Implementig the GSGF in France

Meeting the Challenge and Opportunity of Sustainable Development with Integrated Statistical and Geospatial Information

Jean-Pierre Cling, Vincent Loonis
Insee

Background

- Insee has a longstanding history in the management of Geospatial and Statistical information.
- Until recently, this management was *in-house* and essentially aimed at meeting the census's organisational needs.
- It is not suitable for feeding the growing demand on small area statistics.
- In order to achieve its "2025-vision" of a fully geocoded statistical information system, Insee has to reshape its management of geospatial information.
- The new system has to be more compliant with the GSGF's principles, and will more or less be that of a *data broker*.
- There is a long way to go...

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Background

- The French statistical information system is not a register-based system.
  - There are no inter-connected address, building, dwelling or population registers sharing common IDs.
  - The existing statistical or administrative files are not directly connected to the geospatial information.
- The census is a traditional census.
- The geocoding of statistical or administrative files relies on address matching with a list of addresses managed by Insee.
- Due to the quality of the addresses, the quality of the matching may vary accross files and locations (rural or urban areas).
- There is a 15-people team devoted to manage the mismatches.

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Principle 1: Use of fundamental geospatial infrastructure and geocoding of statistical information

- The new Insee system will rely on a national address register that is currently under construction.
- It will use a common tool for the matching of addresses.
- Insee is trying to be part of the governance to be sure that the new tools will meet its needs.
- To manage the mismatches, whose number will probably not decrease, Insee will nevertheless have to:
  - set up a new *in-house* automatic geocoding system relying on pseudo-IDs and cadastral information,
  - keep a reduced devoted team for the remaining mismatches,
  - set up a quality management of the geocoding.
- Insee is fostering the construction of new registers (building or dwelling) and the use of commons IDs at least within the official statistical world.

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Principle 2: Geocoded unit record data in a data management environment

- Insee is trying to build a data management environment that meets Geostat 3 recommandations, while
  - taking into account the French specificities (no registers, no common IDs),
  - being flexible enough to be compatible with any innovations (new building register, new pseudo Ids).

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Principle 3: Common geographies

The same grid system for all databases.

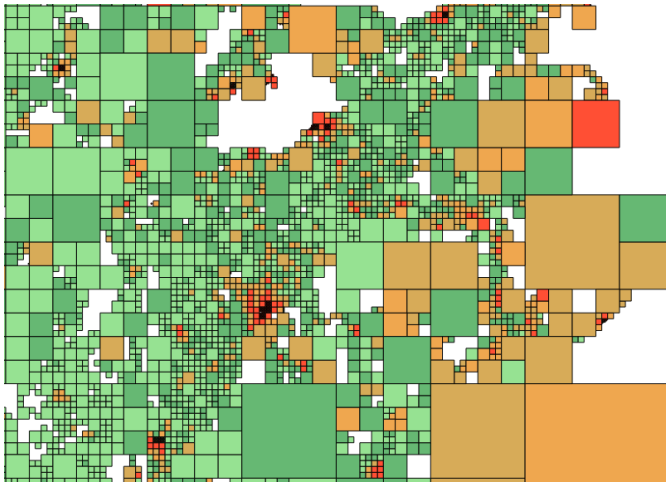

Figure: Splitting squares until meeting a given threshold (number of observations) that depends on the database. All the released information is the true one, but the squares are of various sizes.

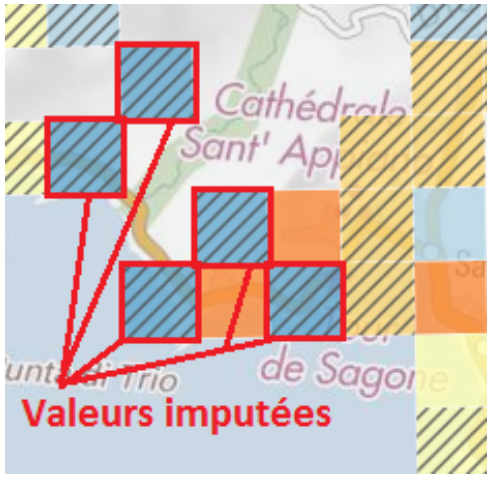

Figure: Disseminating information on same-size cells (200 m or 1 km) but with imputed values when the number of observations is below the threshold.

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Principle 3: Common geographies

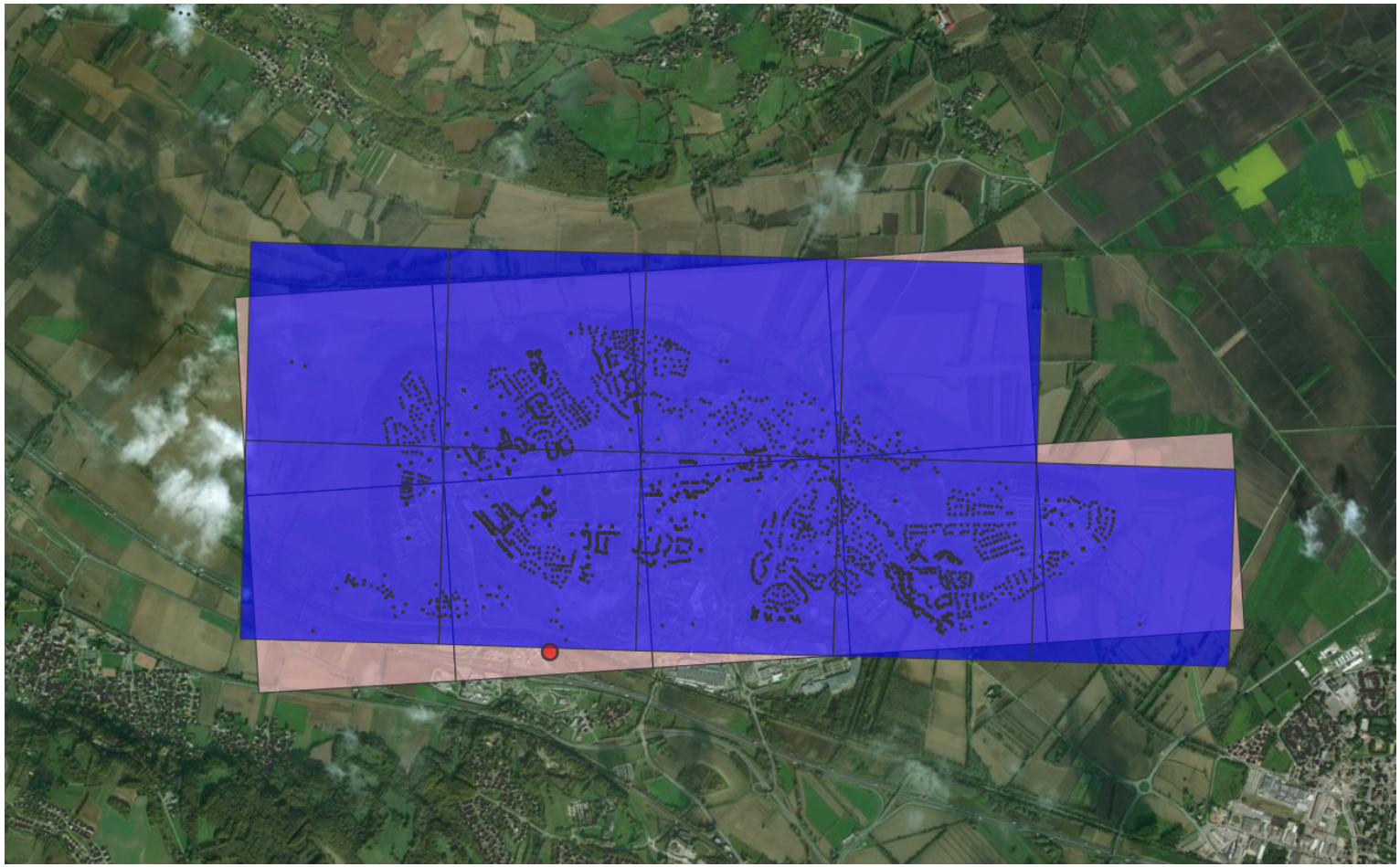

Figure: Using only the European reference system to avoid geo differencing while disseminating with two different systems (National or European)

Principle 4: Interoperability

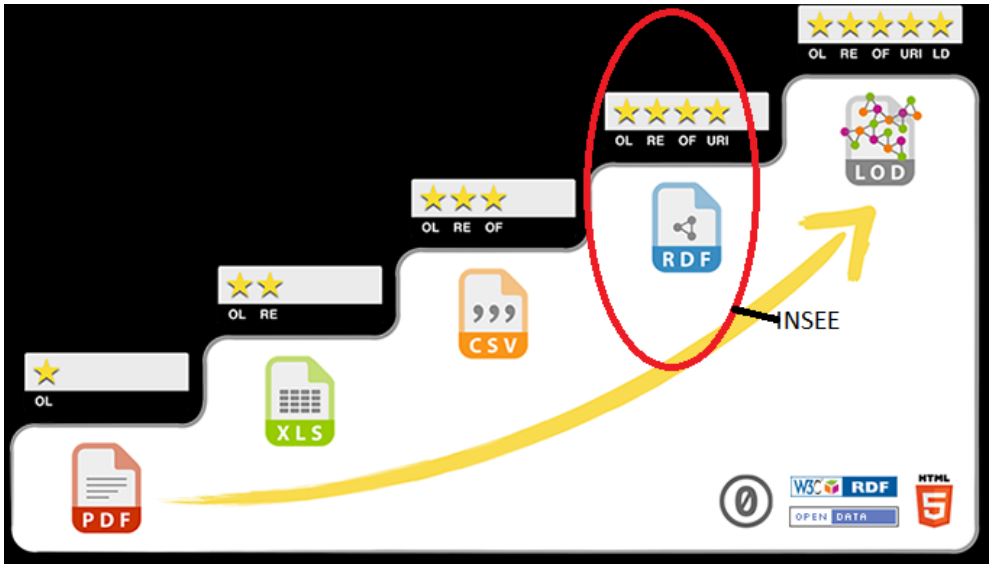

Figure: Insee is responsible for both official and statistical territorial classifications. Insee is about to disseminate according to the 4-star standard. The 5-standard is now reachable.

Principle 5: Accessible and usable geospatially enabled statistics

- Insee released last june a 200-meter-grid database with data on dwellings, incomes and population by sex.
- Insee aims at disseminating other data as soon as possible.
- The data are available, for free, as files as well as on our NMA geo-portal.
- Insee has been very careful about data protection and privacy issues.
- Insee has fostered the use of geocoded statistical information with the dissemination of a Handbook of spatial analysis, supported by EFGS and Eurostat.

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