

Section 5 Progress of toponymic databases

Chapter 11 Standardization of Statistical Area Names

Centro de Referência em Nomes Geográficos, Instituto Brasileiro de Geografia e Estatística

11.1 Introduction

A country with Brazil's dimensions and regional differences demands careful planning of census operations, which are initiated with:

- Characterization of the national territory, in its fundamental aspects, for adequate assessment of its volume of data and costs for the collection operation;
- Correct representation of present boundaries (federation units, cities, subdistricts, and other territorial structures) to ensure adequate ascertainment and disclosure of results;
- Delimitation and description of small territorial collection units (enumeration areas), so as to ensure perfect recognition of work areas.

One of the biggest concerns during planning for the census is avoiding omission problems and/or coverage duplicity of census operation, which is attained by improving the maps used for operation and by a registry system; together they constitute what is conventionally called the Territorial Base.

Therefore, to attain the Territorial Base Planning goals, the territory must be split up in smaller spatial units, called territorial units or enumeration areas. The delimitation process for enumeration areas aims to support census

infrastructure planning, ensure coverage of all the national territory in the period established for census collection, allow comparability of information between censuses, as well as promote ascertainment and disclosure of results for political-administrative divisions (DPA) and other national territorial structures.

In this context, it is important to highlight the definitions of Disclosure Areas and Ascertainment Areas.

Disclosure Areas are areas legally instituted at states and cities, related to DPA, in force at the trigger date of census surveying, which meet the disclosure requirement of census data. DPA portrays state borders and limits for cities, districts and subdistricts. According to the 1988 Constitution, DPA management is the responsibility of states and cities; intracity territorial structure management is under the competence of cities as well.

Beyond legal obligation, the Brazilian territorial structure constitutes one marker for the processes of occupation and regional distinction of the territory, since the territory is, largely, the direct or indirect result of State action. Beyond that, being it a dynamic structure, it goes through constant changes, demanding an effort for updating of the limits of territorial units which compose the Brazilian federation.

Disclosure areas portrayed at IBGE surveys are:

- Federation Units - UFs (Federal District and states);
- Cities;
- Districts;
- Subdistricts, Administrative Regions (RAs) and zones;
- Urban areas;
- Isolated Urban Areas (AUI's) and
- Rural areas.

On the other hand, ascertainment areas are geographical areas defined on maps and logged on the

Territorial Base to serve as spatial units to ascertain statistic data in different territory environments, aiming to meet the growing demand for disclosure on these subjects. Disclosure of ascertainment areas depends, however, on partnerships established between IBGE and the agencies in charge of ascertainment areas (when they exist) such as, for example, Fundação Nacional do Índio (FUNAI), in charge of Indian Lands (TIs).

In this classification, territorial sections legally defined for cultural and environmental conservation reasons as well as those sections more directly involved with urban and rural politics stand out. IBGE currently considers the following ascertainment areas:

- Urban Cities or Villages;
- Non Urban Cities or Villages ;
- Neighborhoods;
- Subnormal Clusters;
- Rural Clusters;
- Settlement Projects (PA), Agro-villas;
- Conservation Units (UCs) ;
- Indian Lands (TIs) ;
- Indian Villages ;
- Quilombola Lands (TQs) ; and
- Quilombola Communities.

(Quilombola Lands are agricultural communities established by runaway slaves and Indians in the Interior in the 18th and 19th century, whose land rights have been officially recognized)

That said, it's necessary to emphasize the importance of correct and precise coding of enumeration areas to recover disclosure and ascertainment areas and consequently integrate statistic and geo-spatial info, summarized in figure 11-1:

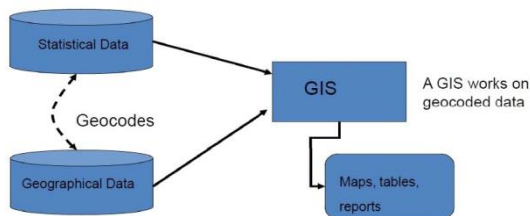


Figure 11-1 Integration of statistical and geographical data. Source: Laaribi, A., 2014

11.2 Criteria for the definition of statistical areas

Enumeration areas are delimited taking into consideration the divisions of disclosure and ascertainment areas, in this order. This prerogative is justified to ensure viability of the survey, ascertainment and dissemination of statistic info on the foreordained territorial structure. They are the smallest areal units in which the National Territory is fragmented for the purposes of IBGE's statistic collection. At the last demographic census, in 2010, Brazil was divided in 314 thousand enumeration areas.

Enumeration areas are, therefore, continuous areas (with the exception of island territories, which do need to obey quantitative home criteria and can either be isolated in an enumeration area or be connected to an enumeration area on land) which must be classified according to their situation as urban or rural (see figure 11-2). This way, it stands out that according to spatial logic, urban enumeration areas tend to have smaller territorial extensions, being more populous, while rural sectors have bigger extension but sparser population. It should be highlighted that according to information from IBGE's Coordenação de Estruturas Territoriais (CETE), responsible for the Territorial Base, in January 2016, Brazil counted 344,220 enumeration areas, 252,873 of them classified as urban and 91,347 of them classified as rural.

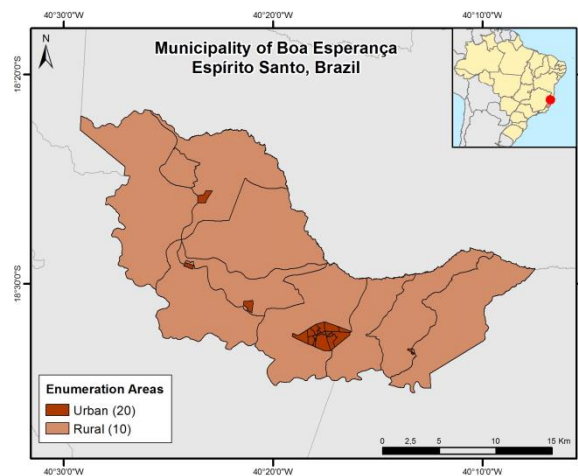


Figure 11-2 Urban and Rural Enumeration areas Boa Esperança City, Espírito Santo, Brazil Source: IBGE, 2015

An enumeration area must be even more adequately classified according to geopolitical, administrative, morphologic, socioeconomic and cultural characteristics, so that its delimitation fulfills the goal of dividing Brazilian territory, according to the assessment of data volumes and collection operation costs, also representing adequately the current territorial structures to ensure ascertainment and disclosure of results, which will offer fundamental elements for geospatial analyses.

Delimitation of geographic space of enumeration areas is defined by a sequence of topographic or artificial landforms, preferably stable ones that can be easily identified on the field, so as to avoid that collection agents invade the enumeration area of other collection agents or omit collections in the enumeration area under their responsibility.

In short, an enumeration area is the territorial unit established for purposes of registry control, formed by a continuous area, located in a single urban or rural framework, with dimension and number of homes that allow surveying by one census agent. That way, all

census agents will proceed with data collection having coverage of their designated enumeration area as a goal.

11.3 Presentation of the "Geocode"

In Brazil, enumeration areas have no names. They are identified by numbers, which in turn connect them to the names of regions, states, cities and districts. In this chapter, we will explain how these numbers are composed.

Each enumeration area has a number with allows its identification in relation to other enumeration areas in a unique way: geocode. The geocode aims to allow reference of lots of information by collection territorial unit, being used as a recovery key of several registries in the Territorial Base. This number is formed by 15 digits.

Beyond this number referring unequivocally to the sector, its composition allows for recognition of the region, state, city, district and subdistrict (or RA or zone) where the enumeration area is located. The example below shows the geocode composition for a sector:

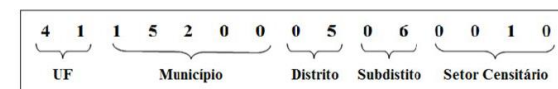


Figura 4.16: Geocódigo do setor censitário Fonte: IBGE (Censo 2010)

Figure 11-3 Example of the Geocode

In figure 11-3, starting from the enumeration area geocode (411520005010010) and from tables matching the geocodes to state-, city-, district- and subdistrict names, it is possible to know that enumeration area 0010 is located in subdistrict 01 (Zone 1), in district 05 (Maringá), in city 15200 (Maringá), which is located in state 41 (Paraná), in Region 4 (South Region), Brazil.

That way, it is shown that territorial units that compose Brazilian DPA will always be associated to a unique code that allows integration of the territorial base to the most

diverse statistics date base. It should be highlighted that when a DPA alteration occurs, a recoding of territorial units involved is performed so as to preserve the previous geocode making it possible to reconstruct territorial organization of the past. For example, districts that were split off could not have their geocodes reused at their origin cities; that way it is possible to rescue previous information, that is, when time passes, it is possible to recover the district's origin, beyond that all levels inserted in the district, among them enumeration areas, must be recoded.

Geocode determination to different Brazilian territorial units is managed by *Coordenação de Estruturas Territoriais* (CETE), part of IBGE, and follows specific criteria for each DPA hierarchic level.



Figure 11-4 Geocodes of the Brazilian Regions (Source: IBGE)

In case of regions, also called great regions; their identification is done by the 1st digit. Numbering order started by the northernmost region, following clockwise from there, applying the following numbers: 1 - North

Region; 2 - Northeast Region; 3 - Southeast Region; 4 - South Region and 5 - Center-West region.

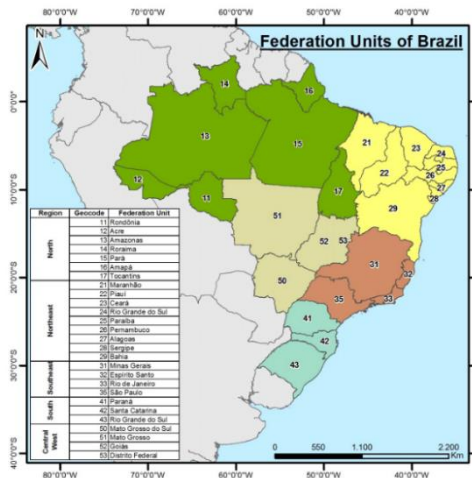


Figure 11-5 Geocodes of the Brazilian Federation Units (Source: IBGE)

The following territorial level refers to Federation Units (UFs). In total, there are 27 UFs whose geocodification also occurs clockwise, starting at 1,



Figure 11-6 Example of UF Geocodes located at Brazil's North Region (Source: Banco de Estruturas Territoriais– BET, IBGE.)

and joins with the Region Geocode in which the UF is located as presented in figure 11-5.

The next five geocode digits refer to city, the fifth one being called a verifier digit. The rules for geocode attribution to a new city are as follows:

BET - BANCO DE ESTRUTURAS TERRITORIAIS				
RELATÓRIO DE DIVISÃO TERRITORIAL BRASILEIRA				
UF : 33-Rio de Janeiro				
DATA BASE : 26/02/2013				
ORDEM ALFABÉTICA DE MUNICÍPIO - DENOMINAÇÃO NORMAL				
MUNICÍPIOS / DISTRITOS / SUBDISTRITOS	MESO	MICRO	MUNICÍPIO	DIST SUB
Angra dos Reis	05	013	00100	05
Angra dos Reis				10
Abrão				15
Cunhambebe				25
Mambucaba				05
Aperibé	01	002	00159	05
Aperibé				05
Aranuama	04	010	00209	05
Aranuama				05
Iguabinha				08
Morro Grande				10
Praia Seca				12
São Vicente de Paula				15
Areal	03	005	00225	05
Areal				05
Armação dos Búzios	04	010	00233	05
Armação dos Búzios				05
Arraial do Cabo	04	010	00258	05

Figure 11-7 DTB report with example of Rio de Janeiro cities and districts (Source: IBGE (2010 Census))

•Add the new city in the interval in which its name fits in alphabetic order on Brazilian Territorial Division report for the state to which the city in question belongs. In figure 11-7, one may find the example of

the city called Aperibé in Rio de Janeiro state which should be between the cities of Angra dos Reis and Araruama.

Código da Unidade	Nome da Unidade	Nome Padrão da Unidade	Lei de Criação	Data de Criação	Data de Instalação	Data de Extinção	Data de Cadastro	Outras Informações
2607901	Jaboatão dos Guararapes	JABOATAO DOS GUARARAPES	1093	24/05/1973	01/01/1939			Un. Inferiores

Código do Nível	Código da Unidade	Nome da Unidade Territorial	Data de Início da Subordinação	Data do Fim da Subordinação
0006	260790105	Jaboatão dos Guararapes	01/01/1980	
0006	260790110	Caveiro	01/01/1990	
0006	260790115	Jaboatão	01/01/1980	
0006	260790120	Curado	15/01/2010	
0006	260790125	Jardim Jordão	15/01/2010	

Figure 11-8 Example of district Geocode at the city of Jaboatão dos Guararapes, Recife, Brazil. (Source: Banco de Estruturas Territoriais – BET, IBGE.)

and Araruama is 0020, with geocode 0015 being chosen (0010<0015<0020), leaving, if possible, an interval to register new cities.

districts beyond the base district, geocodes for these districts should keep, if at all possible, alphabetic order of its respective names.

Next Brazilian DPA level refers to subdistricts, RAs or zones to which two digits are attributed, starting preferably at 06. When a city does not have territorial units of this nature, the geocode must be 0. For example, in figure 11-9 it is possible to see the existent subdistricts on the city of Alegrete, state of Rio Grande do Sul, in detail.

Completing the geocode, the four digits referring to the enumeration area are attributed using crescent sequential criteria, inside the smallest existing area (district and subdistrict, RA or zone). According to this rule, numbering activity of census factors follows the following steps:

- In a district, subdistrict, RA or zone, numbering should be unique, sequential and crescent, starting at 1;
- Numbering should start at the urban framework and continue to rural framework in the same district, subdistrict, RA or zone, starting numbering from the area considered as the center of city or village; and
- Numbering should start at 1, following spirally clockwise and towards the rim; after all enumeration areas in a district, subdistrict, RA or zone are numbered. In case the city has several districts or subdistricts, they should number them as well, starting again at number 1, and repeating every numbering operation, until all sectors of all districts, subdistricts, RAs or city zones are numbered.

While creating new sectors, preferably, the numbering sequence should be kept, differentiating urban and

BET - BANCO DE ESTRUTURAS TERRITORIAIS
RELATÓRIO DE SUBDISTRITOS
UF : 43-Rio Grande do Sul
DATA BASE : 09/03/2016

Página : 1 de 6
Data : 09-03-2016
Hora : 11:16:56 h

ORDEM ALFABÉTICA DE MUNICÍPIO - DENOMINAÇÃO NORMAL

MUNICÍPIO	DISTRITO	CÓDIGO	NOME	LEI_CRIA	DATA_CRIA	DATA_INST		
4300406-Alegrete	05-Alegrete	06	Zona Central	2885	29/03/1999	29/03/1999		
		07	Zona da Coxilha ou Cidade Alta	2885	29/03/1999	29/03/1999		
		08	Zona Norte	2885	29/03/1999	29/03/1999		
		09	Zona Sul	2885	29/03/1999	29/03/1999		
		10	Zona Leste	2885	29/03/1999	29/03/1999		
		11	Zona Oeste	2885	20/03/1999	20/03/1999		
		12	Alegrete	4850	24/10/2011			
		13	Catimbaú	4850	24/10/2011			
		14	Durasnal	4850	24/10/2011			
		15	Guassu-Boi	4850	24/10/2011			
		16	Inhanduí	4850	24/10/2011			
		17	Itaporó	4850	24/10/2011			
		18	Rincão de São Miguel	4850	24/10/2011			
		19	Vasco Alves	4850	24/10/2011			
		TOTAL P/MUNIC : 14						

Figure 11-9 Table with example of subdistrict Geocoding located at the city of Alegrete, Rio Grande do Sul, Brazil. (Source: Banco de Estruturas Territoriais – BET, IBGE.)

•Choose Aperibé's geocode, preferably, in the interval of city geocodes of Angra dos Reis and Araruama (if not possible, geocode should be last in the list for UF's cities). In this case, Angra dos Reis geocode is 0010

•The last city geocode digit, DV (9, in Aperibé's case), is calculated by computer algorithms. Geocode for the city of Aperibé, therefore, will be as follows: 33 0015 9.

After the geocode associated to the city there are two digits that form the district geocode, beginning with 05 for the base district. It should be highlighted that all of Brazil's cities have, at least, the base district and that it has the same name as the city. In case the city has other

Ministério do Planejamento, Orçamento e Gestão Destaque do Governo

B O G **IBGE**

Base Operacional Geográfica

Atualização | Consulta | Formulários | Manuais | Gestão

Consultas Espaciais | Croquis, Descrições e Espelhos de Setores | Tabelas | Áreas de Apuração | Quantitativos | Geração de Arquivos | Críticas Complementares | Comparabilidades anteriores | Quebra de sequência

:: Croquis, Descrições e Espelhos de Setores

BOG: [2016 (Planejamento)]

UF: [22 - Piauí]

Município: [3909 - Floriano]

Distrito: [5 - Floriano] Fazer Consulta

Subdistrito: [Nenhum Subdistrito]

Setor: [Selecione Setor]

ESPELHOS

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 [Espelho do distrito XLS](#) |
 [Espelho do distrito TXT](#) |
 [Descrições de Setores do distrito](#) |
 [Descrições de Setores do distrito para PDA](#) |
 [Histórico de Movimentação do distrito PDF](#) |
 [Histórico de Movimentação do distrito XLS](#)

PROVENIÊNCIA DO SETOR - ORDENAÇÃO POR: SETOR VIGENTE SETOR ORIGEM

LISTAGEM DE SETORES DO DISTRITO 220390905

UF	Município	Distrito	Subdistrito	Setor	Situação/Tipo	Croquis	Descrições
22	03909	05	00	0001	10	Croqui	PDF TXT
22	03909	05	00	0002	10	Croqui	PDF TXT
22	03909	05	00	0003	10	Croqui	PDF TXT
22	03909	05	00	0004	10	Croqui	PDF TXT
22	03909	05	00	0005	10	Croqui	PDF TXT
22	03909	05	00	0006	10	Croqui	PDF TXT
22	03909	05	00	0007	10	Croqui	PDF TXT
22	03909	05	00	0008	10	Croqui	PDF TXT
22	03909	05	00	0009	10	Croqui	PDF TXT

Ministério do Planejamento, Orçamento e Gestão Destaque do Governo

B O G **IBGE**

Base Operacional Geográfica

Atualização | Consulta | Formulários | Manuais | Gestão

Consultas Espaciais | Croquis, Descrições e Espelhos de Setores | Tabelas | Áreas de Apuração | Quantitativos | Geração de Arquivos | Críticas Complementares | Comparabilidades anteriores | Quebra de sequência

:: Croquis, Descrições e Espelhos de Setores

BOG: [2016 (Planejamento)]

UF: [22 - Piauí]

Município: [3909 - Floriano]

Distrito: [5 - Floriano] Fazer Consulta

Subdistrito: [Nenhum Subdistrito]

Setor: [Selecione Setor]

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 [Descrições de Setores do distrito](#) |
 [Descrições de Setores do distrito para PDA](#) |
 [Histórico de Movimentação do distrito PDF](#) |
 [Histórico de Movimentação do distrito XLS](#)

PROVENIÊNCIA DO SETOR - ORDENAÇÃO POR: SETOR VIGENTE SETOR ORIGEM

LISTAGEM DE SETORES DO DISTRITO 220390905

UF	Município	Distrito	Subdistrito	Setor	Situação/Tipo	Croquis	Descrições
22	03909	05	00	0001	10	Croqui	PDF TXT
22	03909	05	00	0002	10	Croqui	PDF TXT
22	03909	05	00	0003	10	Croqui	PDF TXT
22	03909	05	00	0004	10	Croqui	PDF TXT
22	03909	05	00	0005	10	Croqui	PDF TXT
22	03909	05	00	0006	10	Croqui	PDF TXT
22	03909	05	00	0007	10	Croqui	PDF TXT
22	03909	05	00	0008	10	Croqui	PDF TXT
22	03909	05	00	0009	10	Croqui	PDF TXT
22	03909	05	00	0010	10	Croqui	PDF TXT

Edição de SETOR

Estado: [22 - Piauí] | Distrito: [5 - Floriano] | [Cancelar dados](#) [Incluir Registro](#)

Município: [3909 - Floriano] | Subdistrito: [0 -] | [Retornar](#) [Atualizar](#) [Emitir](#)

SETOR	SIT	TIP	EUV	EDOC	ENOC	ECOL	FRM	CT	UC	TI	BA	ASUBN	AGLOW	AU	TG	UF	MUN	DIS	SD	SETOR	SIT	UV	DOC
1	1	0	685	241	73	2	111	1								22	3909	5	0	1	10	685	241
2	1	0	688	252	73	2	111	1								22	3909	5	0	2	10	688	252
3	1	0	198	142	17	0	111	1								22	3909	5	0	3	10	198	142
4	1	0	252	192	32	0	221	3								22	3909	5	0	4	10	551	396

Chave Atual

Setor: [1] último: 123

Situação: [1]

TI: [0] [Ver Mapa](#)

EUV: [685]

EDOC: [241]

ENOC: [73]

ECOL: [2]

Formação: [111]

Controle: [1]

Chave Anterior

UF: [22]

Município: [3909]

Distrito: [5]

Subdistrito: [0]

Setor: [1]

Situação: [10]

Unid Visitada: [688]

Domicílio Ocupado: [241]

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rural frameworks.

All census geocodes find themselves documented in what is called an Enumeration Area Spreadsheet, available at the Geography Operational Base (BOG). Such documents allow for the identification of existing homes in the sector, its situation - urban or rural, its kind and location in relation to disclosure and ascertainment areas. It should be highlighted that there is a sector spreadsheet for each Brazilian city. Figures 11-10 and 11-11 present the city of Floriano, in the state of Piauí, as an example, using information contained in the BOG.

Figure 11-10 List of Enumeration Areas at the city of Floriano, state of Piauí, through BOG query.

Figure 11-11 Spreadsheet of one of the Enumeration Areas of the city of Floriano, state of Piauí, through BOG query.

11.4 Some considerations about Territorial Structure Database (BET)

In the context of registries, files and databases that compose the Territorial Base is included the BET - Territorial Structure Database, registration reference for DPA, for IBGE's and several other public and private bodies' projects and activities.

Its conception with territorial levels, level hierarchy, dates and information about legislation on creation, installing, extinction, alteration of toponymy and other attributes makes the recovery of DPA's historic evolution viable, as well as recovery of territorial snapshots for dates of interest.

Beyond DPA's territorial structures, Territorial Structure Database contemplates, still, mesoregion and geographic microregion levels, including neighborhoods and like, rural clusters, subnormal clusters, special areas and respective hierarchies and attributes.

On the scope of Census, BET is the registry responsible for territorial information (codes, names and territorial sub ordinance) of disclosure and ascertainment units registered at Territorial Base which are disseminated at IBGE's publications and products.

During the 2010 Census, 5,565 cities, 10,283 districts, 662 subdistricts, 10,665 rural clusters, 6,329 subnormal clusters, 14,402 neighborhoods, among other territorial levels, were registered in the Territorial Structure Database.

BET was updated during the preparation for the Territorial Base 2010 with territorial changes after the 2000/2007 Census, aiming not only to make territorial information related to IBGE's ongoing activities available, but mainly making the territorial structure of the 2010 Census available for dissemination.

A vision of BET's levels and territorial hierarchies is presented as follows: Levels:

BET has available, at the moment, 20 territorial levels, being that 14 of them refer to current territorial structures and 6 are called historic levels.

The current levels are:

1- Brazil (level 0000);

2- Levels referring to regional division:

- Geographic Region (level 0001)
- Geographic Mesoregion (level 0008) and Microregion (level 0009)

3- Levels referring to territorial division, registered according to legislation:

- Federative Unit (level 0002)
- City (level 0005)
- District (level 0006)
- Subdistrict (level 0007);

4- Levels referring to Census ascertainment areas:

- Neighborhoods (level 0102), Indian Lands (0105) and Environmental

Código do Nível	Nome do Nível	Código da Unidade	Nome da Unidade	Nome Padrão da Unidade	Data de Criação	Data de Instalação	Data de Extinção
0104	Área Especial	1546	PAEMU DO RIO DE JANEIRO	PAEMU DO RIO DE JANEIRO	31/03/1988	31/03/1988	31/07/2009
0012	Unidade Federativa75	51	Rio de Janeiro	RIO DE JANEIRO			01/01/1975
0006	Distrito	330455705	Rio de Janeiro	RIO DE JANEIRO		01/01/1980	
0005	Município	3304557	Rio de Janeiro	RIO DE JANEIRO	01/03/1965	15/03/1975	01/01/1975
0002	Unidade Federativa	33	Rio de Janeiro	RIO DE JANEIRO		01/01/1975	
0005	Município	3099901	Rio de Janeiro	RIO DE JANEIRO	01/03/1965	01/01/1959	20/04/1960
0005	Município	3499901	Rio de Janeiro	RIO DE JANEIRO	01/03/1965	21/04/1960	14/03/1975
0003	Mesorregião Homogênea	54	Grande Rio de Janeiro	GRANDE RIO DE JANEIRO		01/03/1980	31/05/1990
0103	Aglomerado Rural	24133590022	Vila Rio de Janeiro	VILA RIO DE JANEIRO	28/09/2006	28/09/2006	
0103	Aglomerado Rural	24133590010	RIO DE JANEIRO	RIO DE JANEIRO	31/03/1988	31/03/1988	24/08/1999
0008	Mesorregião Geográfica	3306	Metropolitana do Rio de Janeiro	METROPOLITANA DO RIO DE JANEIRO	01/06/1990	01/06/1990	
0015	Município75	53001	Rio de Janeiro	RIO DE JANEIRO			01/01/1975
0009	Microrregião Geográfica	33018	Rio de Janeiro	RIO DE JANEIRO	01/06/1990	01/06/1990	
0014	Microrregião Fisiográfica	53000	Rio de Janeiro	RIO DE JANEIRO			01/01/1975
0101	Aglomerado Subnormal	35503080891	Rio de Janeiro	RIO DE JANEIRO	08/12/2009	08/12/2009	
0016	Região Metropolitana	3301	Região Metropolitana do Rio de Janeiro	REGIAO METROPOLITANA DO RIO DE JANEIRO	01/07/1974	01/07/1974	

Figure 11-12 BET Name Query - Example of a search for "Rio de Janeiro".

Conservation

Units (0106)[®] territorial structures legally established

- Rural Clusters (level 0103), Isolated Urban Area (level 0107) and Subnormal Clusters (level 0101) [®] registered according to concepts adopted during construction of Territorial Base

Relation between Territorial Structures:

To recover subordination of units such as, for example, the relation of districts in a certain city, there is a pre-established level hierarchy. Each level has a unit code composition which is standard for DTB levels and the same as Operational Bases for ascertainment areas.

The diagram in figure 11-13 (next page) presents the structure and composition for current levels.

BET allows that queries to territorial units be realized

through territorial level or name. Hereinafter is an example of query by name which evidences how geocode helps to differentiate between units with the same name but different level.

11.5 Conclusion

The demand for stronger integration between statistic and geospatial data is growing, therefore it is indispensable for methods that allow such integration to improve. When it comes to IBGE, it is possible to notice the existence of a geocode system already well-structured and widespread in the institution for such goals. These geocodes make identifying territorial units whose names are not yet standardized easier. This way, possible divergences in geographic names used by statistics department and geography department are voided allowing unequivocal reference to spatial units. The use of geocodes meets the principle of univocity, however, it does not meet the need for standardizing geographic names since this activity requires analysis of linguistic, cultural, historic and ethnic aspects, among others.

11.6 References

GUIA do censo. Rio de Janeiro: IBGE. Available at:

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Figure 11-13 Territorial Structure Database Structure

