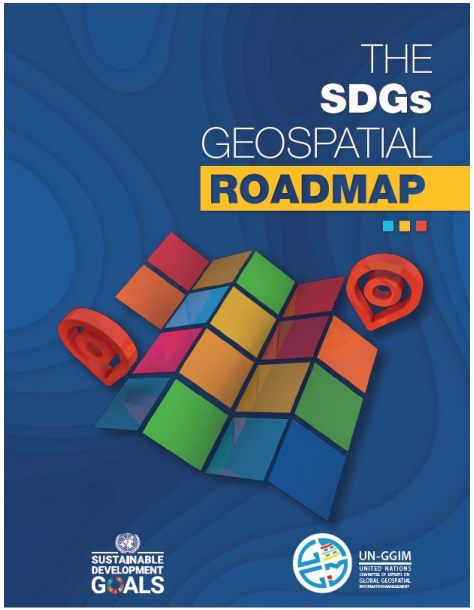






Informed the development of the SDGs Geospatial Roadmap

SDGs GEOSPATIAL ROADMAP



Ireland's SDG reporting ecosystem

UNECE – GSBPM & EG-ISGI - GSGF

UN-GGIM - IGIF

GSGF, IGIF and GSBPM

CSO's Statbank

WebPX

Statistical data

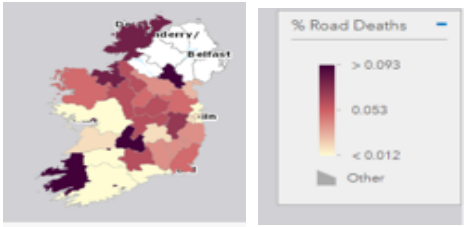
Geospatial Identifier

Update

Download

Indicators Platform

Visualisation within Platform



Direct link FIS

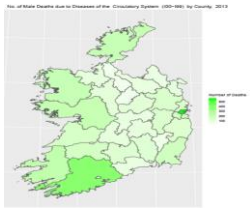
United Nations Statistics Division

Download data, APIs

Users

Visualisation Shape files

R, Python etc. Tutorials provided



Ireland's SDG Data Hub

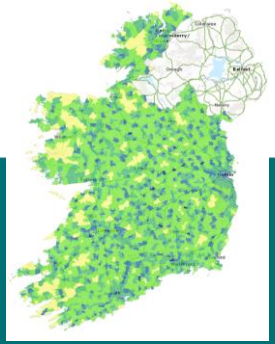
SDG Data Hub

http://irelandsdg.geohive.ie/

- Government Portal for all SDGs (UN, EU, National, OECD)
- Provide Data
- OSi – manages technical issues – uploads data
- DECC – responsibility for content

Geospatial visualisation

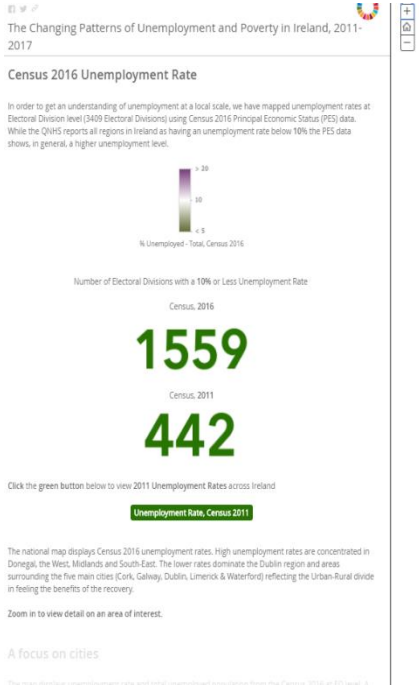
Story maps as a new communication channel

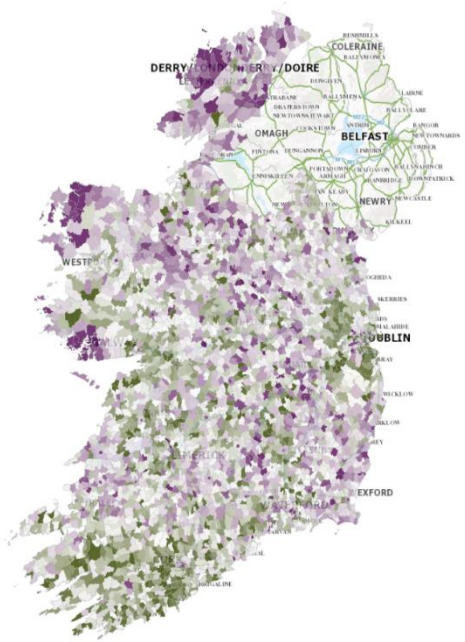


Story Maps

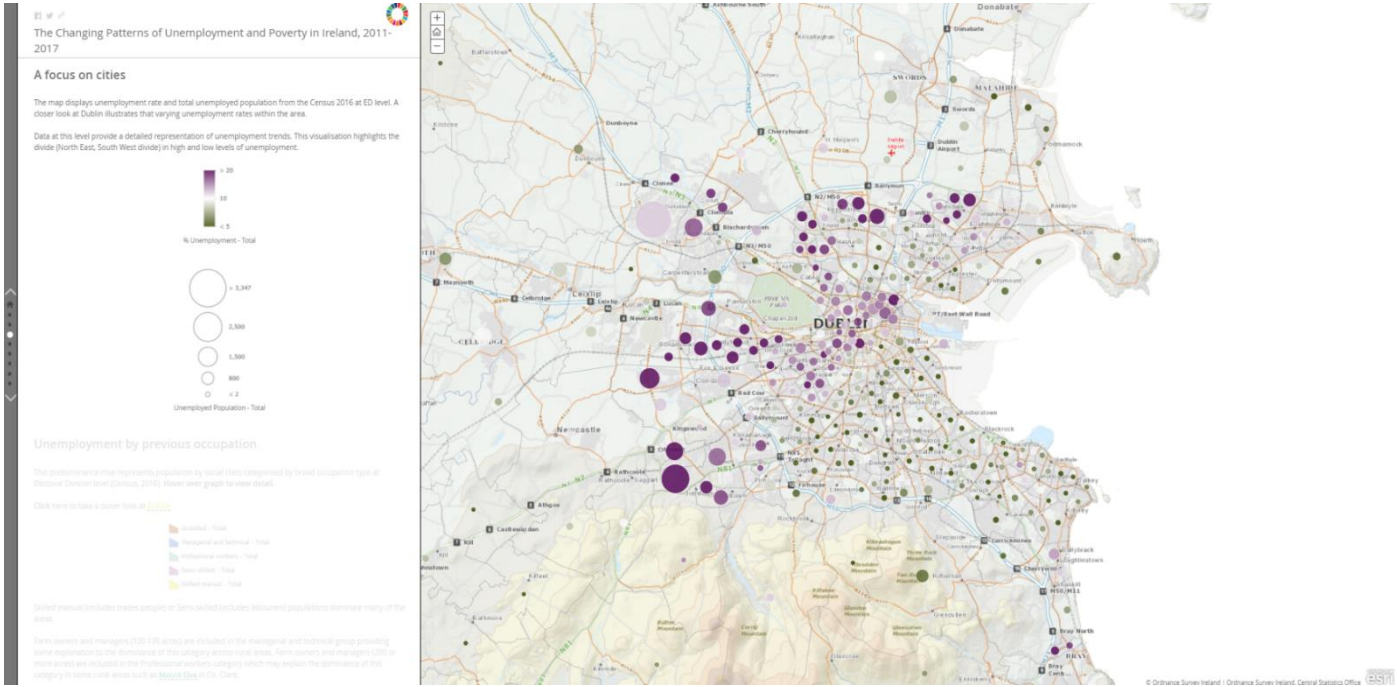
The Changing Patterns of Unemployment and Poverty in Ireland, 2011-2017
This Story Map illustrates changes in Ireland in relation to unemployment and poverty throughout the last decade. The Story Map has been developed to support efforts in reporting Ireland's status in relation to achieving United Nations (UN) Sustainable Development Goals.
SWEATER
CHOICE
Ladbrokes

Story Maps


The Changing Patterns of Unemployment and Poverty in Ireland, 2011-2017
Census 2016 Unemployment Rate
In order to get an understanding of unemployment at a local scale, we have mapped unemployment rates at Electoral Division level (3409 Electoral Divisions) using Census 2016 Principal Economic Status (PES) data. While the QNHS reports all regions in Ireland as having an unemployment rate below 10% the PES data shows, in general, a higher unemployment level.
> 20
10
< 5
% Unemployed - Total, Census 2016
Number of Electoral Divisions with a 10% or Less Unemployment Rate
Census, 2016
1559
Census, 2011
442
Click the green button below to view 2011 Unemployment Rates across Ireland
Unemployment Rate, Census 2011
The national map displays Census 2016 unemployment rates. High unemployment rates are concentrated in Donegal, the West, Midlands and South-East. The lower rates dominate the Dublin region and areas surrounding the five main cities (Cork, Galway, Dublin, Limerick & Waterford) reflecting the Urban-Rural divide in feeling the benefits of the recovery.
Zoom in to view detail on an area of interest.
A focus on cities


COLERAINE
DERRY/DOIRE
OMAGH
BELFAST
NEWRY
DUBLIN
EXFORD

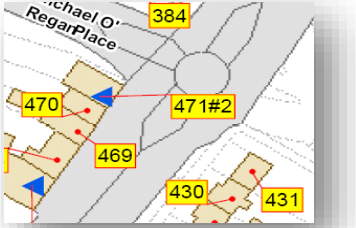
Story Maps


The Changing Patterns of Unemployment and Poverty in Ireland, 2011-2017
A focus on cities
The map displays unemployment rate and total unemployed population from the Census 2016 at ED level. A closer look at Dublin illustrates that varying unemployment rates within the area.
Data at this level provide a detailed representation of unemployment trends. This visualisation highlights the divide (North East, South West divide) in high and low levels of unemployment.
% Unemployment - Total
Unemployed Population - Total
Unemployment by previous occupation
DUBLIN

Network Analysis - Measuring Distance to Everyday Services - 2019

Census 2016 (Origin)

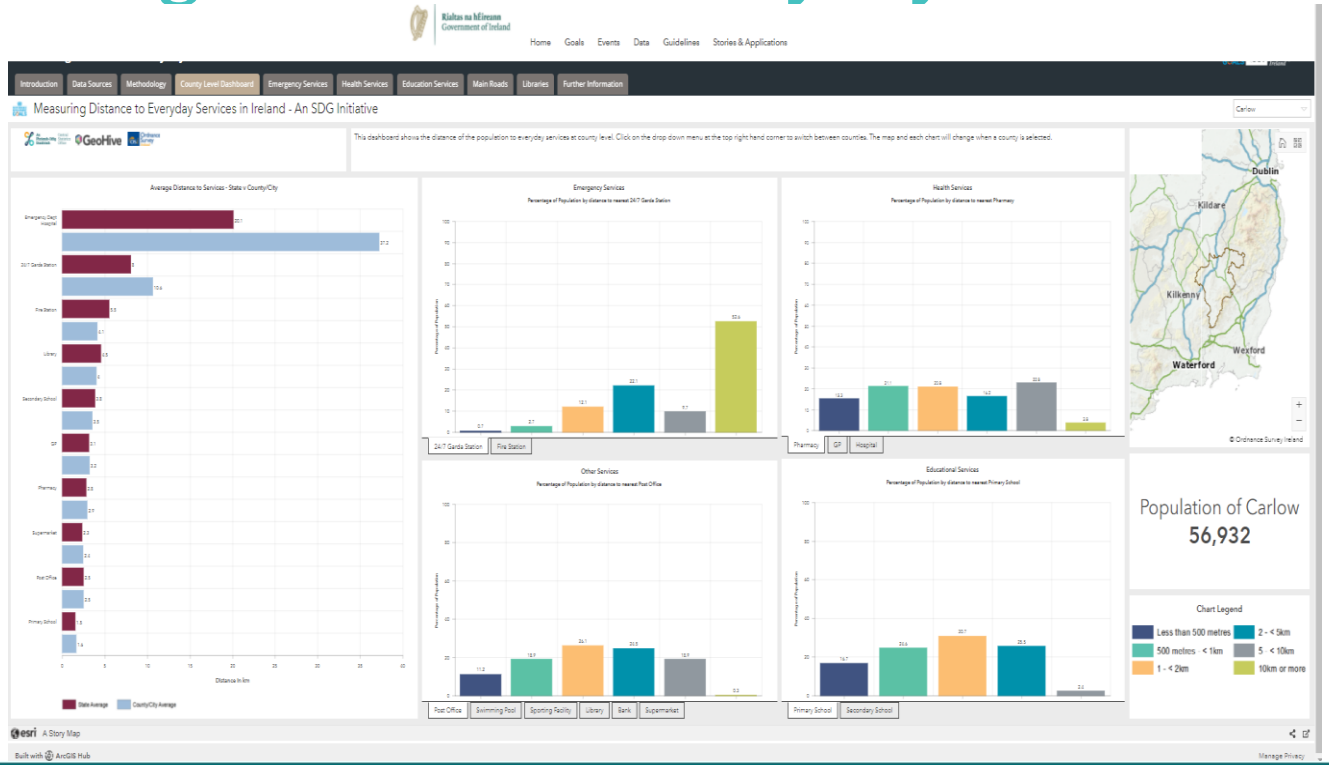
- 98% of dwellings linked to address database prior to census
- 2% digitised by census staff
- 2,070,256 dwellings on final census dataset



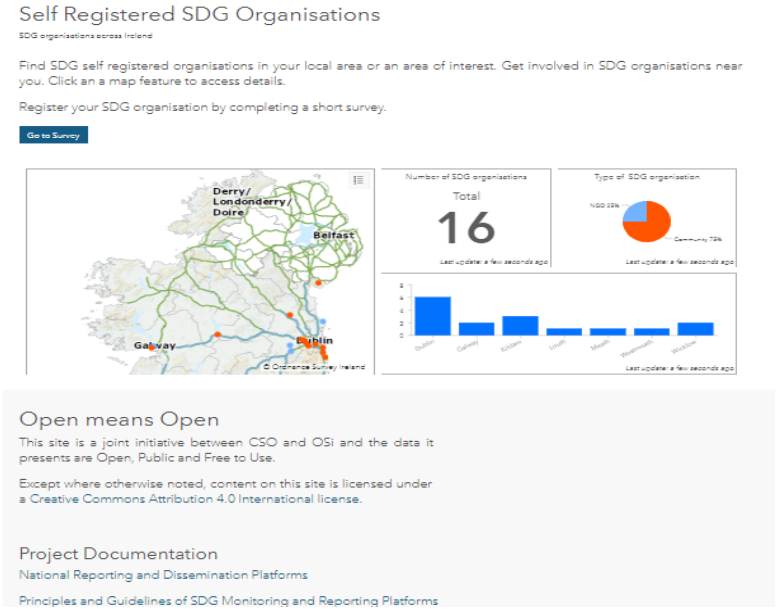
OSi's PRIME 2 (Road network)

- Geographic Data Files level 2 (GDF2) from PRIME 2 database
- Over 300,000 segments
- Each segment is seamless and continuous, no broken lines or edges
- Generate network dataset using ArcGIS

Measuring Distance to Everyday Services - 2019



Self Registrations of SDG Organisations



An Phríomh-Oifig Staidrimh
Central Statistics Office

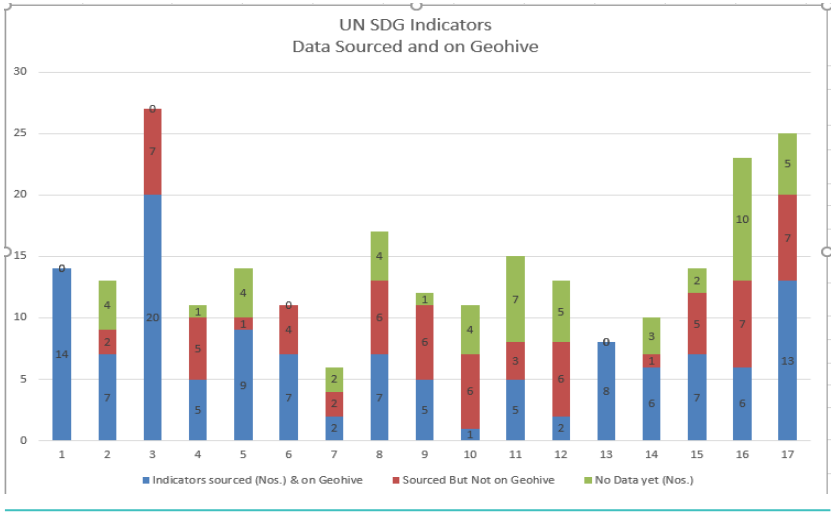
CSO

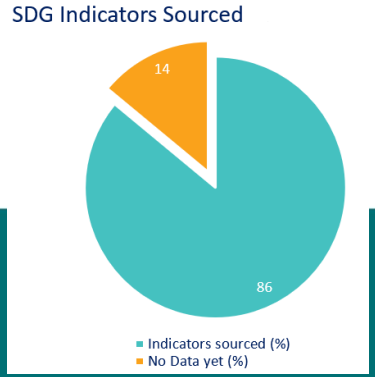
SDG - Hub

Dashboard – No. Indicators sourced

Goal	Total No. of SDG Indicators	Indicators sourced (Nos.)	No Data yet (Nos.)
Goal 1	14	14	0
Goal 2	13	10	3
Goal 3	27	27	0
Goal 4	11	10	1
Goal 5	14	13	1
Goal 6	11	11	0
Goal 7	6	5	1
Goal 8	17	16	1
Goal 9	12	11	1
Goal 10	11	8	3
Goal 11	15	10	5
Goal 12	13	11	2
Goal 13	8	8	0
Goal 14	10	8	2
Goal 15	14	14	0
Goal 16	23	14	9
Goal 17	25	21	4
Total	**244**	**211**	**33**

Status - 2019





Publications - UN SDG Goals

https://www.cso.ie/en/statistics/unsustainabledevelopmentgoals/

> Goals 1 to 10 – Publications
> Goals 11 to 17 ongoing

An Phríomh-Oifig Staidrimh Central Statistics Office

Home | Statistics | Databases | Methods

YOU ARE HERE: HOME / STATISTICS / UN SUSTAINABLE DEVELOPMENT GOALS

UN Sustainable Development Goals

Statistical Publications

- UN SDG's Goal 1 - No Poverty
- UN SDG's Goal 2 - Zero Hunger
- UN SDG's Goal 3 - Good Health and Well-Being
- UN SDG's Goal 4 - Quality Education
- UN SDG's Goal 5 - Gender Equality
- UN SDG's Goal 6 - Clean Water and Sanitation
- UN SDG's Goal 7 - Affordable and Clean Energy
- UN SDGs Goal 8 - Decent Work and Economic Growth -2021
- UN SDGs Goal 9 - Industry Innovation and Infrastructure 2021
- UN SDG's Goal 10 - Reduced Inequalities 2021

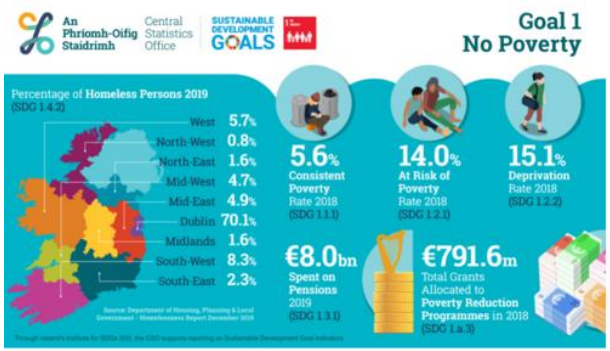
Related Content

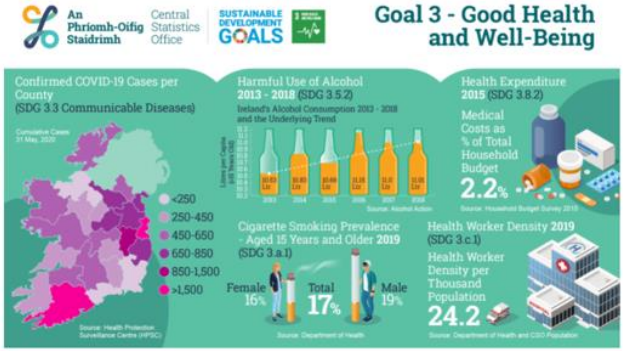
- A Profile of Ireland's Border Population 2016
- Measuring Distance to Everyday Services in Ireland
- Regional SDGs Ireland 2017
- Mapping a Table of Data with Esri Shapefiles in R

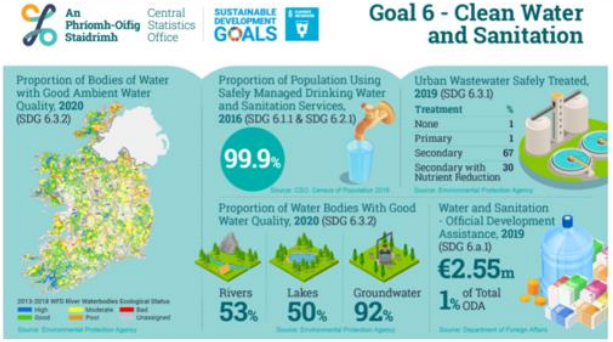
Related Links

- Ireland's SDG Data Hub

SDG Publications – Goals 1 to 10 (Feb 2020 to Nov 2021)







An Phríomh-Oifig Staidrimh
Central Statistics Office
SUSTAINABLE DEVELOPMENT GOALS
Goal 7 - Affordable and Clean Energy
Proportion of Households with Oil Central Heating, 2016 (SDG 7.1.2)
Proportion of Households with Access to Electricity, 2016 (SDG 7.1.1)
100%
Proportion of Households by Central Heating Fuel Type, 2016 (SDG 7.1.2)
40.9% Oil
33.9% Natural Gas
8.7% Electricity
5.2% Peat
5.2% Coal
Renewable Energy Share in the Total Final Energy Consumption, 2019 (SDG 7.2.1)
Overall Renewable Energy Supply
12% of Gross Final Consumption
Share of
8.9% Renewable Transport Energy
36.5% Renewable Electricity
6.3% Renewable Heat
Clean Energy R&D - Official Development Assistance, 2019 (SDG 7.a.1)
€5.12m
1% of Total ODA

An Phríomh-Oifig Staidrimh
Central Statistics Office
SUSTAINABLE DEVELOPMENT GOALS
Goal 8 - Decent Work and Economic Growth
GDP per Capita by Region, 2019 (SDG 8.1.1)
Average Hourly Earnings, 2019-2020 (SDG 8.5.1)
Q4 2019 €24.23
Q4 2020 €25.56
Unemployment Rate % (Aged 15-74 Years), April 2020 & 2021 (SDG 8.5.2)
4.7% April 2020
5.8% April 2021
Youth Unemployment Rate % (Aged 15-24 Years), April 2021 (SDG 8.6.1)
9.7% Males
22.2% Females
15.9% Total
Fatal and Non-Fatal Occupational Injuries, 2019 (SDG 8.8.1)
Non-Fatal Injuries
Workers 8,888
Non-Workers 447
Total 9,335
Fatal Accidents 47

An Phríomh-Oifig Staidrimh
Central Statistics Office
SUSTAINABLE DEVELOPMENT GOALS
Goal 9 - Industry, Innovation and Infrastructure
Average Distance to Main Road Network at Electoral Division, 2016 (SDG 9.1.1)
Manufacturing Value Added, 2020 (SDG 9.2.1)
As a Proportion of GDP 37.2%
Per Capita €28,213
Manufacturing Employment as a % of All Employment, Q1 2021 (SDG 9.2.2)
12.2%
Energy Related CO_2 Emissions, 2019 (SDG 9.4.1)
Total Economy 37,349 $ktCO_2$
Manufacturing 6,330 $ktCO_2$
Research and Development Expenditure, 2019 (SDG 9.5.1)
Government Budget Allocations €802m
Gross Expenditure €4,373m

An Phríomh-Oifig Staidrimh
Central Statistics Office
SUSTAINABLE DEVELOPMENT GOALS
Goal 10 - Reduced Inequalities
Household Median Gross Income by County, Census 2016 (SDG 10.2.1)
Mean Equivalised* Net Disposable Income, 2019 (SDG 10.1.1)
Total Population €27,941
Bottom 40% of Income Distribution €15,692
* A method of attributing household income to individual household members
Labour Share of GDP, 2020 (SDG 10.4.1)
29.3%
Refugee Population, 2019 (SDG 10.7.4)
Refugees in Ireland 15,779
% of Ireland's Population 0.3%
Total Official Development Assistance Overseas, 2019 (SDG 10.b.1)
Total Official Development Assistance €870m
ODA as a % of GNP 0.32%
HUMANITARIAN AID

An Phríomh-Oifig Staidrimh
Central Statistics Office

Refocus of the Irish SDG team to COVID-19

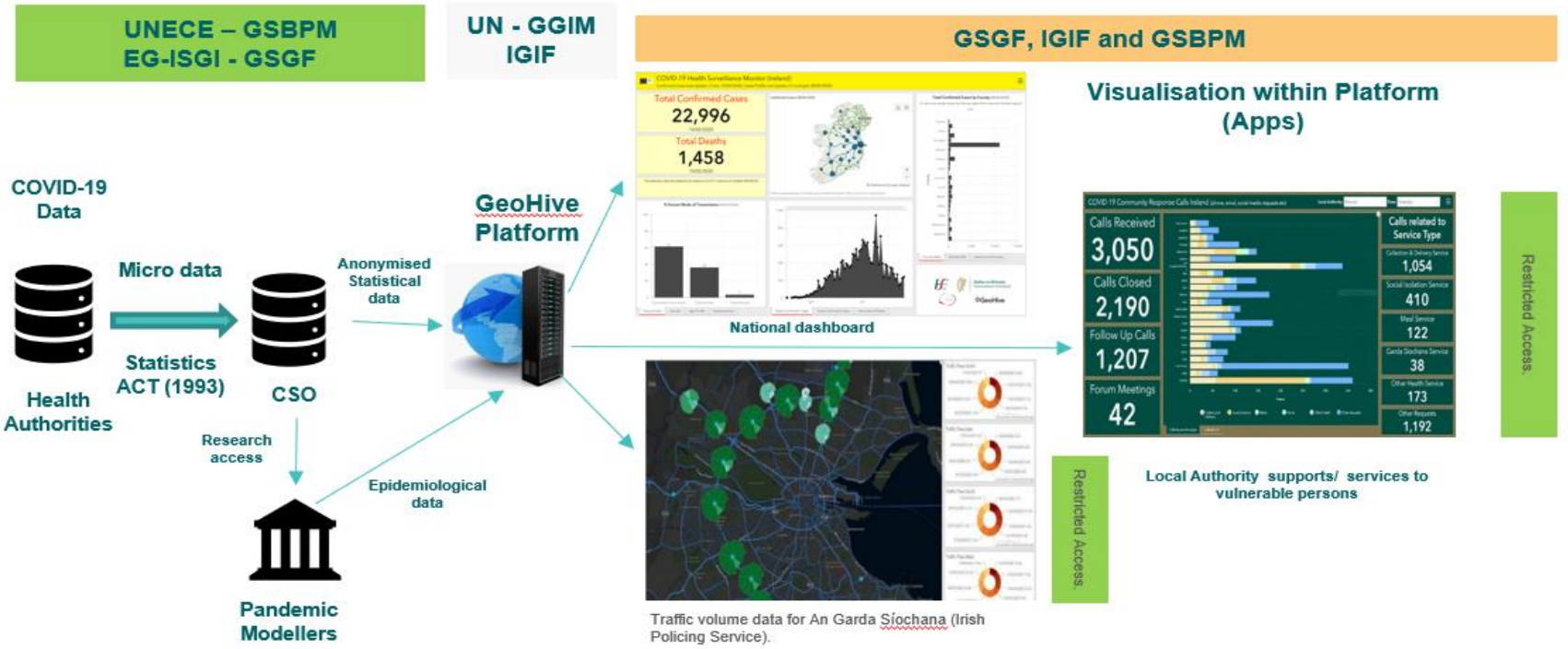
Refocus of the Irish SDG team to COVID-19

In response to the Coronavirus disease (COVID-19) outbreak, the Central Statistics Office (CSO) in collaboration with Ordnance Survey Ireland (OSI), the Department of Housing, Planning & Local Government (DHPLG) and the All Island Research Observatory (AIRO) in Maynooth University, along with Esri Ireland as technical partners, rapidly developed a National Covid-19 Data Hub on the GeoHive platform.

GeoHive was identified as the State's geospatial data platform in the Public Service Data Strategy 2019 – 2023.

For this particular action this work has been designated as the GeoHive Covid19 Response Coordination Group, (GH-COVID19-RCG).

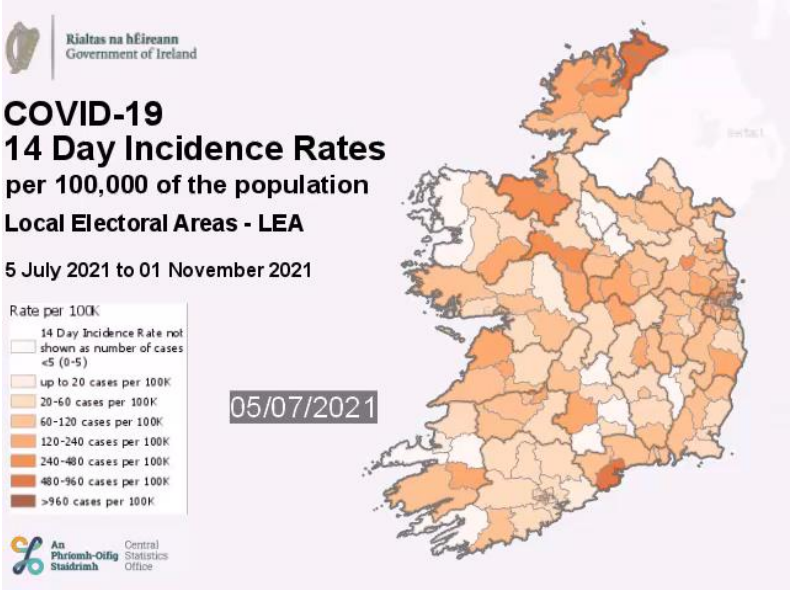
Ireland's COVID-19 reporting ecosystem



Ireland's COVID-19 Internal Hub

- You have seen an image of the public version of the National Covid-19 Data Hub. The National Covid-19 project partners use best practice methodologies and governance structures to ensure the appropriate overall management of the project and its data.
- There is an internal version of this National Covid-19 Data Hub that contains additional data, some of it sensitive. This internal site is only accessible in a secure manner by authorized individuals.
- Some examples of the data on this internal hub are:
  - Hospital admissions and discharges, by date, age and gender of patients.
  - ICU beds - occupied, by age, gender, dates of admission and discharge of patients, and this data is available for each hospital in Ireland.
  - Infections reported by geography (Census Electoral District (ED) 3,409 geographies), date, age, and gender.
  - Testing, dates of referral, test, lab results. Also the geography, ED, of the individuals tested.
  - Throughput of testing labs by date.
- The CSO has sourced these data from our Health Service Executive through our Statistics Act (1993).

Example of Continuing - Work Animation



An Phríomh-Oifig Staidrimh
Central Statistics Office

Thank You