BPR PROJECT - IDB

The Population Register and Real State Register Based on the Use of Official Administrative Records

Bogotá, Colombia  November 2017
Objective and scope of the BPR project

Current stage
Strengthen the capacity of the countries of the Andean Community to produce statistical information on population and real estate based on data from administrative records.

**Current stage**

Pilot test of an integrated system of population and real estate by country - Supported in the conceptual framework defined by the four (4) countries.

- **Municipality of Jamundí**
  - Department of Valle del Cauca

- **GALÁPAGOS**
  - Province located 972 km off the coast of continental Ecuador

- **DISTRICT OF HUASAHUASI**
  - Department of Junín Province of Tarma

- **9 Capital Cities**
  - Sucre, La Paz, Cochabamba, Oruro, Potosí, Tarija, Santa Cruz de la Sierra, Trinidad y Cobija
Integrated System of Population and properties Statistics

Conceptual Framework and Design
SIREPI design proposes six (6) modules that are supported in the metadata of the information contained in the registers.

<table>
<thead>
<tr>
<th>Metadata</th>
<th>Quality management</th>
<th>Process management- BPM</th>
<th>Transformation and integration-ETL</th>
<th>Query</th>
<th>Administration</th>
<th>Monitoring and evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Management of administrative record quality assessments</td>
<td>• Management of administrative data sources (providers)</td>
<td>• Data extraction</td>
<td>• Generation of unidentified microdata</td>
<td>• User administration</td>
<td>• Management of users’ information requirements</td>
</tr>
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<td></td>
<td>• Managing metadata tabs</td>
<td>• Administrative record Inventory Management</td>
<td>• Data Discovery</td>
<td>• Query of aggregated data (tools of data visualization)</td>
<td>• Historical Data Management</td>
<td>• Management of process indicators</td>
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<td>• Management of delivery and update of data and metadata</td>
<td>• Transformation of variables</td>
<td>• Geo-referenced information inquiry, thematic maps</td>
<td>• Managing audit logs</td>
<td>• Management of users’ satisfaction assessments</td>
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<tr>
<td></td>
<td></td>
<td>• System Process Management</td>
<td>• Integration of records</td>
<td></td>
<td>• Administration of catalogs and classifiers</td>
<td>• Process control panel</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>• Auxiliary table management</td>
<td>• Audit registers</td>
</tr>
</tbody>
</table>

Source: Federico Segui, Consultant «SIREPI Design»
The proposed databases for the SIREPI coordinate the production databases and pose a database in DATAMART for a projection of DataWarehouse.

The processes of extraction, transformation and loading, with PENTAHO tools.

Data of administrative records transformed to statistical record (identified with key identification variables and contact variables)

Transformation database

Re-identification of statistical records

Data of statistical registers (disidentified, without key identification variables or contact variables)

Operational Statistical database

(Operational Data Store – Staging Area)

Restricted access

Input database

Raw data as it is extracted from administrative registers

DATA STORE

Source: Federico Segui, Consultant «SIREPI Design»
Conceptualization: Standard Model Hybrid and Dimensional Model

Register 1 (R1) - Metadata

Register 2 (R2) - Metadata

Geographical database - BG - Metadata

Integration R1 + R2 - Metadata Result of integration

Integration con SNR - Metadata Result of integration

Code (20)

Superintendent of notaries and registration

Matricula

Integration con SNR - Metadata Result of integration
The monitoring and control processes to generate alerts are posed with process managers.

The profiling of data that allows analysis by variables and duplicates, using free BIG DATA tools.
In the results, different sources of information are compared for population from zero to four years - Pilot Jamundí, Colombia.

Methodological note: For the MYP, an approximation was made for the simple ages of 2, 3, and 4 years, with the assumption of migration and zero mortality.

<table>
<thead>
<tr>
<th>Simple age</th>
<th>Description</th>
<th>Year of application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than one year old</td>
<td>Boys/girls under one year old, with 1-dose of Triple Viral</td>
<td>2013</td>
</tr>
<tr>
<td>One year old</td>
<td>Boys/girls under one year old with 3-dose of Pentavalente</td>
<td>2014</td>
</tr>
<tr>
<td>Two years old</td>
<td>Boys/girls under one year old with 3-dose of Pentavalente</td>
<td>2015</td>
</tr>
<tr>
<td>Three years old</td>
<td>Boys/girls under one year old with 3-dose of Pentavalente</td>
<td>2016</td>
</tr>
<tr>
<td>Four years old</td>
<td>Boys/girls under one year old with 3-dose of Pentavalente</td>
<td>2016</td>
</tr>
</tbody>
</table>
Link the information from records with a geospatial component to optimize the analysis and strengthen the quality analysis of Administrative Records - Pilot Jamundí, Colombia

Geospatial visualization can be used as an input to complement missing information.