

**United Nations Expert Group on the Integration of
Statistical and Geospatial Information
First Meeting
New York, 30 October - 1 November 2013**

Agenda: Item 10

Issues in managing confidentiality and data access in the ABS ¹

Prepared by
Australia Bureau of Statistics

¹ This document is being produced without formal editing



Statistical Spatial Framework



Issues in managing confidentiality and data access in the ABS

Presentation to UN Statistical-Geospatial Expert Group
October 2013





Background

- Increasing demand for location based information.
- Large variety of geographic regions.
- Increasing interest in data for small area regions.
- Larger amounts of information from other sources available.
- Greater computing power to analyse, compare and link across datasets.

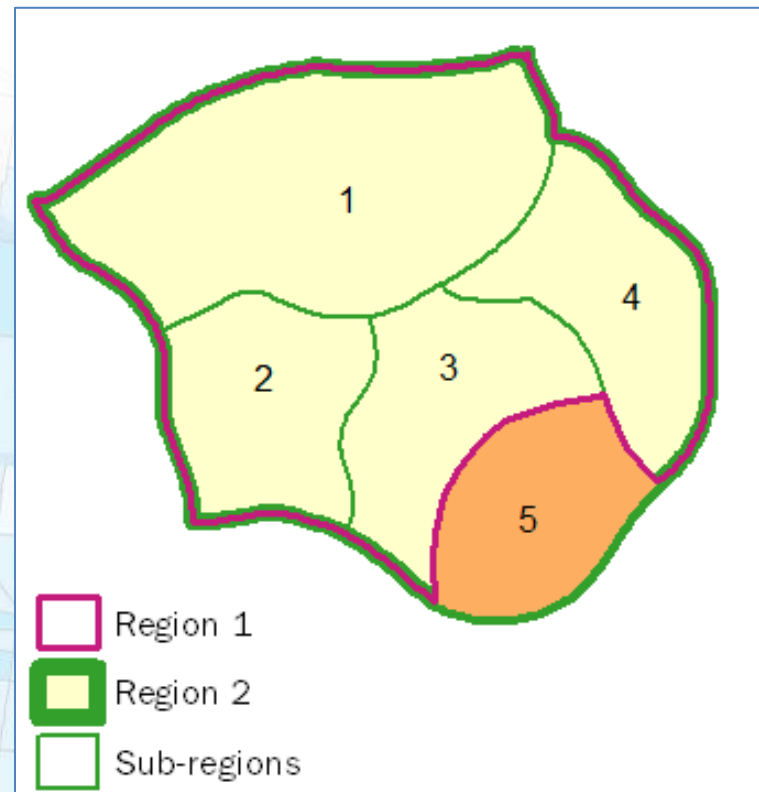
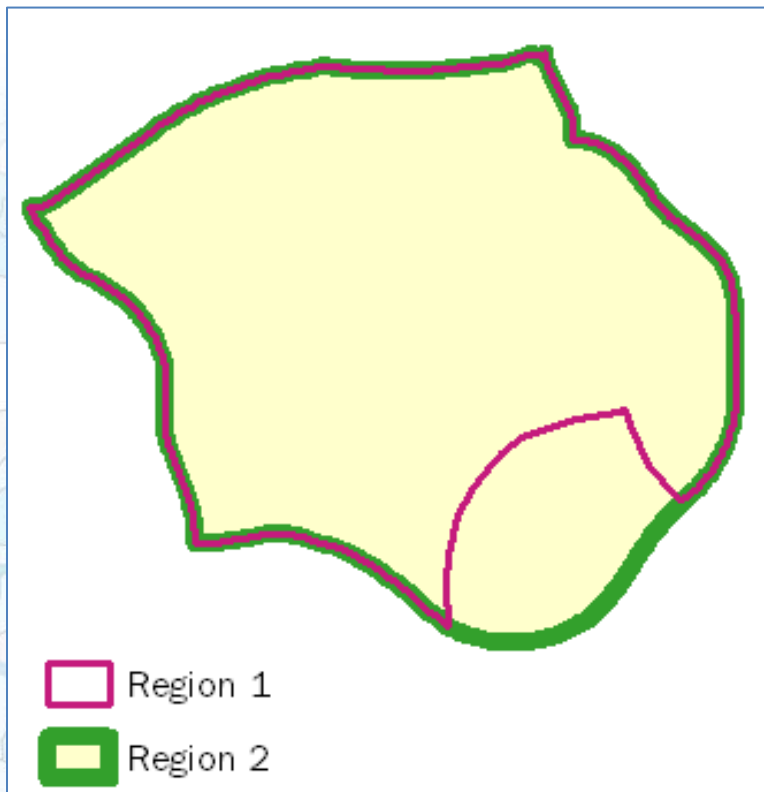


ABS assessment of issue

- Legislated requirement to protect confidentiality – also key to maintaining provider trust and cooperation.
- Increasing level of risk from geospatial enabled data, principally through geographic differencing.
- Current confidentiality protection mechanisms and policies under consideration.



Geographic differencing





ABS confidentiality protection

Standard data suppression and category collapsing mechanisms are generally used in the ABS.

Population Census use data perturbation, which is a suitable method because it is “count data”.

Several additional processes are used in other areas where risks of geographic differencing exists:

- mapping, identification of problematic areas and then suppression, or
- randomised reallocation using correspondences.



ABS long-term solution

Use standard geography as building blocks for all geographic data releases.

Develop an integrated approach to confidentialising data releases, including:

- Increased use of perturbation.
- Integrated identification and resolution of geographic differencing issues.
- Use of suppression as a last resort, principally for magnitude data.



Other options considered

- Limit all geographic data releases to a limited set of geographies – too restrictive.
- Release synthetic data from datasets – costly and may not meet all user needs.
- Release a smoothed dataset across grid points – costly and may not meet all user needs.



Statistical Spatial Framework

ABS would be happy to meet your agency to discuss or present

For more information

E-mail: geography@abs.gov.au

Visit: www.nss.gov.au