

The Importance of Geospatial Information in Monitoring Sustainable Development in the Americas

Luiz Paulo Souto Fortes, PhD

President of PC-IDEA

“Monitoring Sustainable Development – Why Location Matters”
Rio+20 Side Event

June 20, 2012, Rio de Janeiro, Brazil

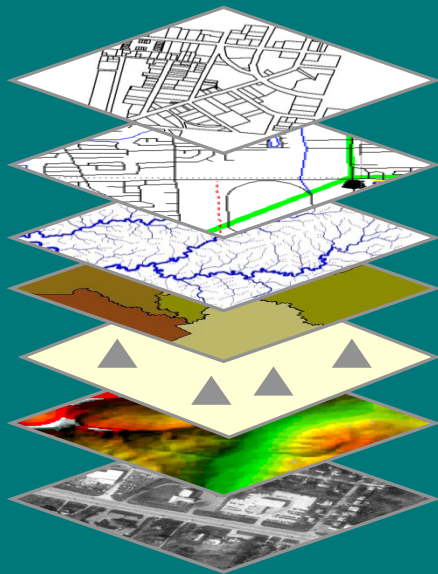


RIO+20
Conferência das Nações Unidas
sobre Desenvolvimento Sustentável



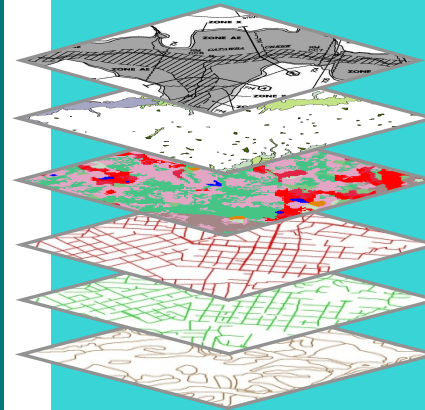
Related to a position on the surface of the Earth

Reference data



Settlement
 Transportation
 Hidrography
 Boundaries
 Geodetic control
 Elevation
 Imaging

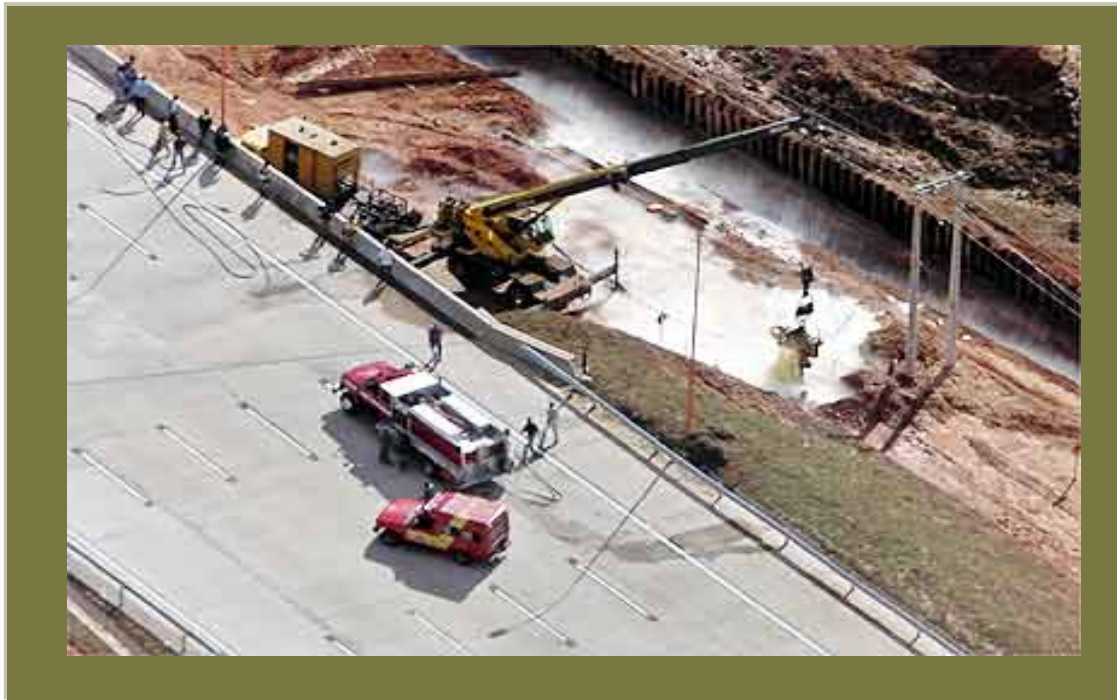
Thematic data



Security
 Demography
 Flooding areas
 Logistic
 Economic and social activities
 Pedology
 Natural resources
 Environment

June 15, 2001: Castelo Branco Highway accident

- A drilling machine hit a gas (GLP) pipeline, due to the use of coordinates referred to inconsistent geodetic reference systems!
- 1500 people removed from their houses for 28 hours
- Highway blocked for 12 hours
- Fortunately, no injury to any one



January 2011: land slides in mountain areas of the State of Rio de Janeiro

- 916 people died



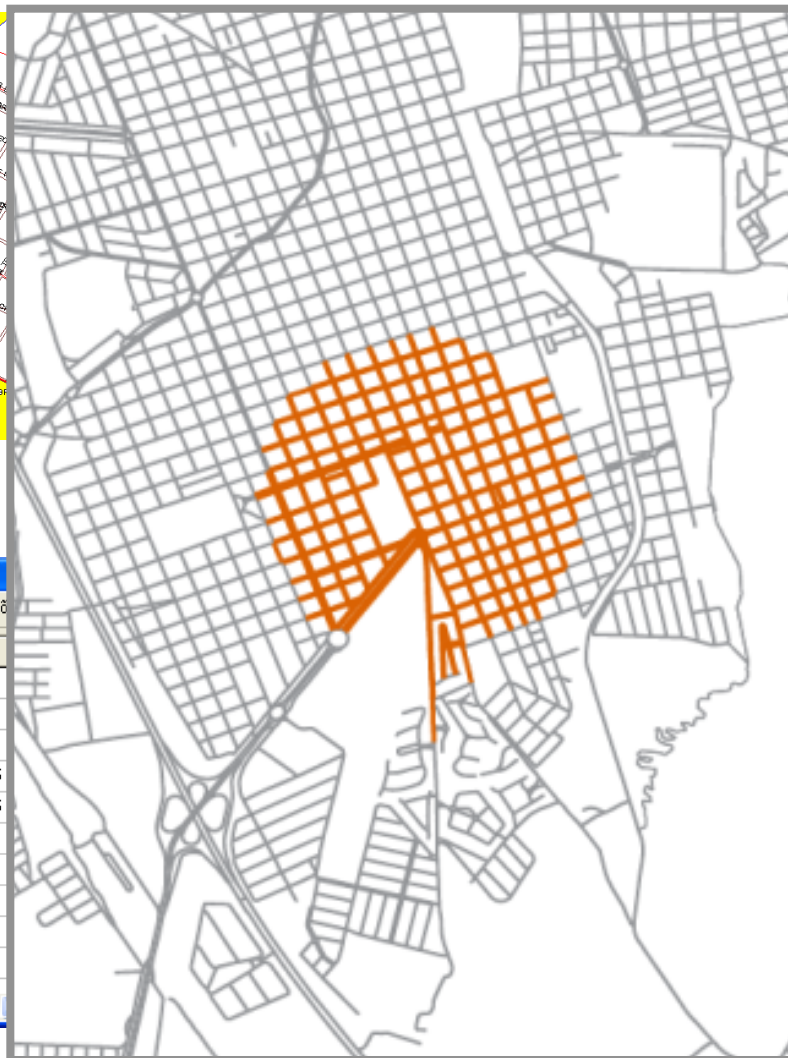
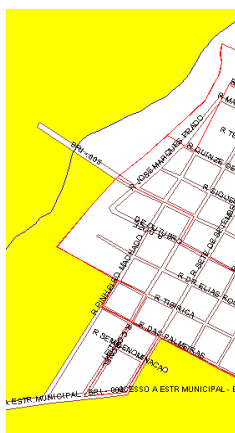
Before

- **IBGE provided address file and other statistics and geospatial data to rescue teams**



After

2012 Population Census Mapping project 2010



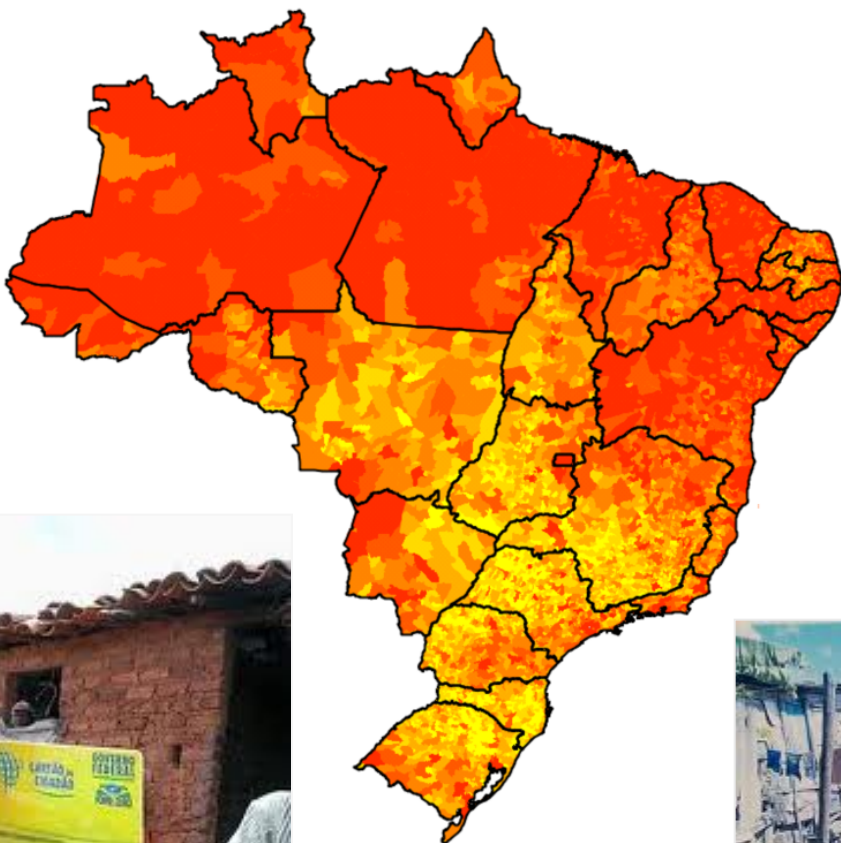
Mapa Temático - 1

Núm. de feições

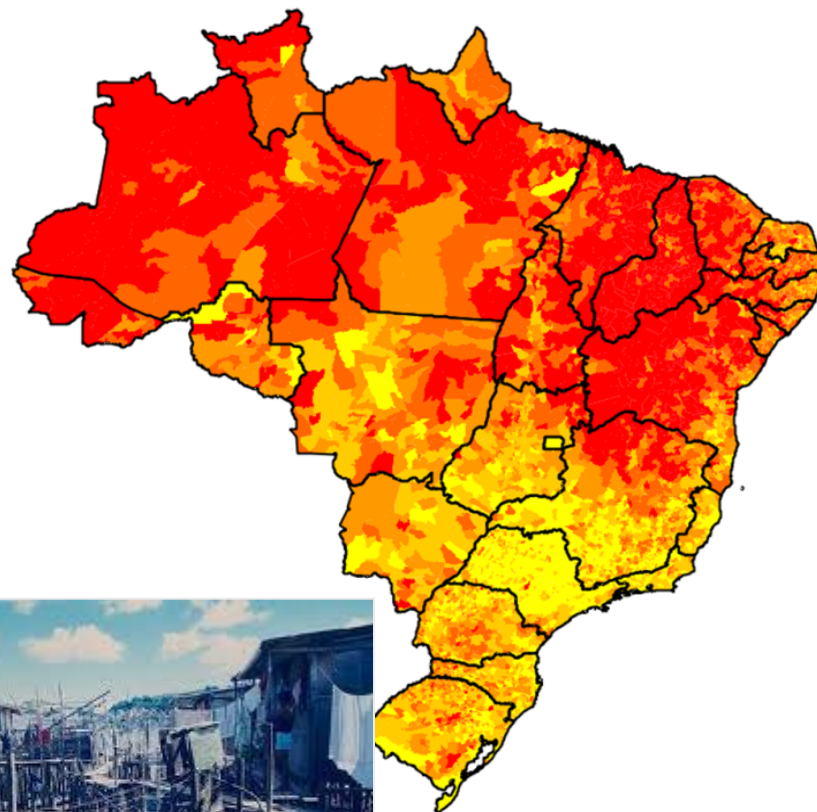
ENTID	TXMEMO
75	R SIQUEIRA CAMPOS
76	R SIQUEIRA CAMPOS
83	R GUALTER LUIS FERNANDES
86	AV ROBERTO RAMOS FERNANDES
87	AV ROBERTO RAMOS FERNANDES
88	R ESTACIO FERRERIA MACHADO
89	R SEM DENOMINAÇÃO
90	R AGENDOR S DE OLIVEIRA
91	R SEM DENOMINAÇÃO
92	R MARCIANO DE SOUZA
94	R CARATIM D'AMIEL



Insuficiente Income



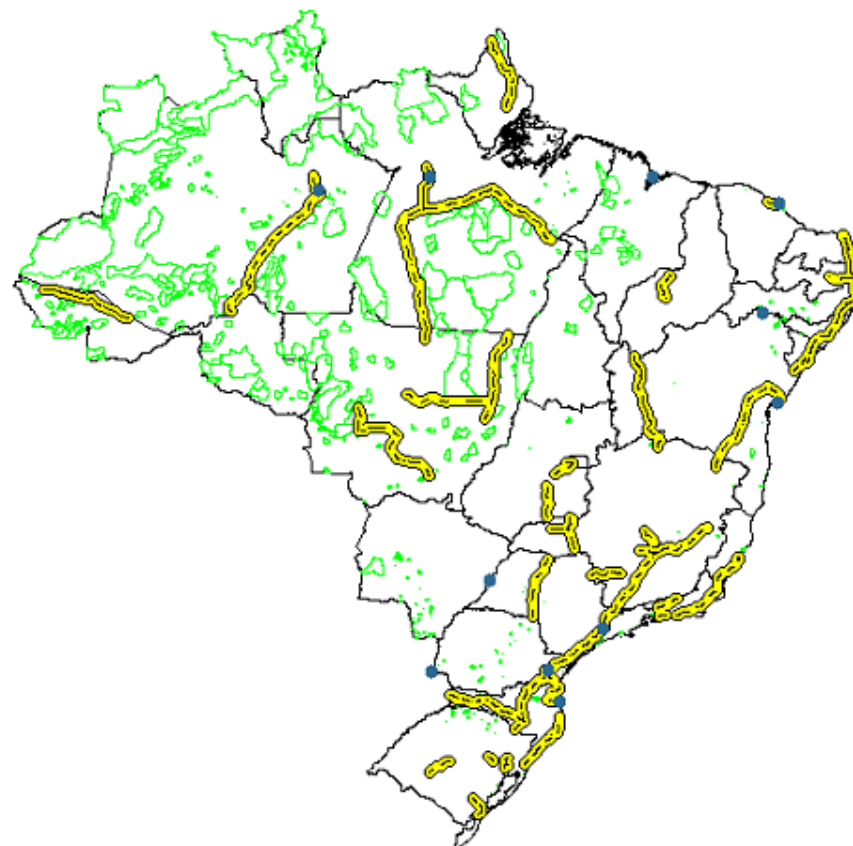
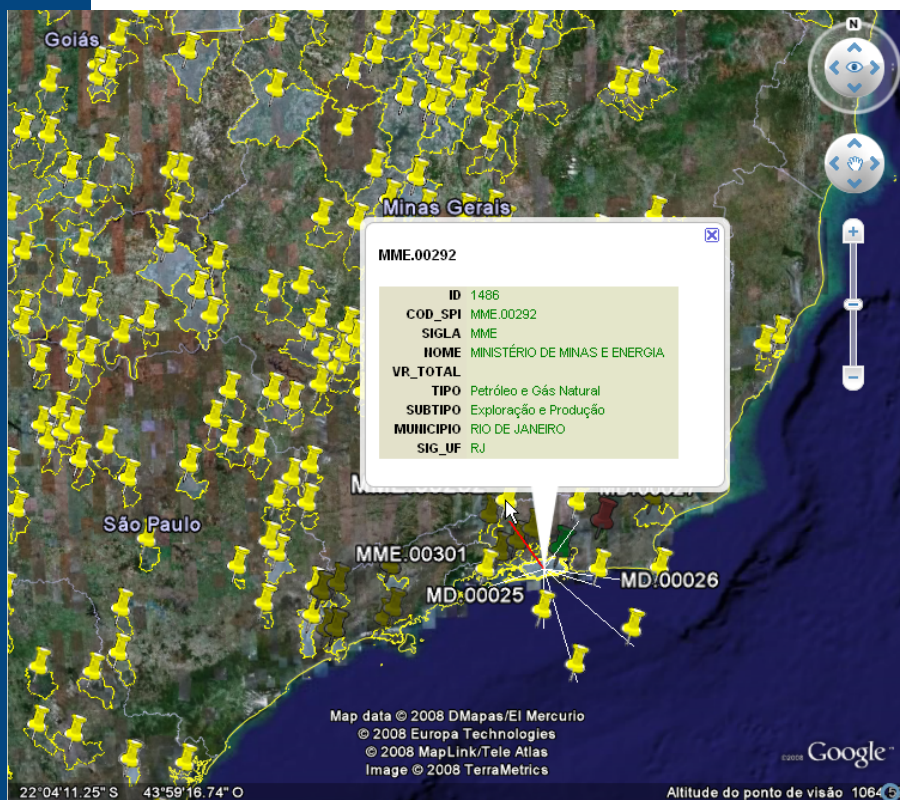
Lack of Public Services



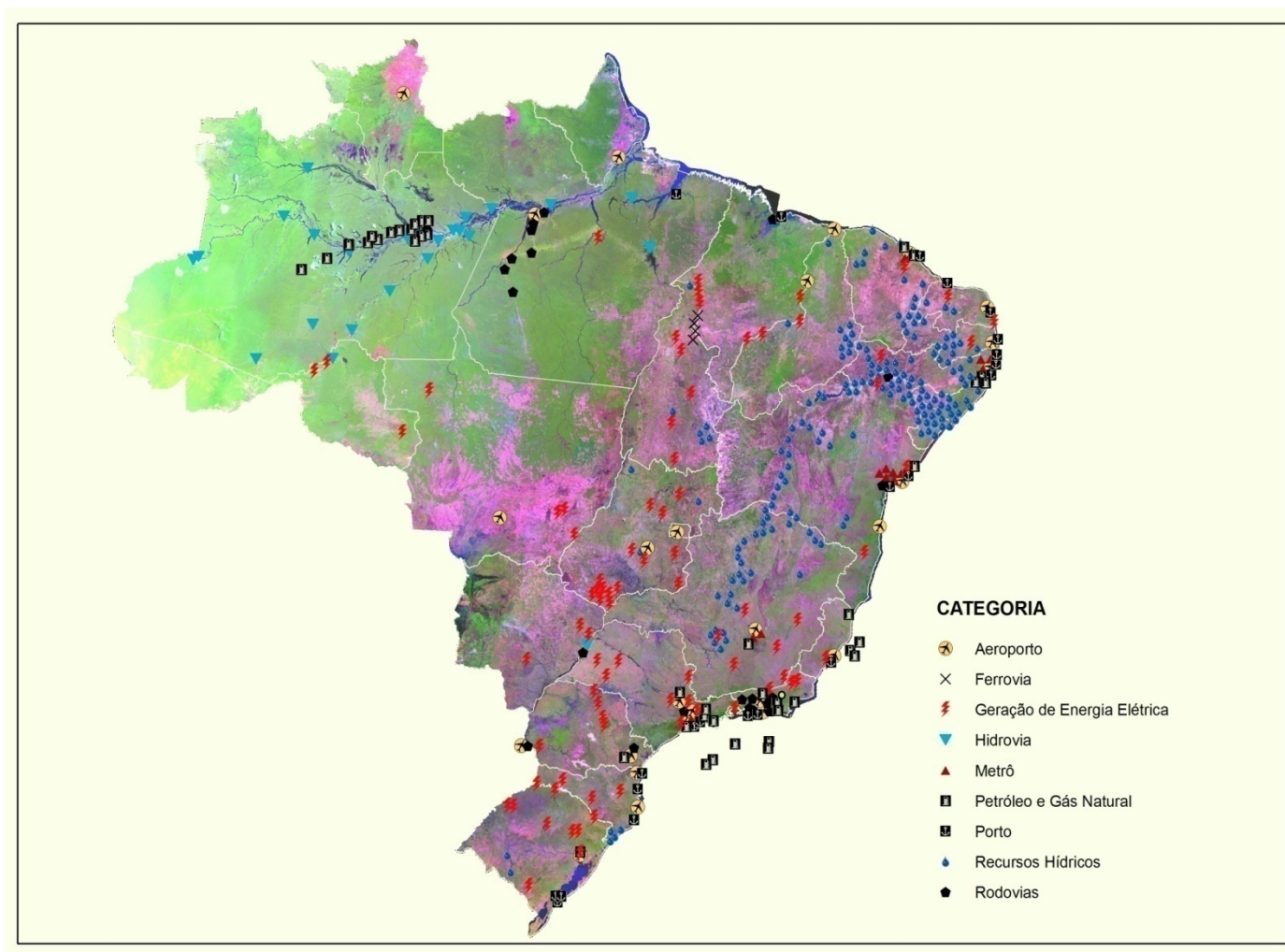
Growing Acceleration Program (PAC) Execution

Municipalities Infrastructure Investments

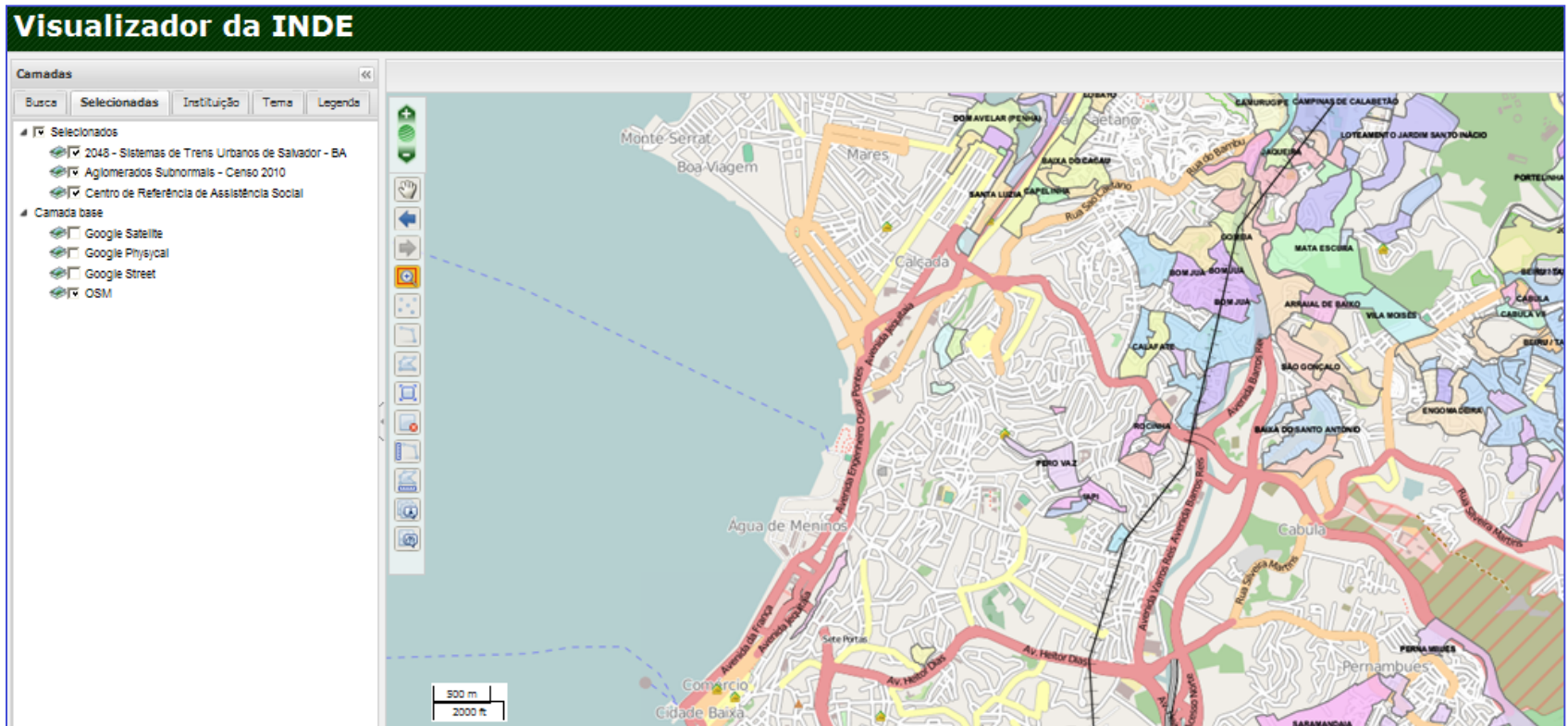
Roads - GeoPAC GSI/PR



Geo-location of investments x infrastructure category



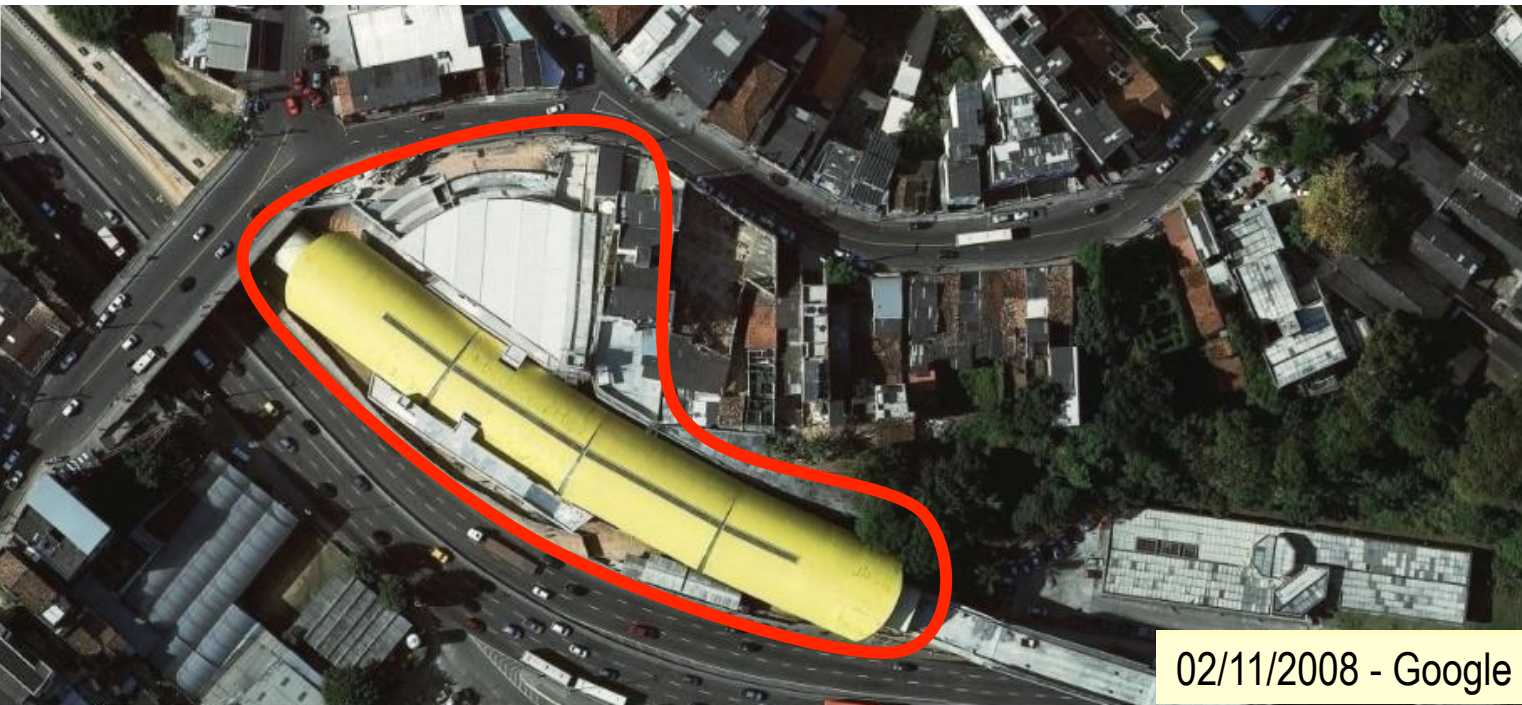
Relating railway/subway infrastructure to slum areas and Social Assistance Units in Salvador - BA



05/01/2008 – Ikonos

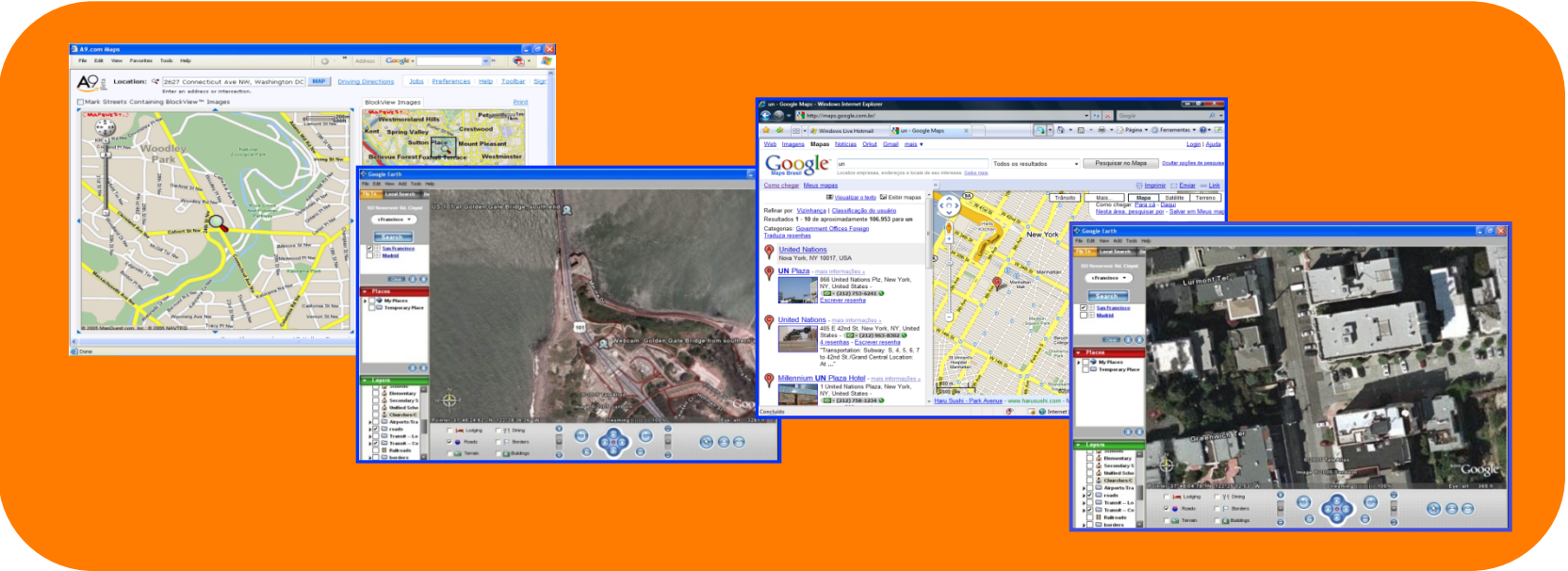


Fonte: CNPM/Embrapa



02/11/2008 - Google

**More than 80% of all information used by the public sector in the world can be related to a location
⇒ everything happens somewhere!**



Mainframe Computing 1960s



Mini Computing 1970s



Personal Computing 1980s

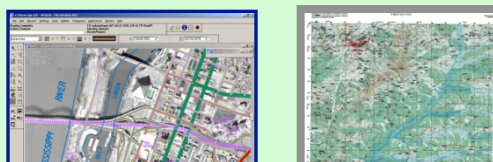


Desktop Internet Computing 1990s



Mobile Internet Computing 2000s



Portable devices**GIS/Web****Low cost imagery**

“In the world today: 5 to 6 billion of mobile devices

By 2020: 50 to 60 billion!”

Nowadays the geospatial information is more easily collected, processed and disseminated by a large producer and user community

Defense and Intelligence



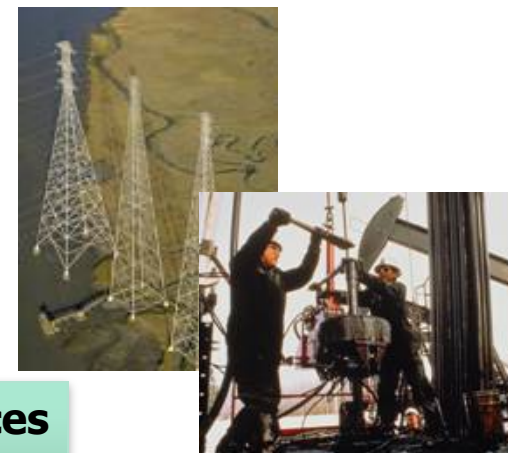
Research and Education



Sustainable Development



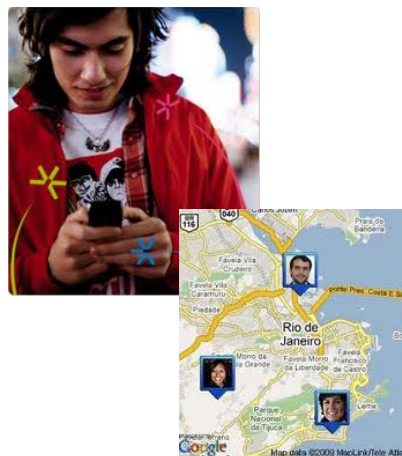
Energy and Communications



Risk and Disasters Management and Response



Positioning and Navigation Services



Natural Resources Management



Electronic Government



South American Regional Infrastructure Integration Initiative (IIRSA)

- To promote the development of transportation, energy and communication infrastructure of the 12 South American countries, in a sustainable way
- Geospatial component being carried out by the GeoSUR Program



Delivery of GI being facilitated by the establishment of the National Spatial Data Infrastructure (INDE)

- Established by the Presidential Decree 6666 of November 27, 2008
- Coordinated by the National Commission of Cartography (CONCAR), in the Ministry of Planning
- Used as reference for the development of the National Open Data Infrastructure (INDA)



National Spatial Data Infrastructure of Brazil - INDE

✓ Available applications

- INDE portal: www.inde.gov.br
- Metadata catalog
www.metadados.inde.gov.br
- Visualization tool
www.i3geo.inde.gov.br



✓ Available data and metadata

- Metadata: **7580** documents
- Data: ~**200** WMS services

✓ Access statistics

- Metadata catalog: **1,800,000** hits per month



Visualizador da INDE

Visualizador da INDE

Camadas

Busca Selecionadas Instituição Tema Legenda

Unidades de proteção integral

Uso da Terra do Brasil 1:5.000.000

www.inde.gov.br

Action Plan to INDE Implementation
(Portuguese, English and Spanish):

<http://www.inde.gov.br/?p=896>

Lavouras + Outras coberturas e usos

Lavouras + Pastagens

Lavouras + Matas e/ou florestas

Pastagens + Sistemas agroflorestais

Pastagens + Outras coberturas e usos

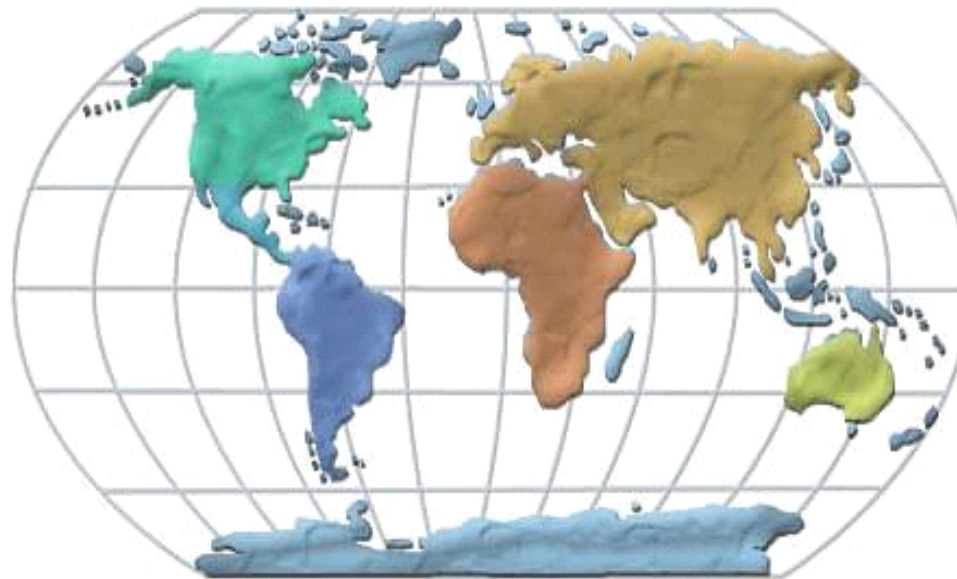
Pastagens + Lavouras

Pastagens + Matas e/ou florestas

Matas e/ou florestas + Sistemas agroflorestais

500 km
500 mi

International Collaboration in the Context of GI



Permanent Committee for Geospatial Data Infrastructure of the Americas (PC-IDEA)

Established on February 29, 2000, based on the Resolution #3 of the 6th United Nations Regional Cartographic Conference for the Americas – UNRCC-A (1997)



- To maximize the economic, social and **environmental** benefits derived from the use of Geospatial Information
- Accomplished through ... the establishment of the Geospatial Data Infrastructure of the Americas
- It implements the regional mechanism associated to the **United Nations Global Geospatial Information Management (UN-GGIM)** initiative

PC-IDEA Member countries



Argentina



Belize



Bolivia



Brazil



Canada



Chile



Colombia



Costa Rica



Cuba



Dominican Republic



Ecuador



El Salvador



Guatemala



Guyana



Honduras



Jamaica



Mexico



Nicaragua



Panama



Paraguay



Peru



United States



Uruguay



Venezuela

PC-IDEA implements the resolutions of the United Nations Regional Cartographic Conferences for the Americas (UNRCC-A), held every 4 years

Executive Board (2009 – 2013)

President (Brazil)



Vice President (Chile)



Executive Secretary (Brazil)



***Vocal Member
(North America:
USA)***



***Vocal Member
(Central America:
Guatemala)***



***Vocal Member
(Caribbean)***

***Vocal Member
(South America:
Chile)***





<http://www.cp-idea.org>



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Capacitación



Herramienta elaborada para compartir capacidades entre los países miembros del CP-IDEA, de una manera sostenible en el tiempo y apuntando a las necesidades y temáticas relevantes en la región. Pretende conectar la oferta y la demanda por talleres, cursos y programas

- ✓ In the current global scenario, when nations are discussing the new paradigms towards sustainable development, geospatial technologies constitutes a fundamental platform to monitor this development
- ✓ The Geospatial community plays a crucial role towards building spatially enable governments and societies



- ✓ The UN-GGIM initiative paves the way for the establishment of the necessary global political and institutional frameworks
- ✓ Regional initiatives, such as PC-IDEA in the Americas, absolutely contributes to maximizing at regional level the economic, social and environmental benefits derived from the use of Geospatial Information through the establishment of Spatial Data Infrastructures

Thank you!

luiz.fortes@ibge.gov.br

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