



International Centre for Local and
Regional Development

Data and Evidence-Informed Planning: Profiling New Data Resources for the Island of Ireland

All-Island Accessibility Mapping Tool
All-Island Deprivation Index

NIRSA

NATIONAL INSTITUTE FOR REGIONAL AND SPATIAL ANALYSIS
AN INSTITIÚD NAISIÚNTA UM ANILÍS RÉIGIÚNACH AGUS SPÁSÚIL



HEA

Higher Education Authority
An tÚdarás um Ard-Oideachas

What is the All-Island Research Observatory?

- AIRO is a **research unit** and **spatial data portal** focused on improving evidence informed planning in Ireland
 - Collects, analyses and provides evidence and tools to support better planning and decision making
 - Maps, data, policy advice, research and training
 - Maximise the **usage and benefit** of publically funded and readily available datasets
 - Highlight the benefit of **proper collection, management and dissemination of datasets**
- Who do we work with?
 - Government Departments
 - Semi-State bodies
 - Regional Authorities, Local Authorities, Local Partnerships etc
 - Academics, Researchers, Public
- **Interactive website** to provide users with a toolkit - **free resource** for public sector and civil society organisations
- Currently 1,600+ registered users on the site
 - Registration due to be taken off site

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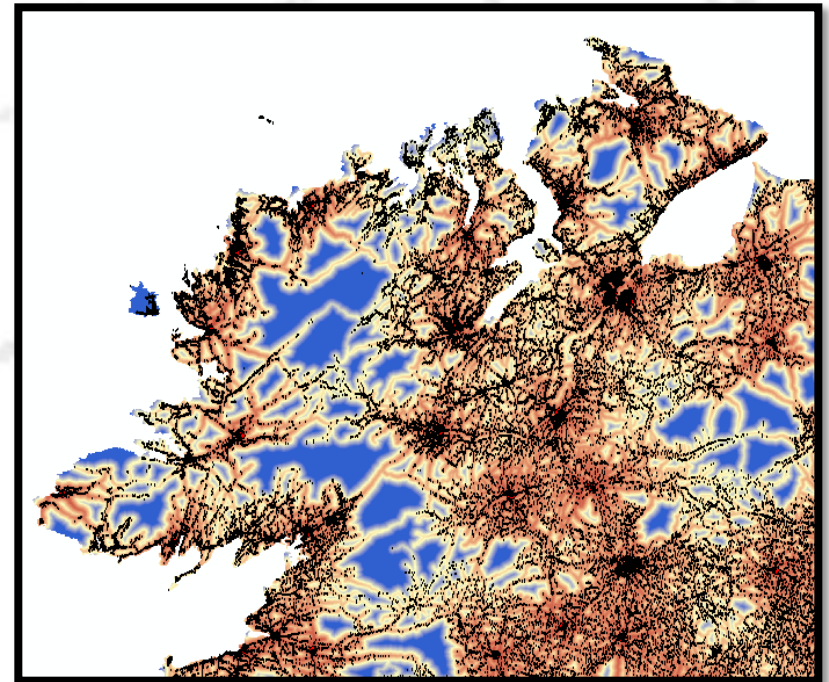
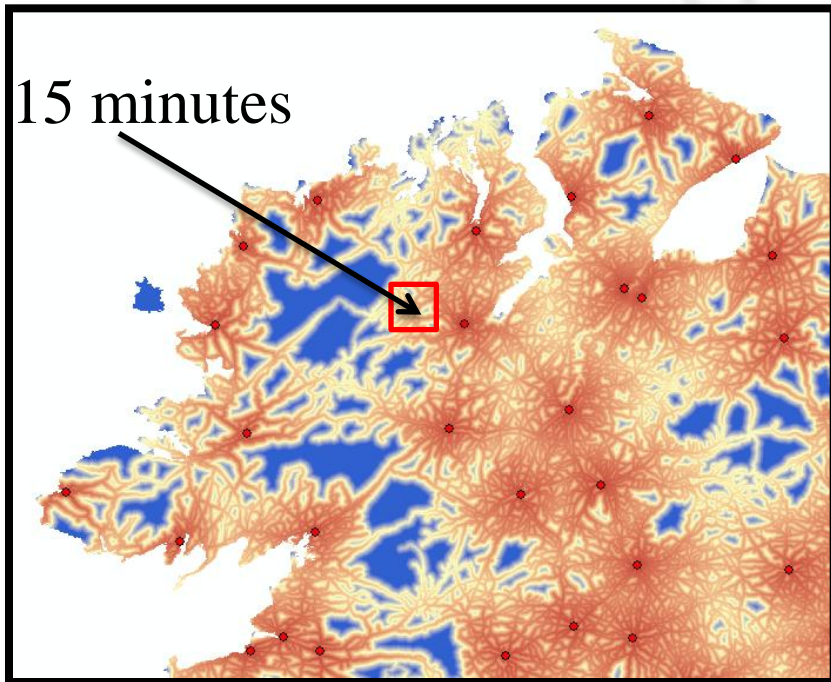
- Partnership between National Institute for Regional and Spatial Analysis (NIRSA) & National Centre for Geo-Computation at NUIM; works in collaboration with International Centre for Local and Regional Development (ICLRD)
 - AIRO is the data and mapping partner of ICLRDR
- The ICLRDR and AIRO are currently involved in four research activities as part of the INTERREG IVA funded Cross-Border Spatial Planning and Training Network (CroSPLaN) data capture initiative:
- CroSPLaN is a three-year programme of research, training and workshops in Northern Ireland and the Southern border counties.
 - Island of Ireland Housing Monitoring Tool
 - Development of All-Island Monitoring Indicators
 - **All-Island Accessibility Mapping Tool**
 - **All-Island Deprivation Index**

All-Island Accessibility Mapping

- Develop a series of maps that show levels of ‘drive-time’ accessibility to key settlements and services on the Island of Ireland
 - Feed into future ICLRD work on Shared Services
 - Highlight areas with low level of access to services
 - Is there a different level of service provision in NI and RoI?
- What Settlements and Services?
 - Settlements
 - Gateways, Gateways & Hubs
 - Settlements > 50,000, > 20,000, > 10,000, > 5,000 and > 1,500
 - Services
 - Primary Schools, Secondary Schools
 - Airports, Train Stations and Stops
 - Emergency Hospitals, GP Surgery, Pharmacies, Dentists
 - Fire Stations, Garda/PSNI

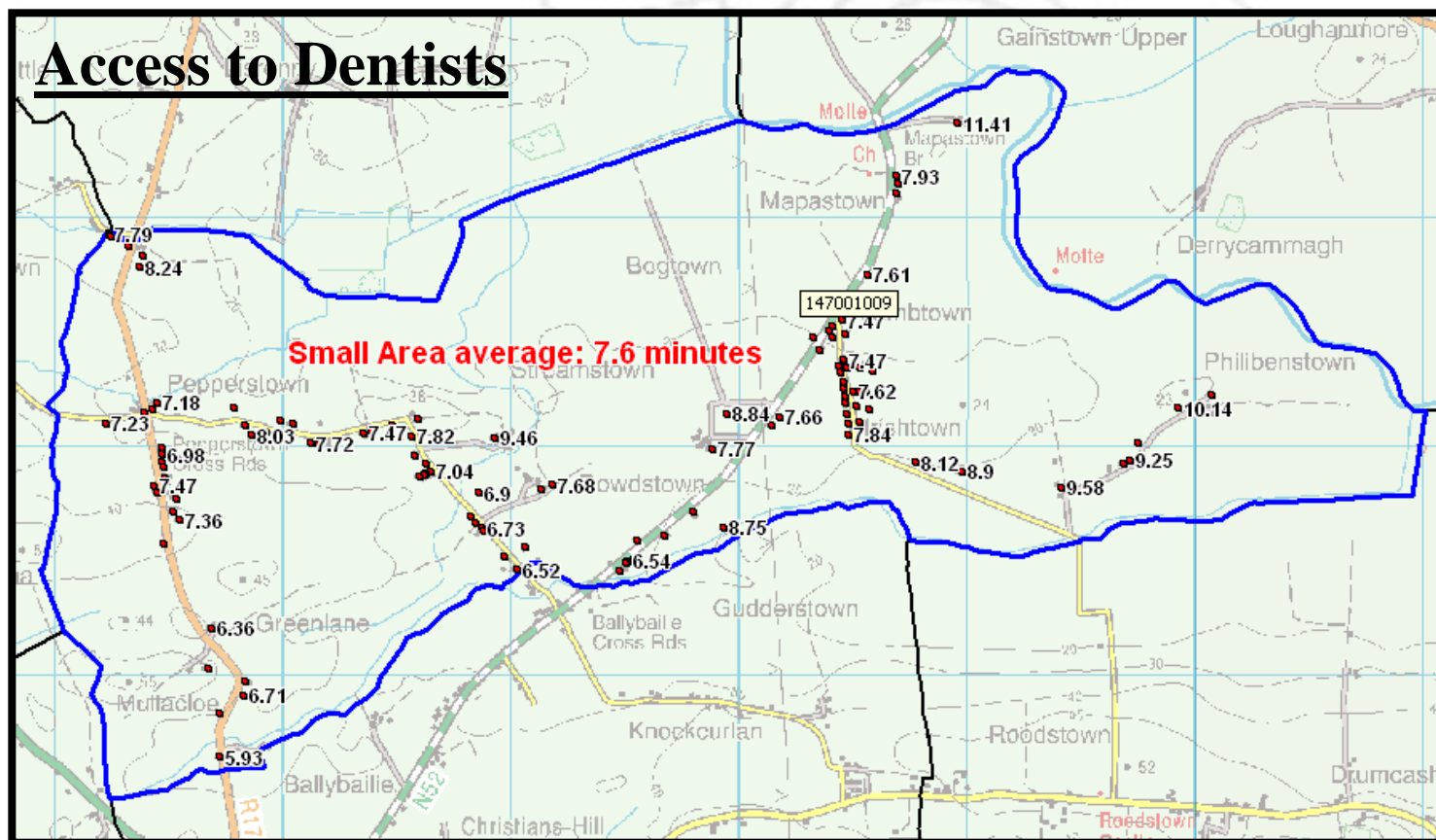
All-Island Accessibility Mapping

- Methodology
 - Accessibility scores developed for every residential address point on the island (**2,695,923**)
 - RoI (1,990,339)
 - NI (705,524)
 - **NAVTEC** roads dataset
 - Average speed (Midway between Peak and Off-Peak)
 - +10% congestion charge for urban areas
 - +3 minutes delay added to each score

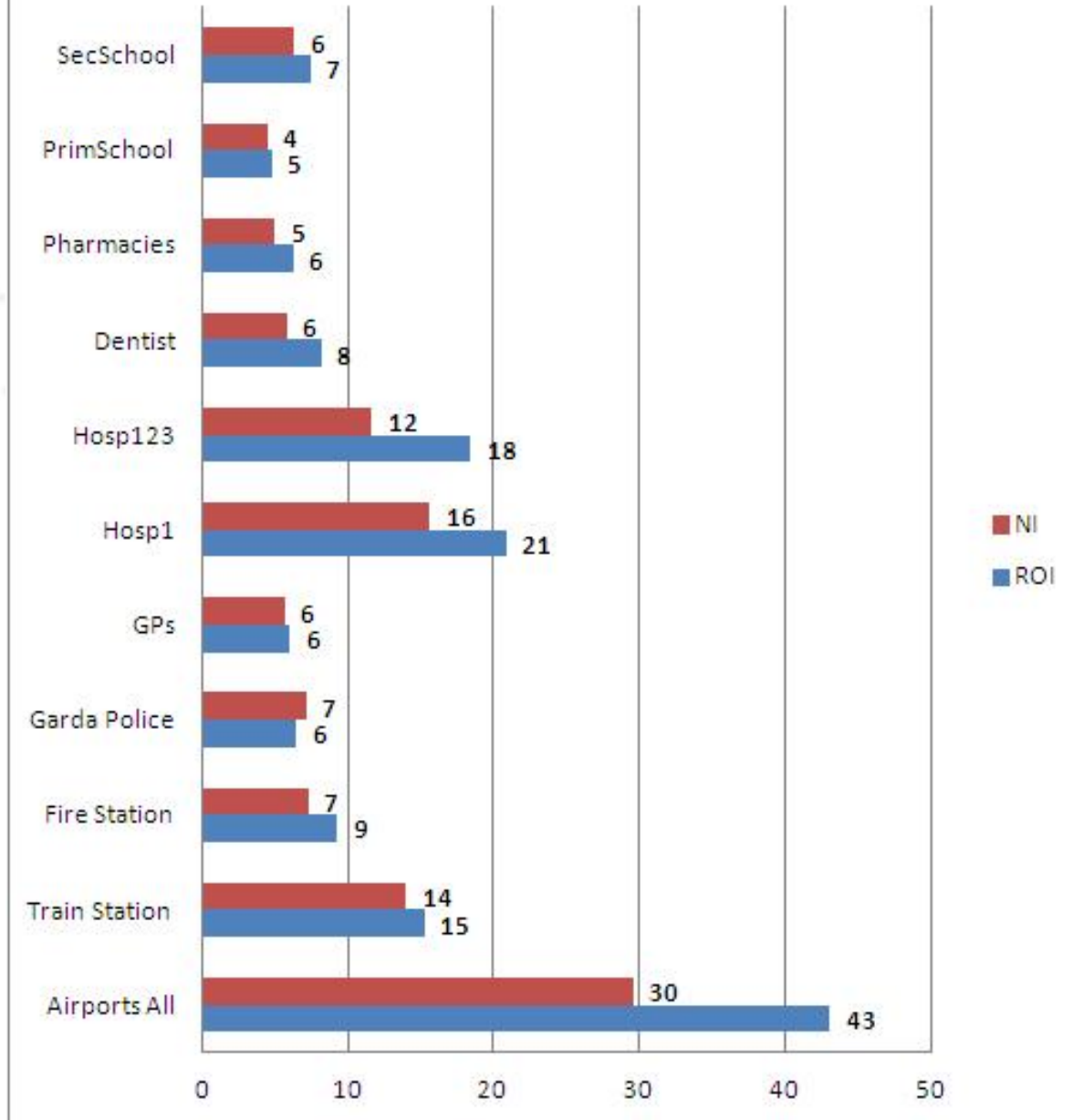


All-Island Accessibility Results

- **Small Area (RoI) and Output Areas (NI) (23,953)**
 - Average drive-time based on residential address scores
 - 18,931 Small Areas
 - 5,022 Output Areas



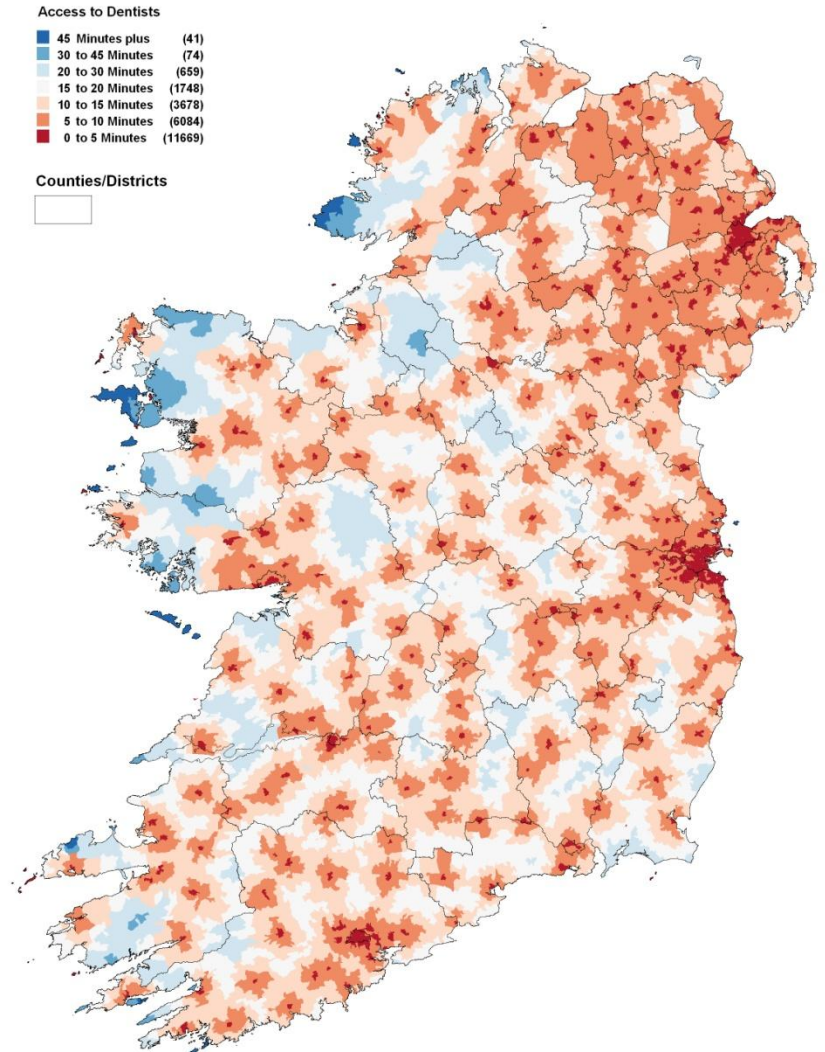
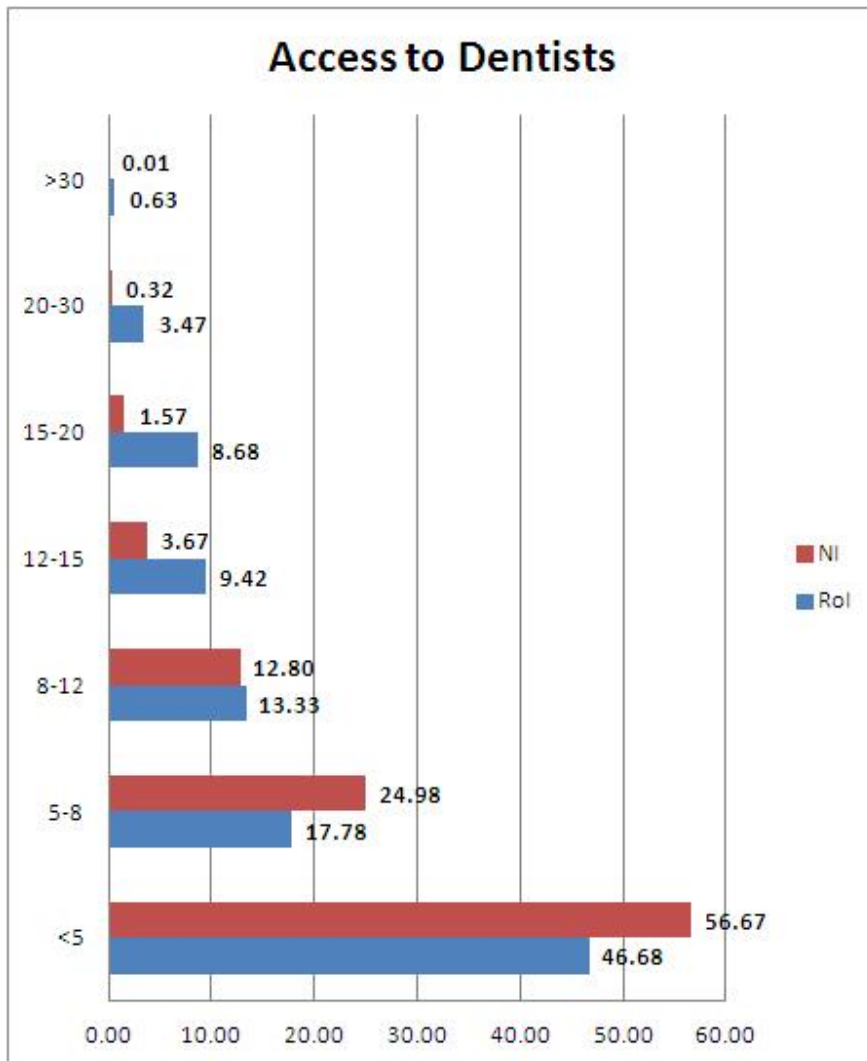
Access to Services - All-Island Analysis



- In general, average travel time to services are lower in N. Ireland
- Education seems to be roughly comparable
- Local health services (GPs, Dentists etc) are marginally lower in N. Ireland
- Noticeable difference in more strategic health services such as Emergency Hospitals
 - N. Ireland having much better access

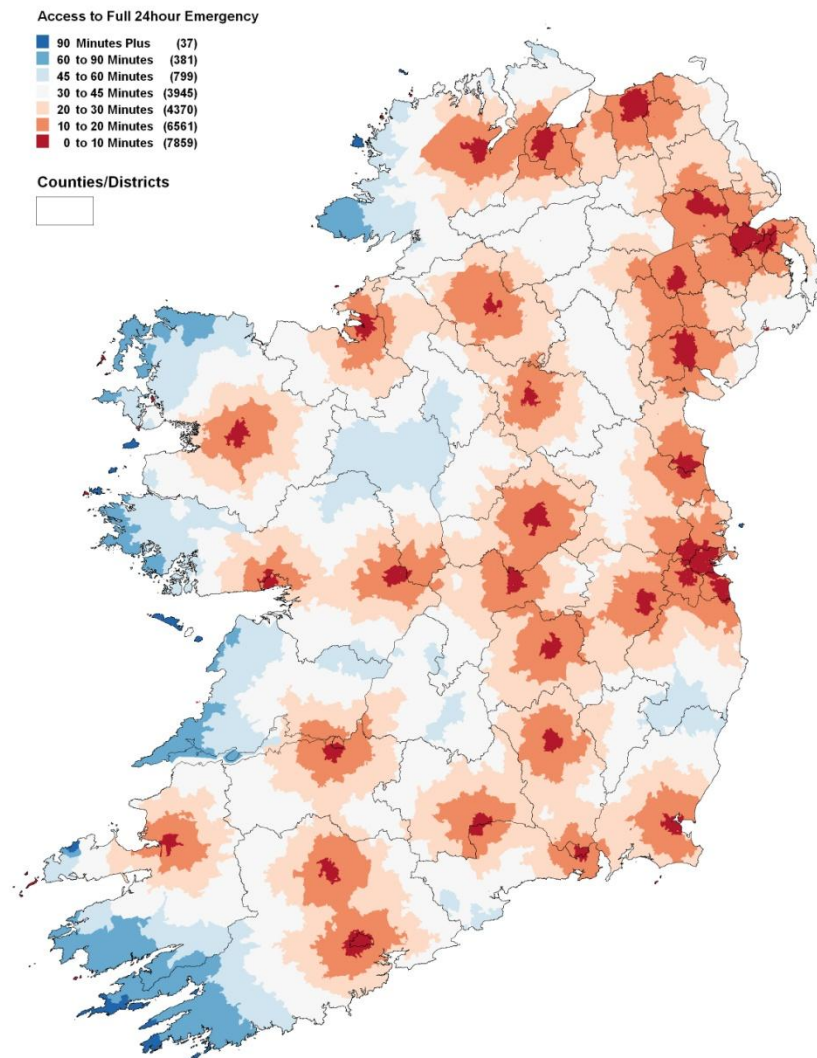
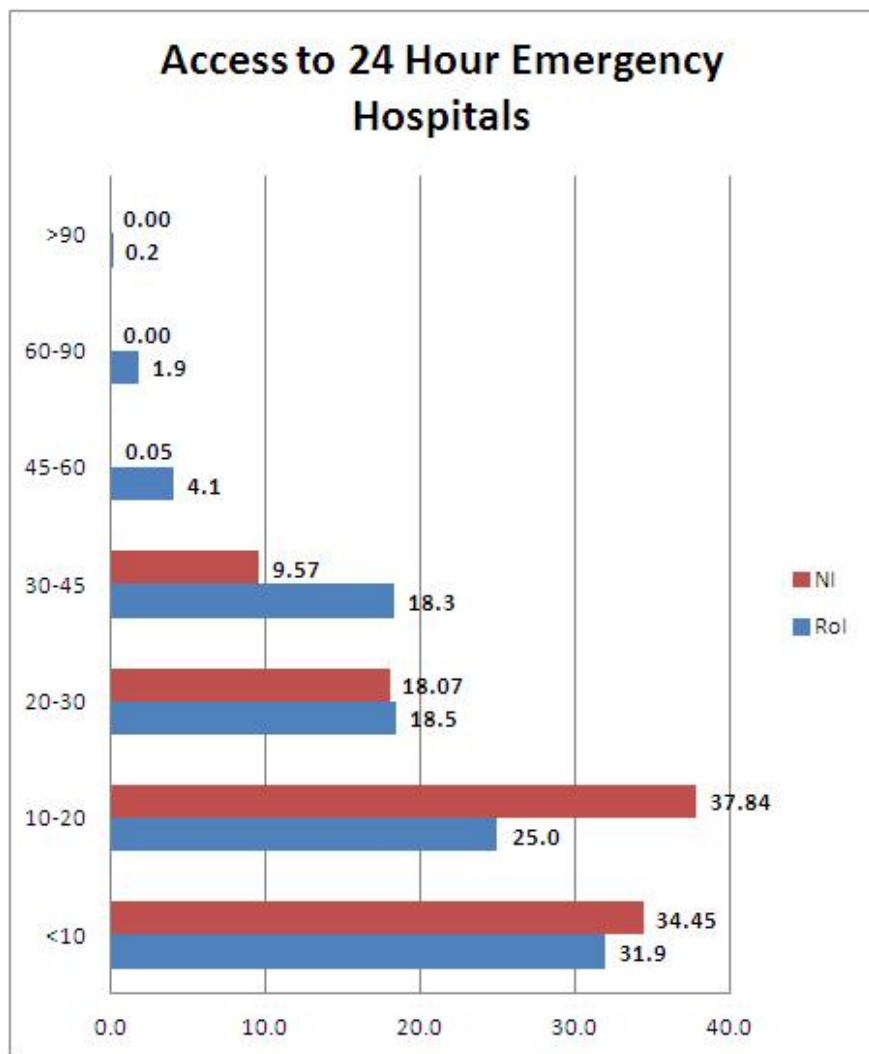
All-Island Accessibility Results

- Maps
 - Dentists



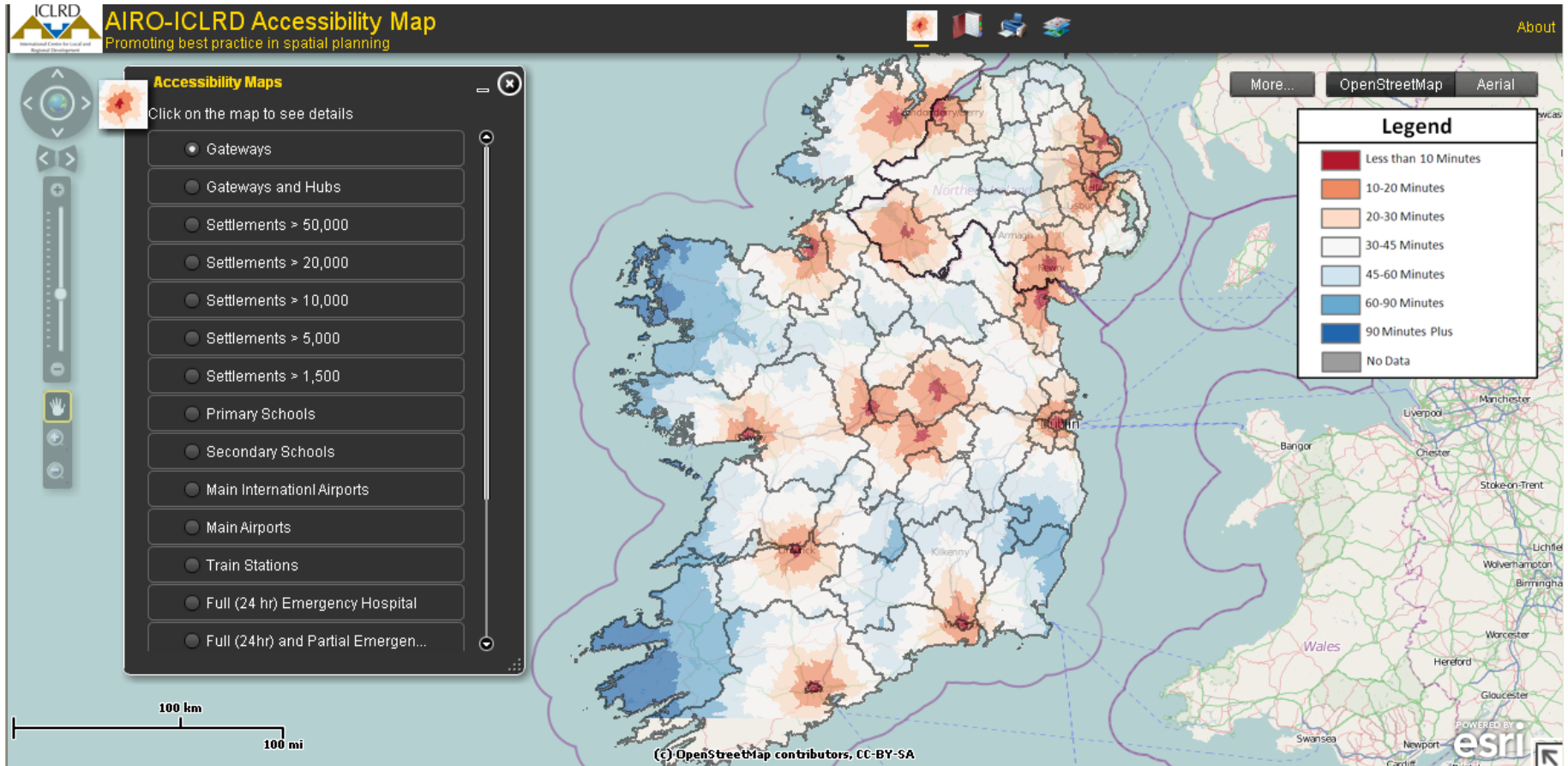
All-Island Accessibility Results

- Maps
 - Full 24 Hour Emergency Care



All-Island Accessibility Tools

<http://airomaps.nuim.ie/airoaccessmap>



[View results at LA level](#)

All-Island Deprivation Index

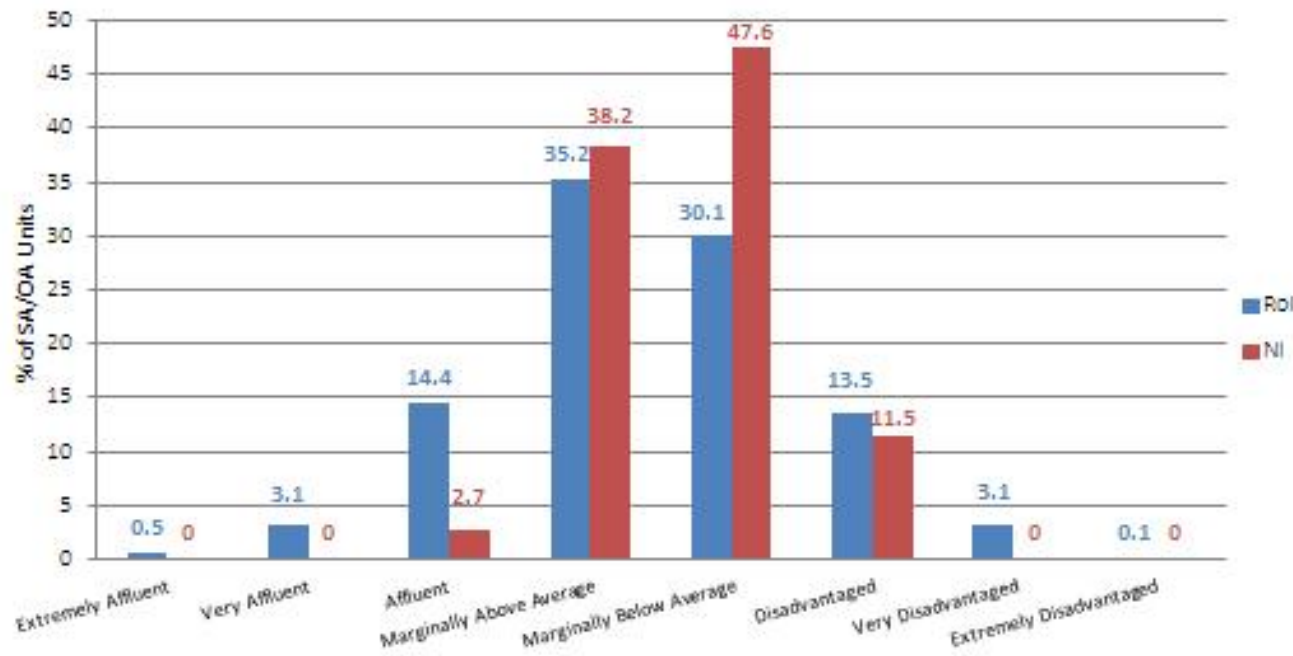
- For the first time, the 2011 Census has been coordinated throughout all European countries
 - Development of small area deprivation at a Europe-wide level
- The 2011 Census in Ireland and Northern Ireland now provide a unique opportunity to study the spatial distribution of deprivation from a comparative perspective
- Developing an index of deprivation requires the identification of comparable multi-national data
 - Recent UK indices such as the IMD/MDM are predominantly based on administrative data (income, employment, health, education, proximity to services)
 - No comparable datasets within the RoI
 - Legacy of poor data management procedures
 - Non-unique nature of Irish addresses
 - Lack of a unique identifier such as ‘Postcode’
 - As a consequence, any All-Island Deprivation Index (or trans-national European deprivation index) must be based on the Census of Population
- The aim within the current study was to demonstrate the feasibility of constructing a deprivation index across two jurisdictions.

All-Island Deprivation Index

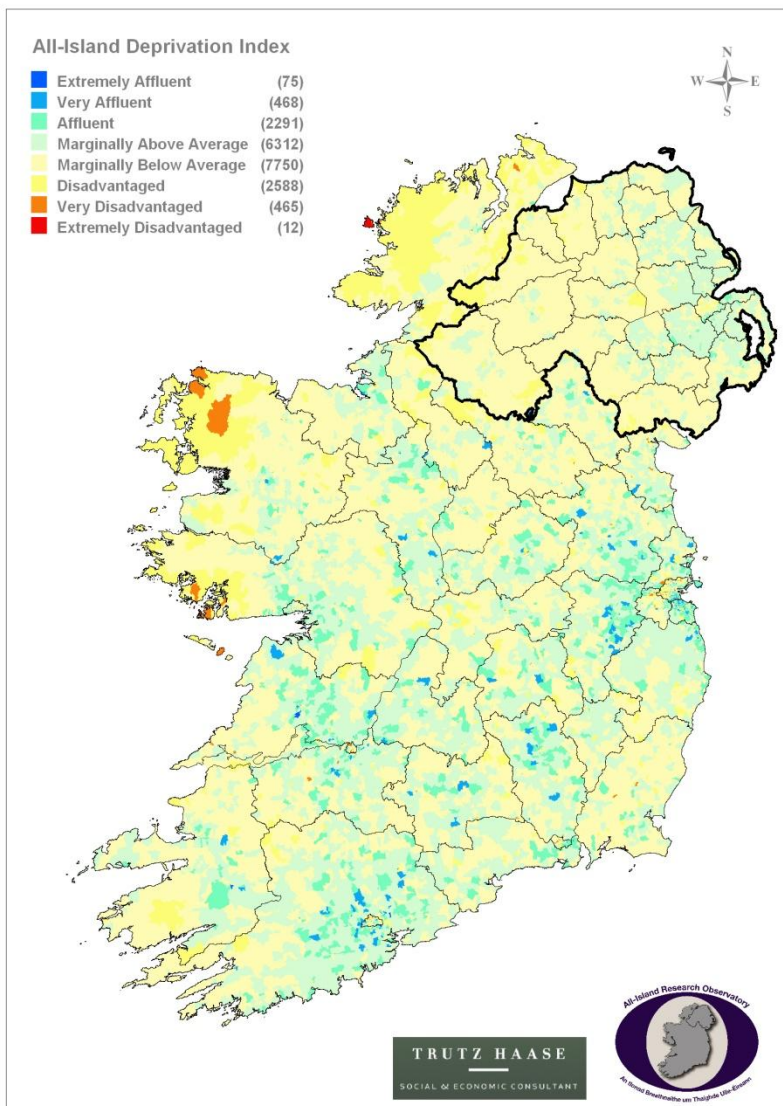
- The All-island Deprivation Index is constructed along similar lines to the Pobal-Haase Deprivation Index for Small Areas
 - <http://maps.pobal.ie/#/Map>
- The overall index draws on ten indicators to express a combination of three dimensions of relative affluence and deprivation:
 - Demographic Profile
 - % change in population over 5 years
 - % population under 15 and over 65
 - % population with primary school education only
 - % of population with third level education
 - Mean number of persons per room
 - Social Class Composition
 - % population with primary school education only
 - % of population with third level education
 - % households headed by professional , managerial and technical employees
 - % households headed by semi-skilled, unskilled manual workers
 - Mean number of persons per room
 - Labour Market Situation
 - % households with children aged under 15 and headed by single parent
 - Male unemployment rate
 - Female unemployment rate

All-Island Deprivation Index - Results

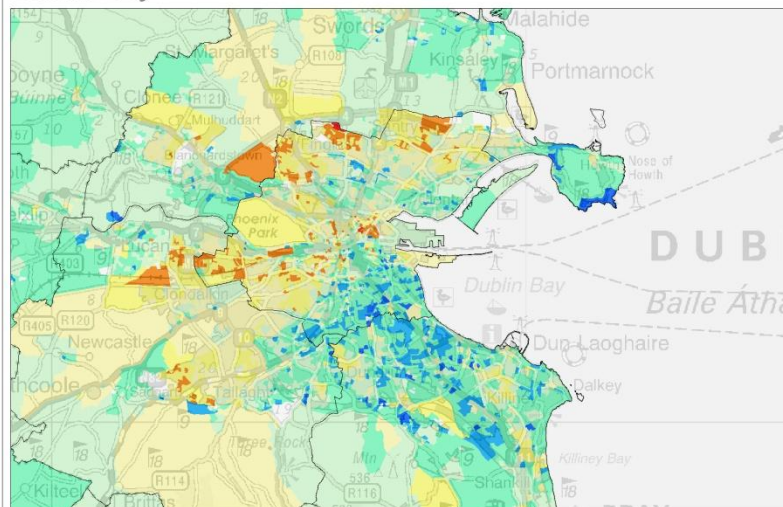
- The All-island Deprivation Index results are normally distributed, with most scores clustered around the mean and fewer at the extremes
- Eight labels
 - Extremely Affluent, Very Affluent, Affluent, Marginally Below Average, Marginally Above Average, Disadvantaged, Very Disadvantaged and Extremely Disadvantaged
- The initial findings of the *Index* suggest that there are more extremes in levels of both disadvantage and affluence present within and across the Republic of Ireland



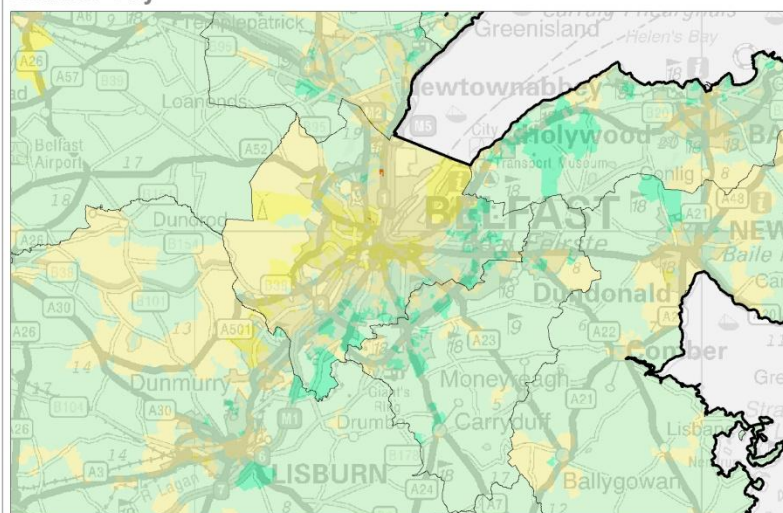
All-Island Deprivation Index - Results



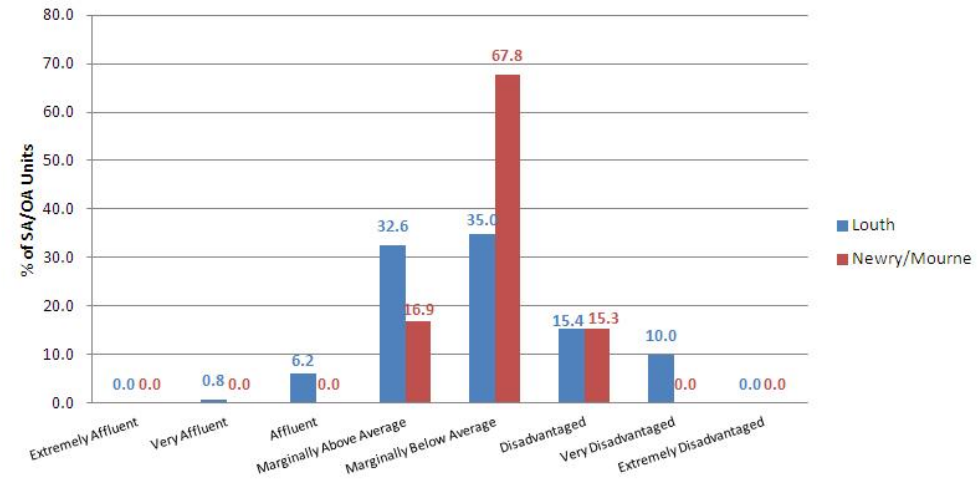
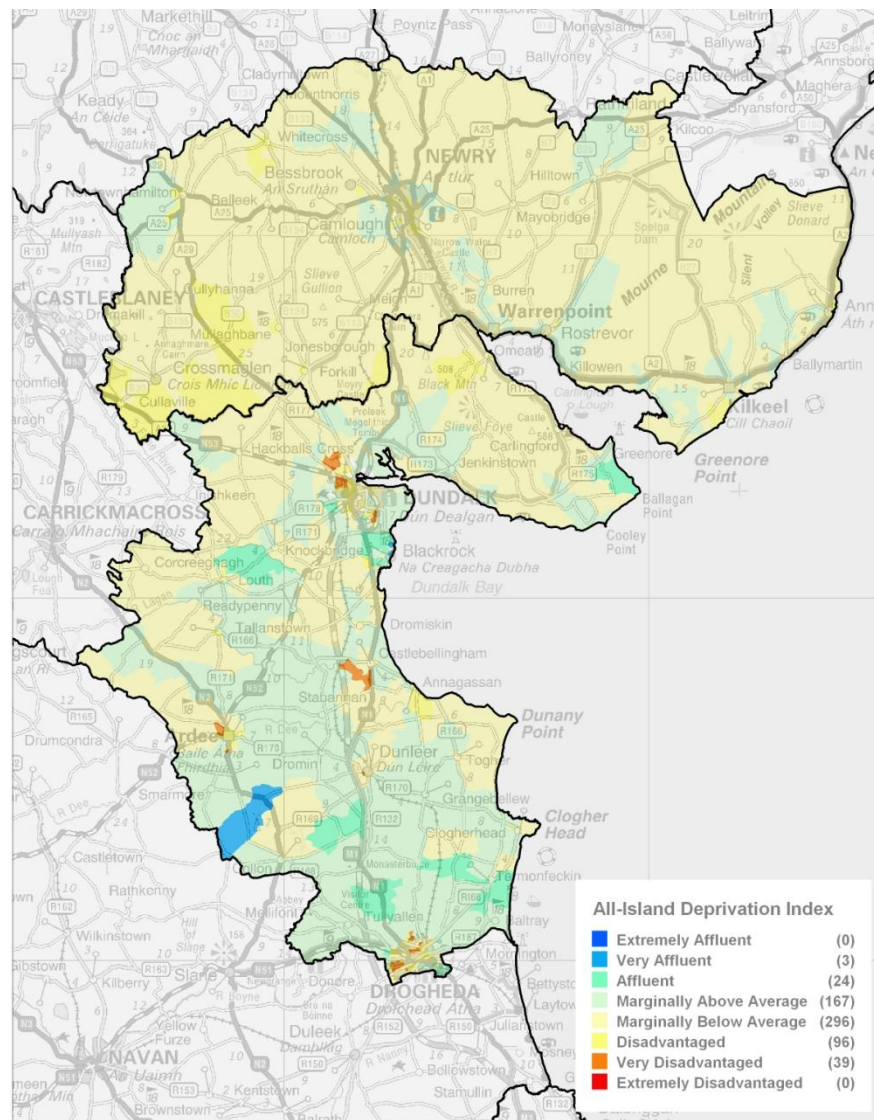
Dublin City



Belfast City

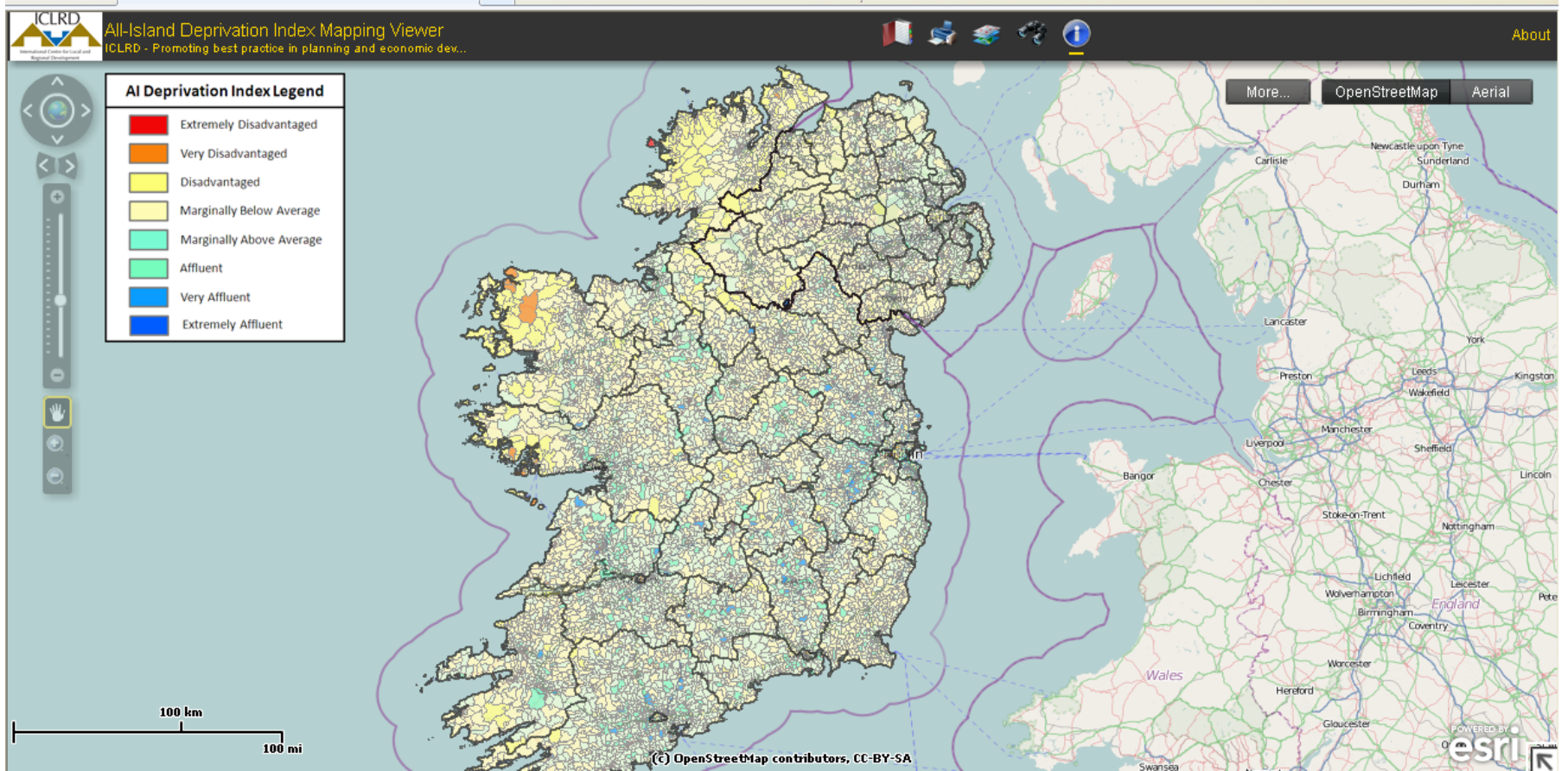


All-Island Deprivation Index - Results



All-Island Deprivation Index - Tool

<http://airomaps.nuim.ie/AIDepIndex>



Thanks

Demo available at refreshment breaks

[**http://airomaps.nuim.ie/airoaccessmap**](http://airomaps.nuim.ie/airoaccessmap)

[**http://airomaps.nuim.ie/AIDepIndex**](http://airomaps.nuim.ie/AIDepIndex)