



An  
Phríomh-Oifig  
Staidrimh

Central  
Statistics  
Office

# Ireland's innovative approach to monitoring the SDG indicators through geospatial visualisation

Kevin McCormack

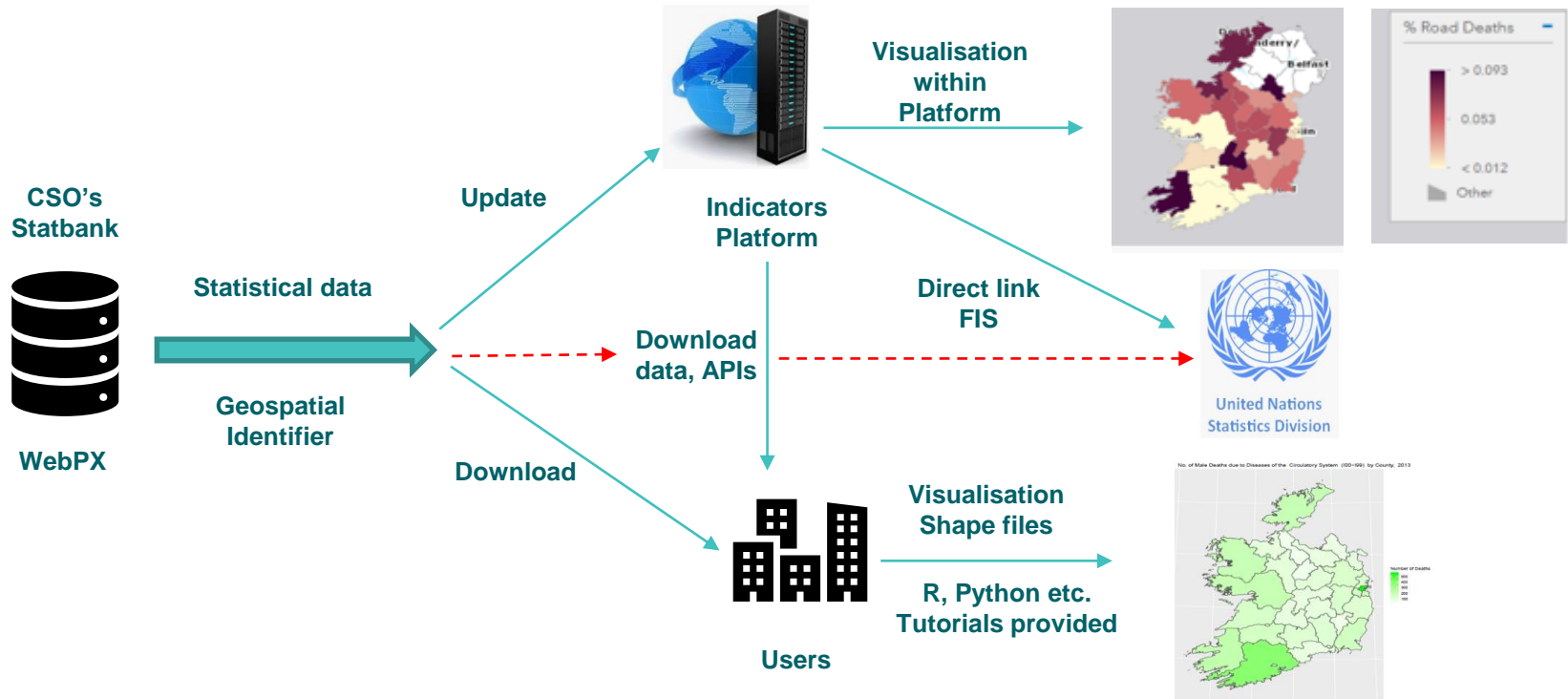
# UNSD/Esri – FIS for SDGs Programme

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.”



# Ireland's SDG reporting ecosystem



# Tasks completed by Project Team

Sourced information for 211 **indicators** (mostly Tier 1), of which 60 have a geospatial aspect, and created **100+ datasets** at NUTS 3, county and census local area geography.

Developed Ireland's **National SDG Indicators Platform**, built with Esri technology and hosted on OSi's web portal, known as GeoHive, where interested parties can openly access, visualise and download data and related APIs.

<http://ireland-s-hub-for-sustainable-development-goals-irelandsdg.hub.arcgis.com/>



# 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**

Legend: > 20, 10, < 5

**Unemployed Population - Total**

Legend: > 3,347, 2,500, 1,500, 800, < 2

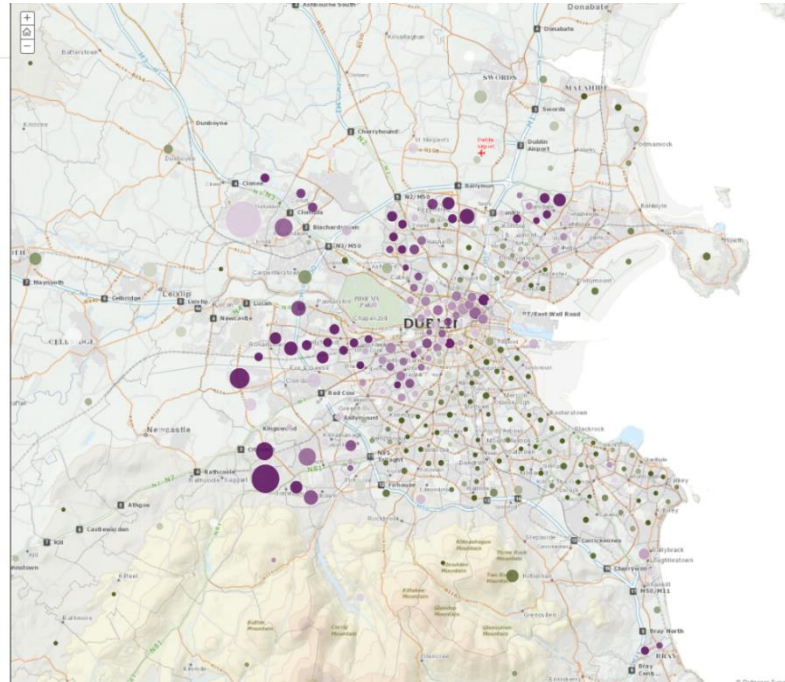
### Unemployment by previous occupation

This performance map represents population by social class (categorized by level occupation type at Electoral Division level (Census, 2016)). Hover over graph to view detail.

Click here to take a closer look at [Unemployment by previous occupation](#)

- Unemployed - Total
- Managerial and Technical - Total
- Professional services - Total
- Non-skilled - Total
- Unskilled manual - Total

Unskilled manual (includes trades people or Semi-skilled (includes blue-collar) populations dominate many of the areas.  
Farm workers and managers (100-150 acres) are included in the managerial and technical group providing some explanation as to the dominance of this category in rural areas. Farm workers and managers (200 or more acres) are included in the Professional services category which may explain the dominance of this category in some rural areas such as Moylagh in Co. Clare.



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# Geospatial Potential of Statistical Data

- Geospatial identifier with all statistical data.
- Esri Shapefiles readily available.
- Now testing Earth Observations data – merging with census boundary files (shapefiles) and geospatially coded statistical data.



# Mapping a Table of Data with Esri Shapefiles in R - Tanzania

An introductory tutorial to mapping opensource data with two shapefiles using the “*ggplot2*” and “*tmap*” packages in R

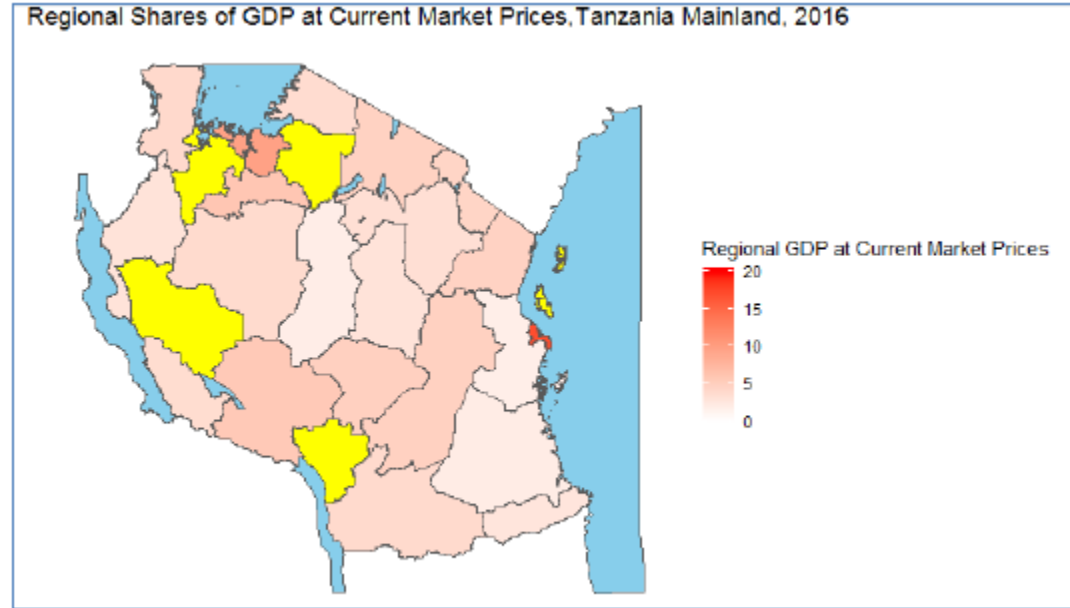


Figure 1: Geospatial presentation of GDP data.



# VNR - Story Map

- Prepared for Ireland's VNR
- Complementary to traditional PDF document
- Well received
- Content agreed with Department of Communications Climate Action and Environment (DCCAE) – policy department with responsibility for SDGs.





# VNR - Story Map

**Ireland: Voluntary National Review 2018**

**Introduction**

This Story Map provides a brief overview of Ireland's Voluntary National Review [VNR] 2018. VNRs are part of the follow-up and review mechanisms for the implementation of the 2030 Agenda for Sustainable Development. United Nations [UN] member states are encouraged to conduct progress reviews at the national and sub-national levels.

The VNR is based on data provided to the National Sustainable Development Unit by the CSO, using the EU SDG indicator set. In order to provide for a more comprehensive overview of conditions in Ireland in 2017, reference is also made to OECD and national indicators as appropriate when discussing the 17 SDGs.

Ireland is performing well in relation to SDG 1: No Poverty, SDG 2: Zero Hunger, SDG 3: Good Health and Well-being, SDG 4: Quality Education, SDG 8: Decent Work and Economic Growth, SDG 9: Industry, Innovation and Infrastructure, and SDG 16: Peace, Justice and Strong Institutions.

Performance against other SDGs, though in many areas positive, is more mixed, and specific challenges exist in relation to housing, levels of obesity, achieving sustainable consumption and production, biodiversity and habitat destruction, mitigating and adapting to climate

## SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	SUSTAINABLE DEVELOPMENT GOALS




# VNR - Story Map

**Ireland: Voluntary National Review 2018**

Introduction **National Context** [SDG 1 No Poverty](#) [SDG 2 Zero Hunger](#) [SDG 3 Good Health & Well-Being](#) [SDG 4 Quality Education](#) [SDG 6 Clean Water & Sanitation](#) [SDG 7 Affordable & Clean Energy](#) [SDG 8 Decent Work & Economic Growth](#) [Conclusion](#)

Meaningful implementation of the SDGs at the national level requires that each country, guided by the level of global ambition reflected in the Goals, defines what constitutes successful achievement of the SDGs in light of its national circumstances. Therefore Ireland has included a 2030 Vision as part of the [Sustainable Development Goals National Implementation Plan 2018-2020](#), setting out an ambitious set of high-level commitments which address the 17 SDGs and taking account of the social, economic and environmental dimensions of the 2030 Agenda.

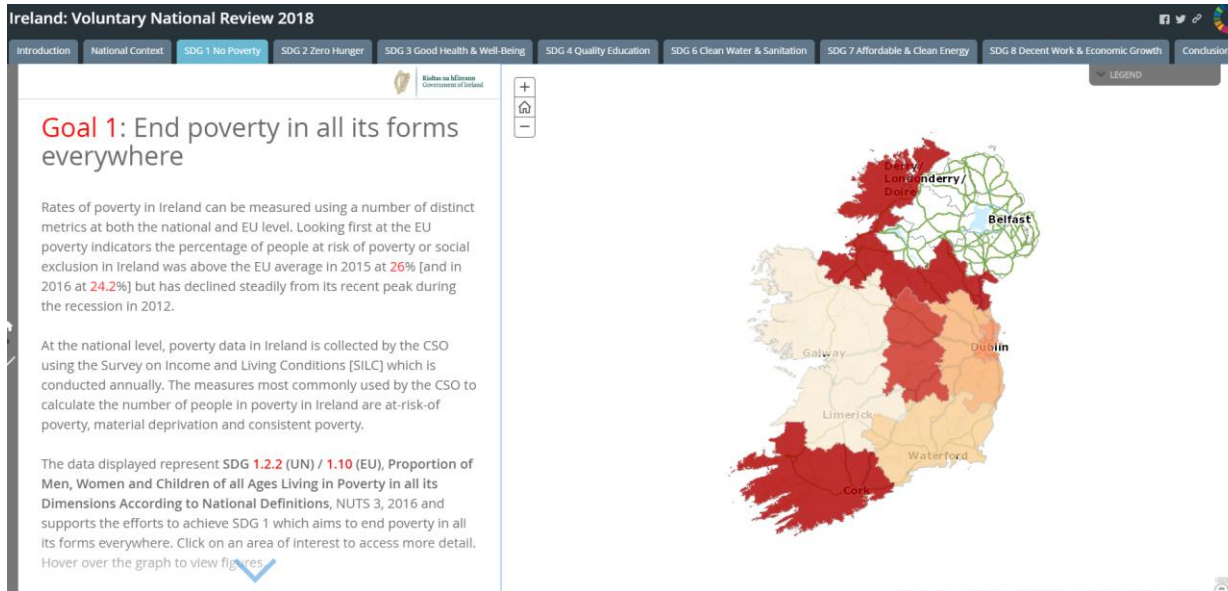
Many of the measures through which Ireland will achieve the SDGs will take place within the context of [Project Ireland 2040](#), [play video for overview] which is the Government's overarching policy initiative to make Ireland a better country for all our people, a country that reflects the best of who we are and what we aspire to be. Project Ireland 2040 is made up of the [National Planning Framework](#) to 2040 [NPF] and the National Development Plan 2018-2027 [NDP].



Scale: 1:100,000 Rev: 01  
Drawn by: Marie T. Ryan



# VNR - Story Map



# VNR - Story Map

Ireland: Voluntary National Review 2018

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 **Riada na hÉireann**  
Government of Ireland

## SDG 6: Ensure availability and sustainable management of water and sanitation for all

Ireland's performance under this Goal is mixed based on latest available EU and OECD data.

Ireland is in the middle OECD tier in relation to renewable freshwater resources and, consistent with the OECD average, public satisfaction with local water quality has fallen slightly in the recent years.

Based on EU SDG indicators, Ireland outperformed the EU average in relation to **biochemical oxygen demand** [BOD] in rivers in 2012, though failed to meet the threshold for the cleanest river category of less than 1.0 mg/L BOD. Ireland was also below the EU averages for **Nitrate** in groundwater and **Phosphate** in rivers.

The map displays **SDG 6.3.2, Proportion of Bodies of Water with Good Ambient Water Quality**, WFD Sub-catchment, 2015 and supports efforts and supports the efforts to achieve SDG 6 which aims to ensure availability and sustainable management of water and sanitation for all. Click on an area of interest to access more detail.



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# VNR - Story Map

Ireland: Voluntary National Review 2018

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The VNR reflects Ireland's overall strong economic recovery it also indicates that challenges remain for Ireland in terms of meeting its own national poverty targets, and addressing inequality of outcomes within the education system. A significant level of investment is required to protect Ireland's drinking and bathing waters but this will be addressed through the [River Basin Management Plan](#) and its associated capital investment. Performance in relation to life on land and under water in Ireland is also mixed. Ireland's [Biodiversity Action Plan](#) is potentially the most detailed Irish example of engagement with the SDGs in a sectoral policy and this is a positive indicator of future progress.

Ireland has recently launched or will shortly launch a number of major national policies with relevance to the SDGs, and subsequent reports will provide information on the impact of these policies. The first [SDG National Implementation Plan](#) is obviously the most relevant policy and Ireland will now focus on establishing and bedding in the ambitious stakeholder engagement arrangements and SDG awareness strategies provided for under the Plan. Both the NDP and the [NPF](#) recognise the interdependence of economic and social growth, as well as the importance of sustainability.

The full VNR is available [here](#). All mapped data included in this Story Map can be accessed from [Ireland's SDG](#)

