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2021

Demographic Statistics Advisory Group

13 June 2023

Topics covered

Item	Description
1	2021 Census update
2	Flexible Table Builder demo
3	Population Statistics update
4	Geography update

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Census 2021 update

Outputs schedule

May 2022 (Population and Households)

Headline population and households (rounded)

September 2022

Ethnicity, Identity, Language, Religion (unrounded population & households)

December 2022

Health, Disability and Housing characteristics

February 2023

New output geographies (including person and household counts)

March 2023

Labour market, Qualifications, Sexual Orientation, Household relationships, Migration etc.

May 2023

Further detail for various topics and Flexible Table Builder “taster” tables

Future release plans

Release	Description	Planned release date	Geography
Flexible Table Builder	<ul style="list-style-type: none"> • Standard census topics in digital platform that allows tables to be custom built • Cross tabulations • Disclosure control built-in 	22 June 2023	Various
Final staged releases	<ul style="list-style-type: none"> • Statistics for smaller areas (including towns and villages) • Commissioned table service • Grid Square product • Postcode estimates etc. 	From autumn 2023	Various
Microdata	<ul style="list-style-type: none"> • NILS/NIMS • Samples of census data • Origin-destination data • Safe setting access, research projects etc. 	From December 2023	TBC

Draft microdata plans (1)

- We cannot produce all microdata products at the same time
- Engaged with academics to understand user need in Jan
- Have developed a draft strategy with priorities
- Will be published asap

Draft microdata plans (2)

Priority 1a: NILS (2021) and NIMS (2021)

- Aim for launch in winter 2023
- To be tabled at the NILS Steering Group (tomorrow)

Priority 1b: Comprehensive SAR

- Subject to approval of Northern Ireland Registrar General
- Aim for launch in 2024

Priority 2: SARs (1/5/10%) and Origin-Destination

- Alignment with England and Wales microdata samples where possible
- Autumn 2023 to begin development – will build on lessons learnt from Priority 1 products

Priority 3: EES (2021), CARS (2021)

- Development starts in 2024 – will build on lessons learnt from Priority 1 and Priority 2 products

Considerations

Timing and delivery could be impacted by:

- Decisions on geography
- If/how the new cell-key SDC methods apply to microdata
- Infancy of Comprehensive SAR concept
- Developments in other parts of UK/RoI
- International sample (IPUMS)

Strategy will provide more information when published

Flexible Table Builder Demo

<https://build.nisra.gov.uk/en/>

Population Statistics update



Department of

Finance

An Roinn

Airgeadais

- Reconciled Census 2021-based mid-year population estimates for 2011-2021
- Mid-year Population Estimates for 2022
- Rebasing Smaller Areas 2011-2021
- Rebuilding MYE on Data Zones/Super Data Zones



Northern Ireland

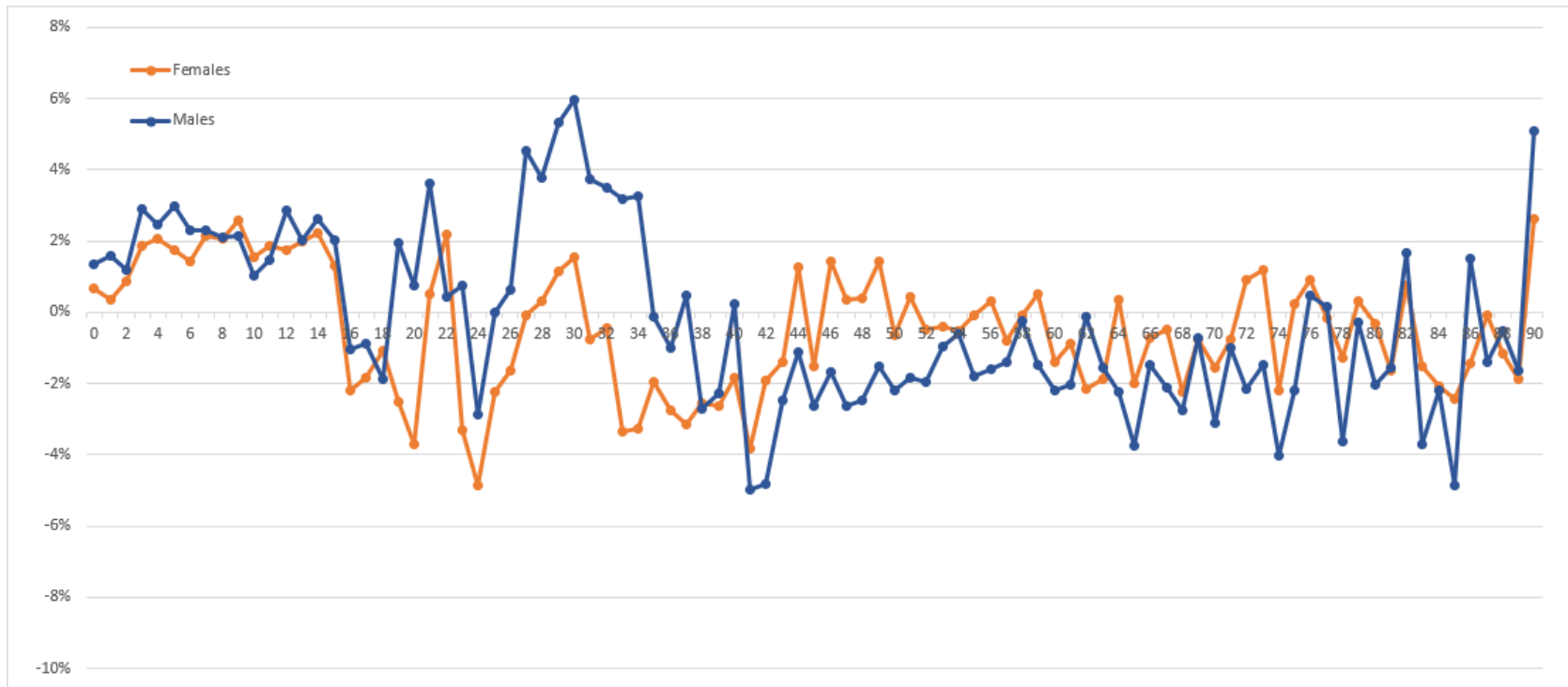
2021 rolled-forward mid-year estimates was 4,917 (0.26%), **lower** than Census 2021-based MYE

England & Wales

2021 rolled-forward mid-year estimates was 268,500 (0.45%), **higher** than Census 2021-based MYE



Rebasing 2011 based estimate for 2021 vs 2021 based (2)



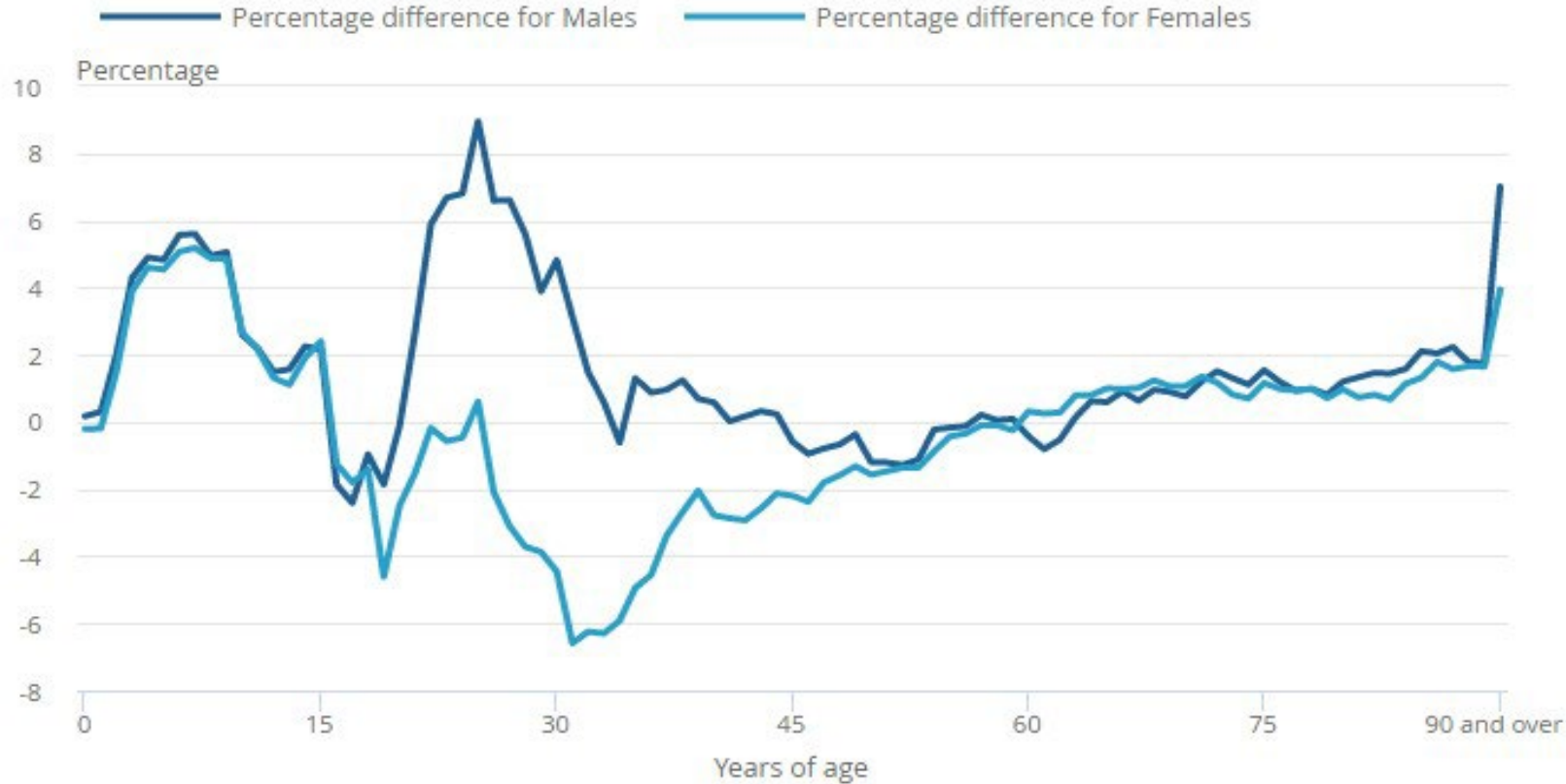
Above the line means 2011>2021
So need to reduce the 2011 series
Which means increase international outward migration (2012-2020)

Below the line means 2011<2021
So we need to increase the 2011 series

Decrease international outward migration



Rebasing 2011 based estimate for 2021 vs 2021 based (3)



At present 2021-based projections will not be published before March 2024.

There has been a proposal that we could wait for NRS to complete Scottish figures and run 2022-based projections.

This would mean:

- no 2021-based projections
- Publication of 2022-based National projections from March 2025 (earliest)
- Publication of 2022-based Sub-National projections from 2026

Census Office are keen to take feedback on a proposed 2022-based set of projections



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Geography update

Content

New statistical geographies

- Why they were needed
- What do they look like

Grid-Squares

- What is the Grid-square product
- 2021 Grid-square considerations

Approximating geographies

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Data Zones geography

Why new geographies were needed

Practical reasons

- SOA and SA created using data which is now out of date
- Areas linked to former local government boundaries
- SA layout issues, for example, irregular shape, donut polygons

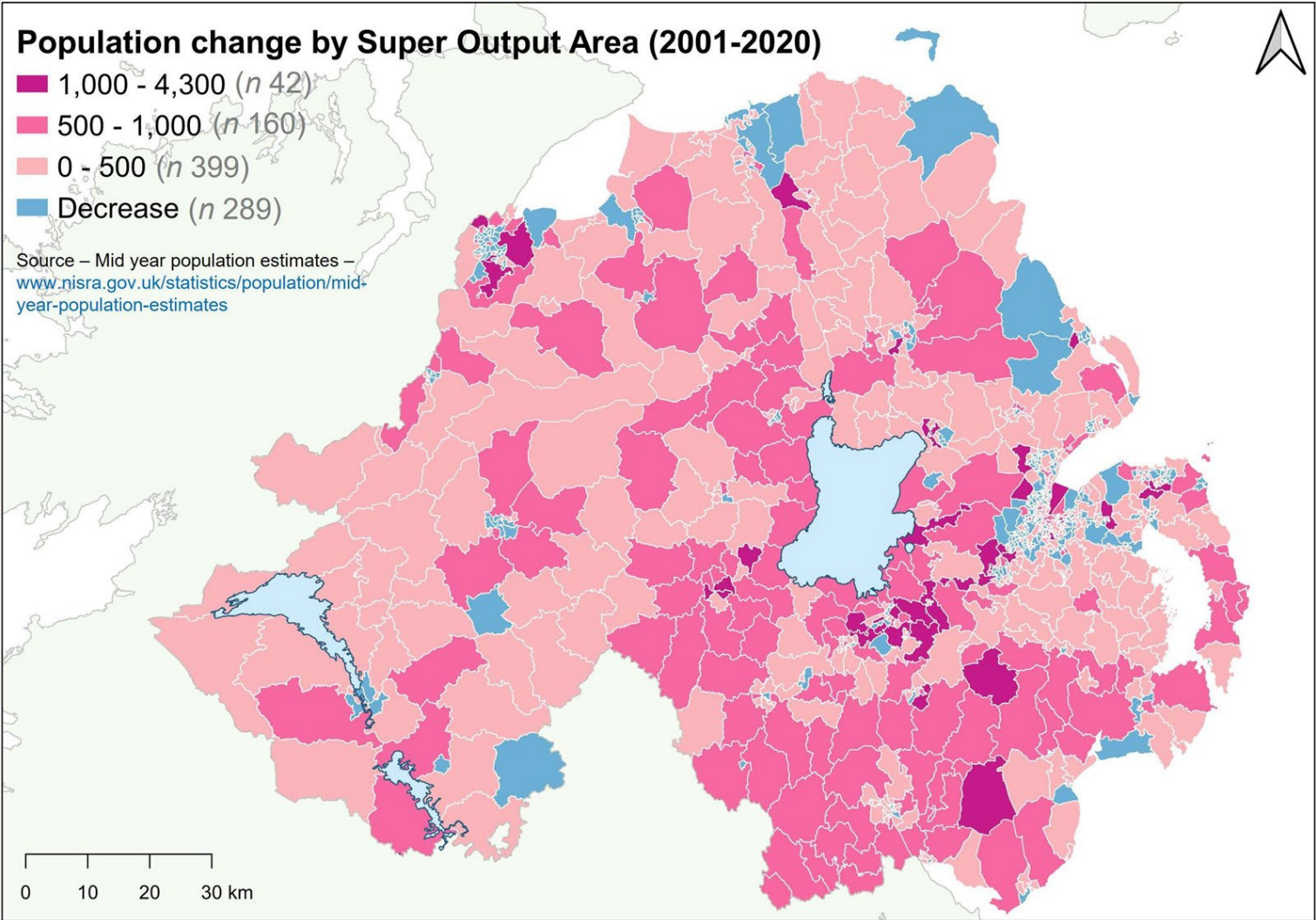
User engagement and policy

- User feedback from 2018 outputs strategy consultation
- Ministerial advice to align with District Electoral Areas

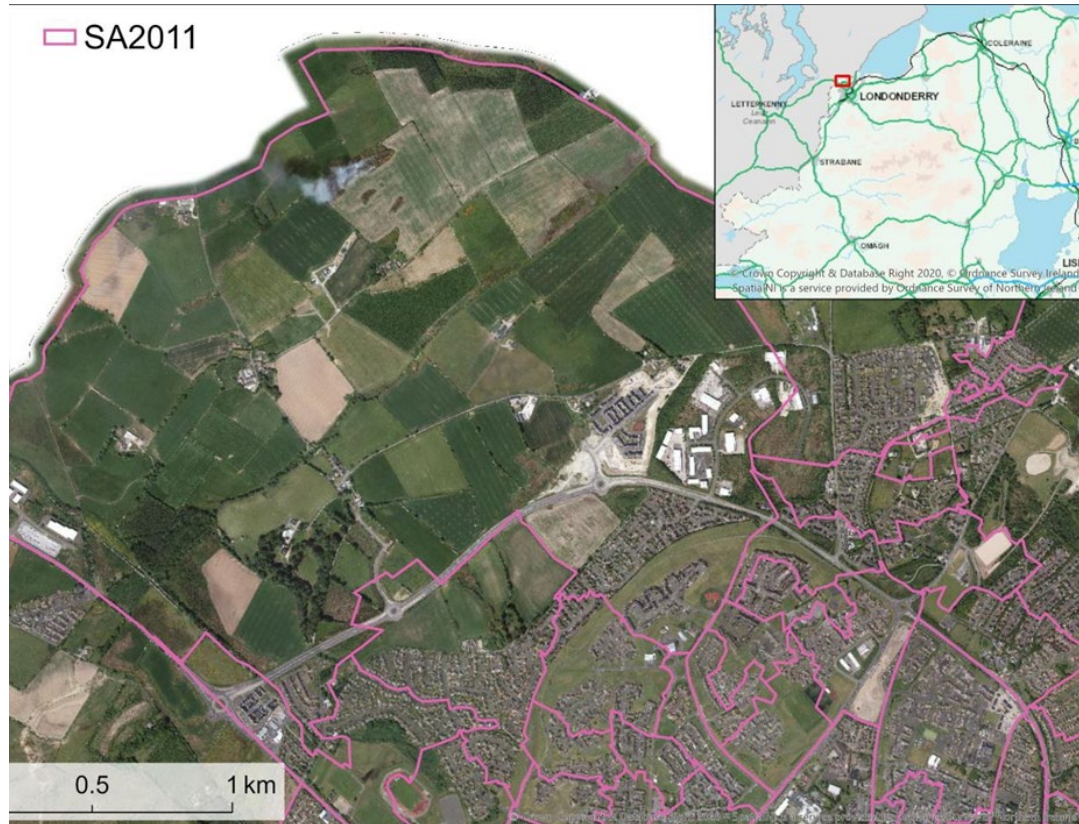
Population change by Super Output Area (2001-2020)

- 1,000 - 4,300 (n 42)
- 500 - 1,000 (n 160)
- 0 - 500 (n 399)
- Decrease (n 289)

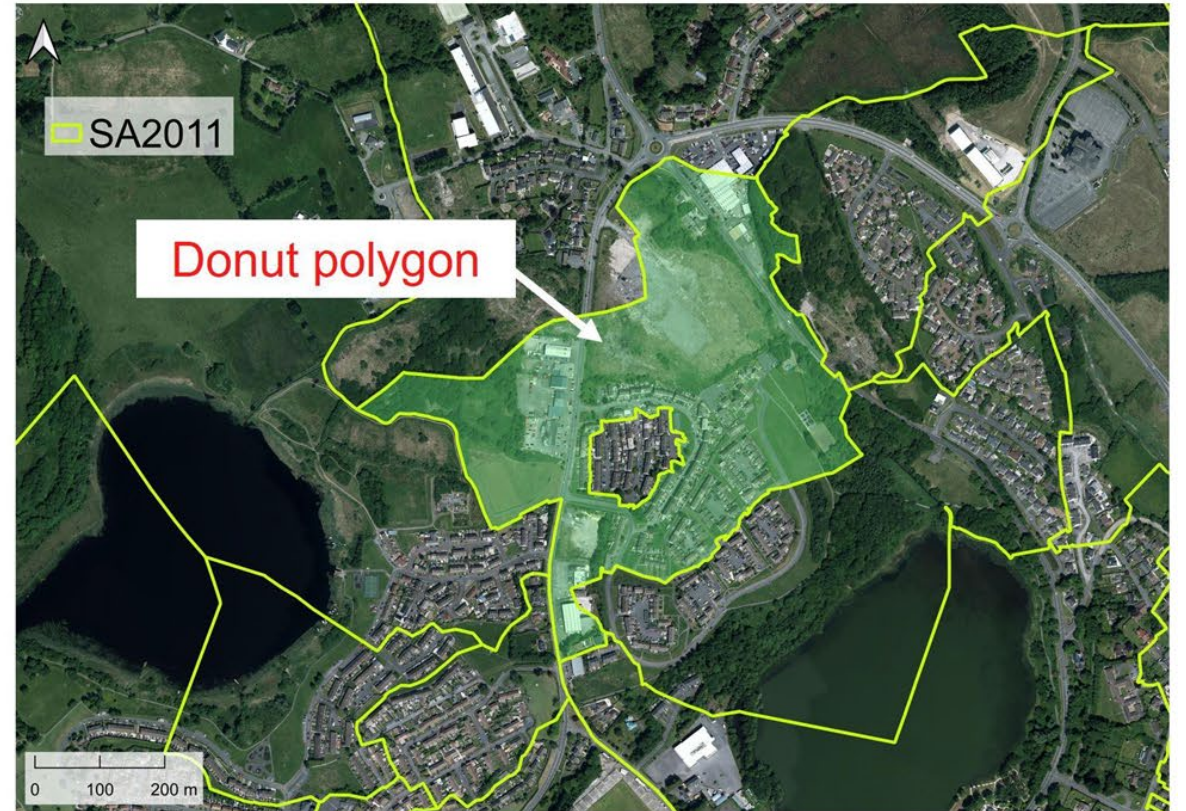
Source – Mid year population estimates – www.nisra.gov.uk/statistics/population/mid-year-population-estimates



Small Area vs Data Zone



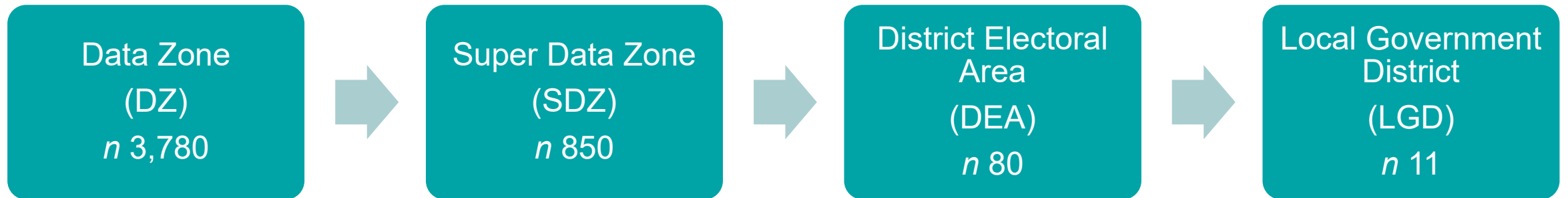
Irregular shapes (1)



Irregular shapes (2)



Main output geography hierarchy for Census 2021



Geography	Average per LGD	Range per LGD	Average per DEA	Range per DEA	Average per SDZ	Range per SDZ
Super Data Zone	77	49-175	11	6-22	-	-
Data Zone	344	223-735	47	24-100	4	2-8

What the new geographies provide

- More balanced distribution of population across areas
- Readily identifiable boundaries and compact shape
- Internally similar areas in terms of tenure and accommodation type
- Nesting within DEAs and LGDs
- Alignment with larger settlements

More information is available on the NISRA website:

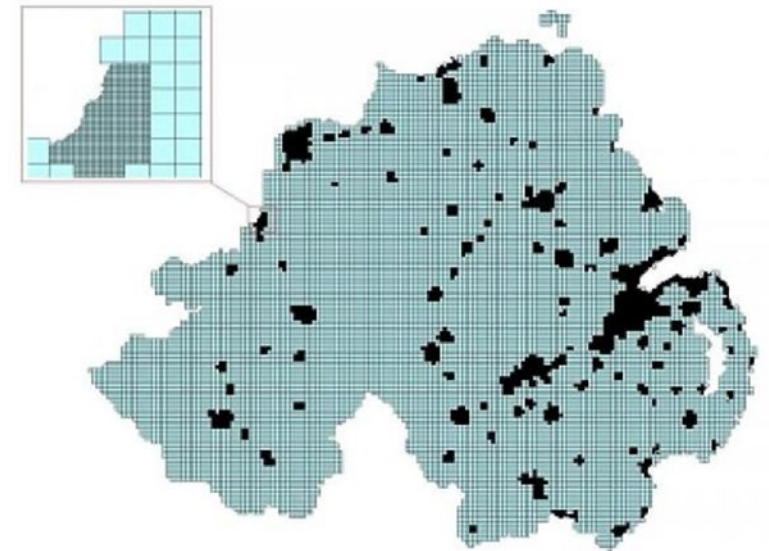
<http://www.nisra.gov.uk/statistics/2021-census/results/census-output-geography>

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Grid Square geography

Grid Square data

- Available from 1971 to 2011 Censuses
- Combined 1km and 100m grid squares
- More restricted range of outputs (typically univariate)
- Primarily used to produce towns and villages data
- Data suppressed in grid squares below person and Household thresholds
- 2011 product downloadable from NISRA website
- 1971 to 2011 available from Census Customer Services (71 to 01 from UKDS)



Census 2021 grid square product - considerations

What is the main purpose

- Continue the time series from 1971?
- 2021 specific product?
- Both?

Can we improve for 2021

- Update Combined grid (currently based on settlements – option to base on 2021 census population density)?
- More variables than before?
- Can we revisit minimum thresholds?

Format

- Static database and/or interactive tool (custom area builder)

Availability

- Download/digital product online etc.

Need to be mindful of disclosure risk

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Approximating geographies

NI geographies in scope (1)

Geography	Exact counts	Building Block
Data Zones	Yes	N/A
Super Data Zones	Yes	Data Zones
District Electoral Areas	Yes	Data Zones
Local Government Districts	Yes	Data Zones
Counties	?	?
Parliamentary Constituencies	?	?
Health and Social Care Trust	?	?
Former Local Government Districts	?	?
Towns and Villages	?	?
Current Wards	?	?
Former Wards	?	?
Super Output Areas	?	?
Small Areas	?	?

Approximating geographies

Geographies that don't nest can be approximated

- Both Data Zones and Grid Squares can facilitate approximation
- Not exact counts but within tolerances
 - Data on exact basis not available in outputs due to disclosure by differencing

Method

- Overlaying different geographies
- Populating with census data
- Attributing Data Zones or Grid Squares on basis of majority population

Approximating using Data Zones

Geography	Number of areas	Exact count and DZ approximation	Exact count and DZ approximation	Exact count and DZ approximation	Exact count and DZ approximation	Exact count and DZ approximation	Exact count and DZ approximation
		within 1%	within 2%	within 3%	within 5%	within 10%	within 20%
Counties	6	100%	100%	100%	100%	100%	100%
Parliamentary Constituencies	18	83%	100%	100%	100%	100%	100%
Health and Social Care Trusts	5	100%	100%	100%	100%	100%	100%
Former LGDs	26	85%	100%	100%	100%	100%	100%
Towns and Villages (Settlement (2015))							
Band A - Belfast	1	100%	100%	100%	100%	100%	100%
Band B - Derry City	1	100%	100%	100%	100%	100%	100%
Band C - Large town	14	93%	100%	100%	100%	100%	100%
Band D - Medium town	10	90%	100%	100%	100%	100%	100%
Band E - Small town	17	47%	59%	76%	82%	100%	100%
Band F - Intermediate settlement	24	63%	71%	75%	83%	100%	100%
Current Wards	462	10%	18%	27%	44%	78%	98%
Former Wards	582	7%	14%	20%	35%	62%	87%
Super Output Areas	890	5%	10%	14%	25%	46%	75%
Small Areas	4,537						

Approximating using Grid Squares

Geography	Number of areas	Exact count and GS approximation	Exact count and GS approximation	Exact count and GS approximation	Exact count and GS approximation	Exact count and GS approximation	Exact count and GS approximation
		within 1%	within 2%	within 3%	within 5%	within 10%	within 20%
Current Wards	462	76%	93%	98%	100%	100%	100%
Former Wards	582	69%	88%	94%	98%	100%	100%
Super Output Areas	890	46%	65%	77%	90%	99%	100%
Small Areas	4,537	21%	29%	37%	48%	68%	88%
Towns and Villages - Bands G and H	574	76%	85%	89%	93%	98%	99%

NI geographies in scope (2)

Geography	Exact counts	Building Block
Data Zones	Yes	N/A
Super Data Zones	Yes	Data Zones
District Electoral Areas	Yes	Data Zones
Local Government Districts	Yes	Data Zones
Counties	No	Data Zones
Parliamentary Constituencies	No	Data Zones
Health and Social Care Trust	No	Data Zones
Former Local Government Districts	No	Data Zones
Towns and Villages	No	Data Zones*
Current Wards	No	Grid Squares
Former Wards	No	Grid Squares
Super Output Areas	No	Grid Squares**
Small Areas	No	Not available

Consistent geography over time

New DZ/SDZ geography replaces SA/SOA geography

What about census data over time?

- Grid Square data is available back to 1971 – mainly univariate
- DZ/GS approximations bridge the gap for multi-variate analysis
- DZ Lookup tables are available – GS lookups will be available when ready

What about local level statistics over time?

- NISRA is actively looking into longer-term options for Census and Population & Migration Statistics
- Further information will be communicated when decisions are taken