



Cartagena Data Festival

Better data for
a better tomorrow

#DATA2015

Wifi

Network: casa1537

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Cartagena
Data Festival

Better data for
a better tomorrow

Geo Big Data 4 Mass Collaboration

Speakers:

[Javier Carranza](#), Director, GeoCensos, Argentina

[Taissa Abdalla de Souza](#), Taissa Abdalla F. de Sousa, Data
Visualization at IBGE, Brazil

[Olga Henker](#), Hackathon Lead, GeoCensos, Colombia

[Jeffrey Villaveces](#), Information Unit, UNOCHA, Colombia

Map of the side event

Part 1: Introduction and Stakeholders' ideas 30 mins

Part 2: Posters and presentations of Geo Big Data experiences 60 mins



Map of the side event





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Geo Big Data 4 Mass Collaboration

Snapshots:

Sabina Talero, Independent Researcher, Colombia

Gabriel Dicelis, Geo Node

Louis Remmondin, CIAT

Ariel Nuñez, WorldBank

Ricardo López Valverde, Observatorio Opinión Pública Bolivia



What is geo Big data?

According to ESRI: *Visualizing and analyzing big amounts of data in a way that reveals territorial patterns, trends, and relationships that reports don't. This includes data of disparate places, streams, or web logs*

According to OSM : *This is a recent trend, being analyzed in last OSM in Buenos Aires as the proliferacion of mobile devices that are connected to the Internet, location based services. Challenges for them are locating a large number of objects, e.g. connected cars, on a map.*



Why geo Big Data?

Excerpt from the Open GIS Consortium Vision (1994)

“Approximately 80% of business and government information has some reference to location, but until recently the power of geographic or spatial information and location has been underutilized as a vital resource for improving economic productivity, decision-making, and delivery of services. We are an increasingly distributed and mobile society. Our technologies, services, and information resources must be able to leverage location, (i.e., my geographic position right now) and the spatial information that helps us visualize and analyze situations geographically.”



Who has set the agenda?

What about national statistics offices tradition?

1. August 2013 John Dunne, of the CSO Ireland, “data can be processed through cloud computing by third-party providers”
2. Sept 2013 Struijs / Daas from CBS : Great impact. Paradigm shift from a survey oriented to a more secondary data-focussed orientation
3. Mostly European and Asian orgs are influencing, such as ECE, Eurostat, OECD, ESCAP but next: World Statistical Congress to be held from 26 to 31 July 2015 in Rio de Janeiro, Brazil



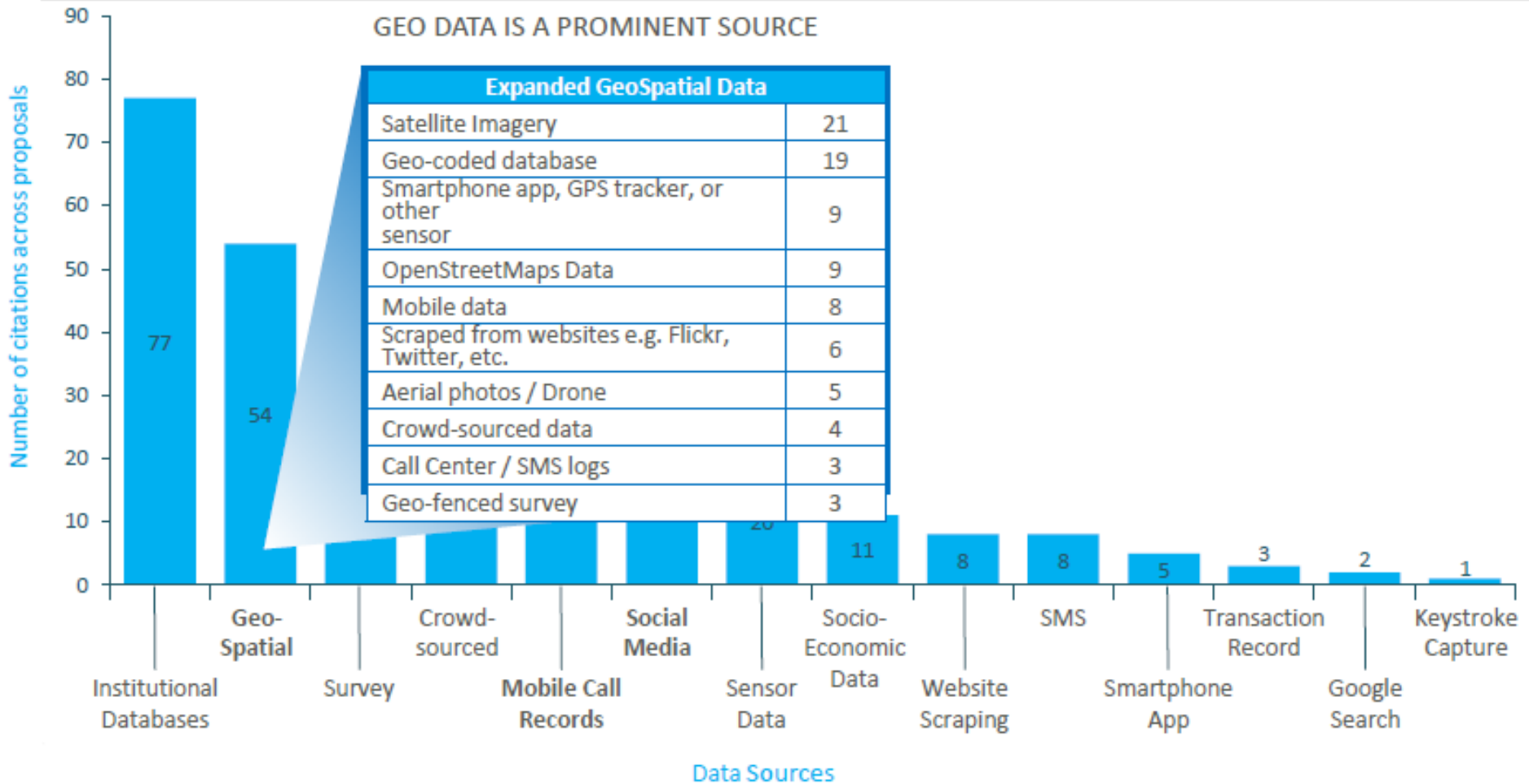
Why geo Big Data for NSOs?

1. Geographic advances has evolved into a multilayered one, not only multidimensional as in traditional statistics, but also with massive information capabilities
2. Data are in general set in geographic context, territory adds information
3. Technologies have exponentially developed to process geographical data that were non existent when statistic offices where created
4. More sophisticated and efficient collection methods and technologies that challenge survey traditional statistics (pasive crowdsourcing / gps pda).



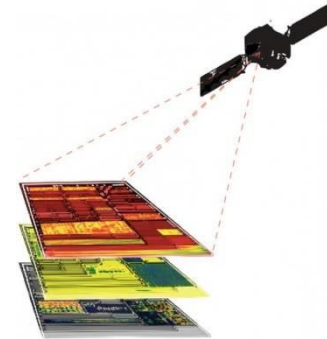
Top Big Data sources

Geo and satellite prominent, call records, crowd-sourced, social and traditional sources cited in proposals to big data competition



How is geo big data collected?

1. Sensor network sources
2. Satellite imaging
3. Road Sensors
4. Climate Sensors
5. Tracking device sources
6. Mobile telephones
7. Global Positioning System (GPS)



Snapshots of Geo Big Data

IDENTIFICACIÓN DE ÁREAS ESTRATÉGICAS DE DESARROLLO MINERO EN EL TERRITORIO COLOMBIANO CON MODELOAMIENTO ESPACIAL MULTICRITERIO

Autores: Sabina Talero, Enrique Torres y Juliana Plazas

RESUMEN

El propósito del presente informe es proponer para el caso de Colombia y transposición de manera general a cualquier territorio, un modelo matemático que permita la selección de la prioridad y jerarquización de los recursos mineros, basándose en la evaluación de los beneficios esperados para los proyectos, sus áreas de influencia y la Nación.

PREMISA PARA LA PLANEACIÓN Y EL DESARROLLO MINERO
Los riesgos y costos totales, asociados a la extracción de un recurso no renovable, deben ser menores que los beneficios esperados para los proyectos, sus áreas de influencia y la Nación.

Se obtiene como resultado la identificación de cinco áreas estratégicas de desarrollo minero en Colombia. Para ello se realizaron documentos técnicos de la identificación y jerarquización de las áreas de desarrollo minero en Colombia.

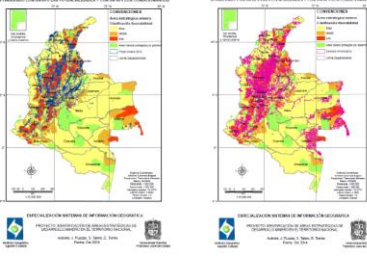
Se presentará más de 20 casos de información geográfica con memoria técnica y para permitir la actualización de la información de riesgo de la zona de áreas estratégicas y mineras.

OBJETIVO

Identificar áreas estratégicas mineras para el desarrollo de la minería, basadas en un análisis multicriterio y multi-escala de las características, restricciones y costos y priorización para su desarrollo en el primer momento (2015-2020).

METODO

- Identificación de un marco conceptual referente al ordenamiento del recurso minero en Colombia. Para ello se realizaron documentos técnicos de la identificación y jerarquización de las áreas de desarrollo minero en Colombia.
- Caracterización de las áreas de desarrollo minero mediante el uso de un modelo matemático multicriterio y multi-escala de las características, restricciones y costos y priorización para su desarrollo en el primer momento (2015-2020).
- Identificación y jerarquización de las áreas de desarrollo minero en Colombia. Para ello se realizaron documentos técnicos de la identificación y jerarquización de las áreas de desarrollo minero en Colombia.
- Caracterización de las áreas de desarrollo minero mediante el uso de un modelo matemático multicriterio y multi-escala de las características, restricciones y costos y priorización para su desarrollo en el primer momento (2015-2020).
- Identificación y jerarquización de las áreas de desarrollo minero en Colombia. Para ello se realizaron documentos técnicos de la identificación y jerarquización de las áreas de desarrollo minero en Colombia.
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Información: minerasresponsablecolombia2015@gmail.com

Geo Big Data 4 Massive Collaboration

IDENTIFICACION DE ÁREAS DE RIESGO EN LA SEGURIDAD CIUDADANA EN LA CIUDAD DE LA PAZ, BOLIVIA

Ricardo López Valverde

Resumen

El propósito es el de localizar territorios donde se genera mayor actividad delictiva. El beneficio de este es generar la alerta de espacios seguros y no seguros en la ciudad generando categorías de riesgo a través de la clasificación en colores.

Objetivo

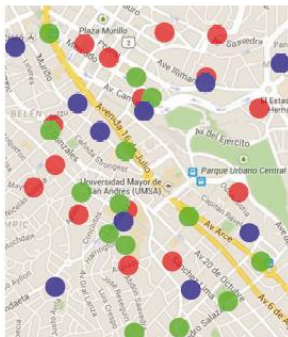
Identificar áreas donde se genere actividad delictiva dentro del Municipio de La Paz.

Método

- Primero identificamos conceptualmente la idea revisando documentos reglamentos, noticias, entre otros.
- Posteriormente clasificamos el tipo de información que teníamos y fuimos categorizandola según variables que establecimos
- Solicitamos información a la población a través de medios digitales
- Generamos una alerta ciudadana que se utiliza en celulares inteligentes.

Resultado

Conservamos información sobre hechos delictivos y la convertimos en alerta ciudadana para teléfonos móviles



Geo Big Data 4 Massive Collaboration



Monitoring forests & natural land cover in Latin America and the Caribbean using geospatial tools

WHAT IS THE TERRA-I TOOL?

- Detects vegetation loss resulting from human activities.
- Works in near real-time, producing maps every 16 days.
- First continental scale system in operation and the first to work outside of the Brazilian Amazon.

METHODOLOGY

- Premise: natural vegetation loss follows a predictable pattern of change in greenness from one date to the next, brought about by site specific characteristics and climatic conditions over the preceding days.
- Bayesian-probability based neural network (BNN) learns how the greenness of a given pixel responds to a unit of rainfall (year 2000-2004).
- Calibrated model is run to identify fluctuations in greenness that cannot be explained by rainfall or by previous state of the vegetation (year 2004-present).
- Anomalies are flagged as potential vegetation loss.

RESULTS - MOVING TOWARDS DATA GENERATION

Identifying hotspots of change

Beyond humid tropical ecosystems

Modeling future scenarios of change

Achievements

- In the 8 years since Terra-i's inception, approximately 200 organizations from 45 countries report using its data as part of research, conservation and development efforts.
- This year, Terra-i became one of the principal sources of natural vegetation monitoring information for the Global Forest Watch and the Ministry of Environment of Peru.
- A new crowdsourcing game, "Forest Defenders", proved to be a useful way to validate Terra-i remote sensing methodology.
- Terra-i innovation and relevance was recently recognized with the GeoSUR award, a prize given by the Pan-American Institute of Geography and History (IPGH).

APPLICATIONS

- Monitoring effectiveness of conservation.
- Estimating environmental impacts of infrastructure.
- Assessing contribution of deforestation to climate change.
- Understanding impact of recent land cover change on ecosystem services through WaterWorld and Cobling Nature Policy Support Systems).

FUTURE

- Self-monitoring of deforestation and other natural vegetation loss by lower-income countries.
- Ensuring the tool's sustainability through community-based analysis of results.
- Maintaining continually updated data freely available online.

An approach to primary healthcare service areas for landmine victims in Colombia



1. Abstract

Abstract: An approach to primary healthcare service areas for landmine victims in Colombia. The study aims to identify the most appropriate locations for primary healthcare service areas for landmine victims in Colombia. The study uses a geospatial approach to identify the most appropriate locations for primary healthcare service areas for landmine victims in Colombia. The study uses a geospatial approach to identify the most appropriate locations for primary healthcare service areas for landmine victims in Colombia.

2. Building a Transportation Network

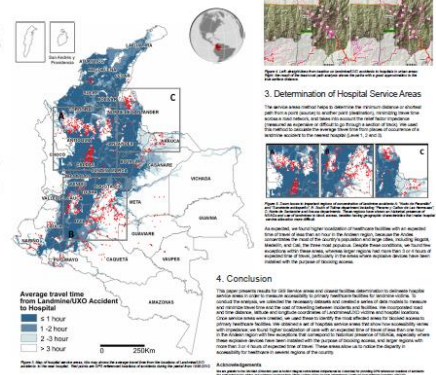
Building a Transportation Network: This section describes the process of building a transportation network for primary healthcare service areas for landmine victims in Colombia. The network is built based on the most appropriate locations for primary healthcare service areas for landmine victims in Colombia.

3.3 Measuring Connectivity of the Network

Measuring Connectivity of the Network: This section describes the process of measuring the connectivity of the transportation network for primary healthcare service areas for landmine victims in Colombia. The connectivity is measured based on the most appropriate locations for primary healthcare service areas for landmine victims in Colombia.

3.3 Finding the best routes for paths of individuals

Finding the best routes for paths of individuals: This section describes the process of finding the best routes for paths of individuals for primary healthcare service areas for landmine victims in Colombia. The best routes are found based on the most appropriate locations for primary healthcare service areas for landmine victims in Colombia.



Collecting Exposure Data via Community Mapping

1. LOOK

Look for the area to be mapped.

2. DATA INPUT

Data input and data collection.

3. FIELD PAPER

Field paper and data collection.

4. DATA INPUT

Data input and data collection.

5. DATA INPUT

Data input and data collection.

6. QUALITY CHECK

Quality check and data collection.

4. FIELD SURVEY

Field survey and data collection.

5. DATA ENTRY

Data entry and data collection.

6. QUALITY CHECK

Quality check and data collection.

7. DATA ENTRY

Data entry and data collection.

