



# **Geo-Web Platforms, PPGIS and Spatial Planning - The GeoCitizen Approach**

Karl Atzmanstorfer, 2017

Working experiences from Ecuador

# GIS for DEVELOPMENT



Can GIS challenge existing power structures?





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## Indigenous People and Resistance to Mining Projects (English version)

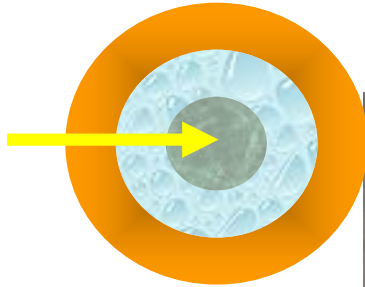
### An Overview

By Luis Vittor

Latin America's governments and its indigenous peoples are clashing over the issue of mining. Governments, motivated by economic growth, have established legal frameworks to attract foreign investments to extract mining resources. When those resources are located in indigenous lands where the residents oppose extraction, conflict is frequent. But what motivates this opposition of indigenous people and local communities? What mechanisms have the communities and the indigenous people developed to express their disagreement with this new activity within their territory?

<http://revista.drclas.harvard.edu/book/indigenous-people-and-resistance-mining-projects>

# Background and previous efforts



Mapping the  
Community

Shuar Indians –  
Transkutuku - Ecuador





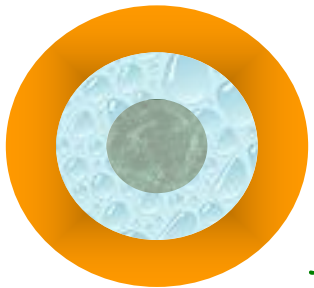
# Background and previous efforts

<http://blog.geocomunidad.org/en/>





# Background and previous efforts



*AmazonGISnet*

**MAKING INFORMED DECISIONS COLLECTIVELY  
ABOUT THEIR TERRITORIES**

# Participation ?

**Few notes from history and theory**

# Defining Participation and PGIS

- Not a common understanding of participation (also within organisations)
- Instrument OR goal
- Pseudo-participation OR Empowerment
- *Please provide your own definition of **EMPOWERMENT** (1 min)*

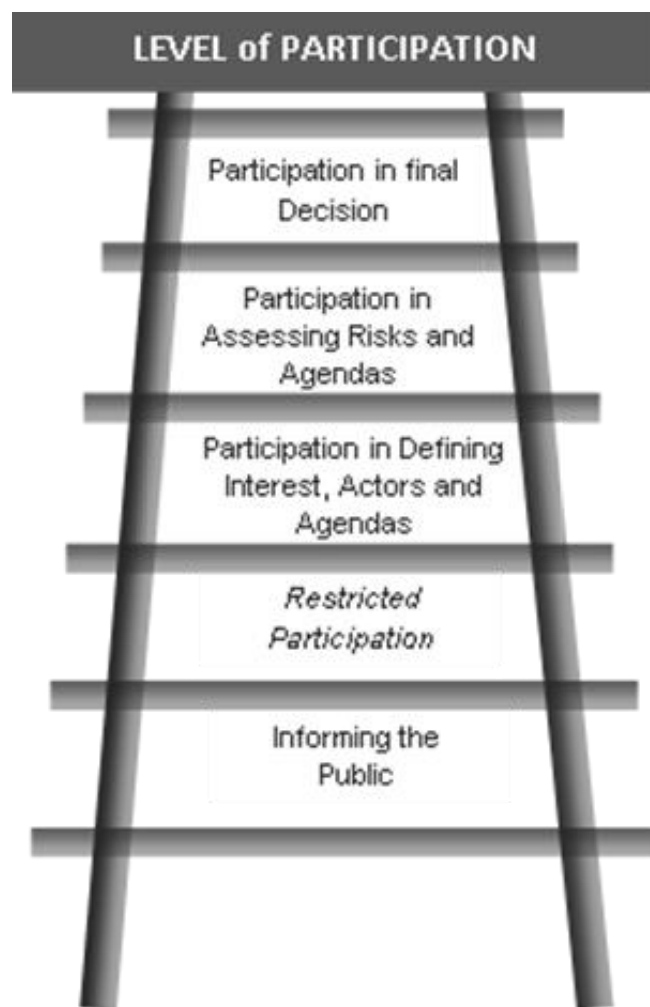




# Empowerment

*... “the process by which stakeholders identify and shape their lives and the society in which they live through access to knowledge, political processes and financial, social and natural resources.” (Carver 2001)*

# Arnstein's Ladder of Citizen Participation (1969)



# Questions to be addressed

- Whose GIS is it?
- Whose questions are addressed?
- Who sets the agenda?
- What will happen when the experts leave or donor funding dries up?
- What is left with those generated the data and shared the knowledge?

*(Rambaldi et al 2006)*

# ...times are a changing...

- Recent advances in technologies
  - Computer power
  - Internet connections
  - Standards and data availability, Open data
- Mobile technologies
  - Smartphones
  - Internet access
- Usability improved significantly
  - Cartographic/graphic design
- ,External' drivers
  - Google Earth/Maps
  - contribute to and edit geographic information

*GeospatialWeb 2.0  
(Geoweb)*



# Volunteered Geographic Information (VGI)

- spatially referenced data contributed by users within an online environment
- form of tags, text, video, images or audio that is linked to a spatial reference and contributed within a publicly accessible online environment ('humans as sensors')
- unique insight into the real lived experience of stakeholders
  - not simply for public consultation, but for a **citizen-driven and collaborative development** of a **meaningful narrative surrounding** a planning issues

# Critical issues

- Concerns with regard to its **quality, reliability, and overall value** → credibility
- **Why** people create and contribute to VGI repositories
- Take into account specific nature of VGI → political blogs, **subjective nature of the information**
- Terms of information “**accuracy**”
- Who **owns** the data?

From collaborative mapping initiatives to participatory GeoWeb applications for community management

# GeoCitizen Framework - Methodology

- 📍 Quality of Life (QoL) Self-Assessment visualized through online community maps that serve as background information for further discussions
- 📍 Story Telling around Problems and Possible Solutions (audio and video)
- 📍 Pointing out the problem sites on a community map
- 📍 Discussion of alternatives on common social media
- 📍 Rating of the best proposal
- 📍 Implementing and monitoring the solution

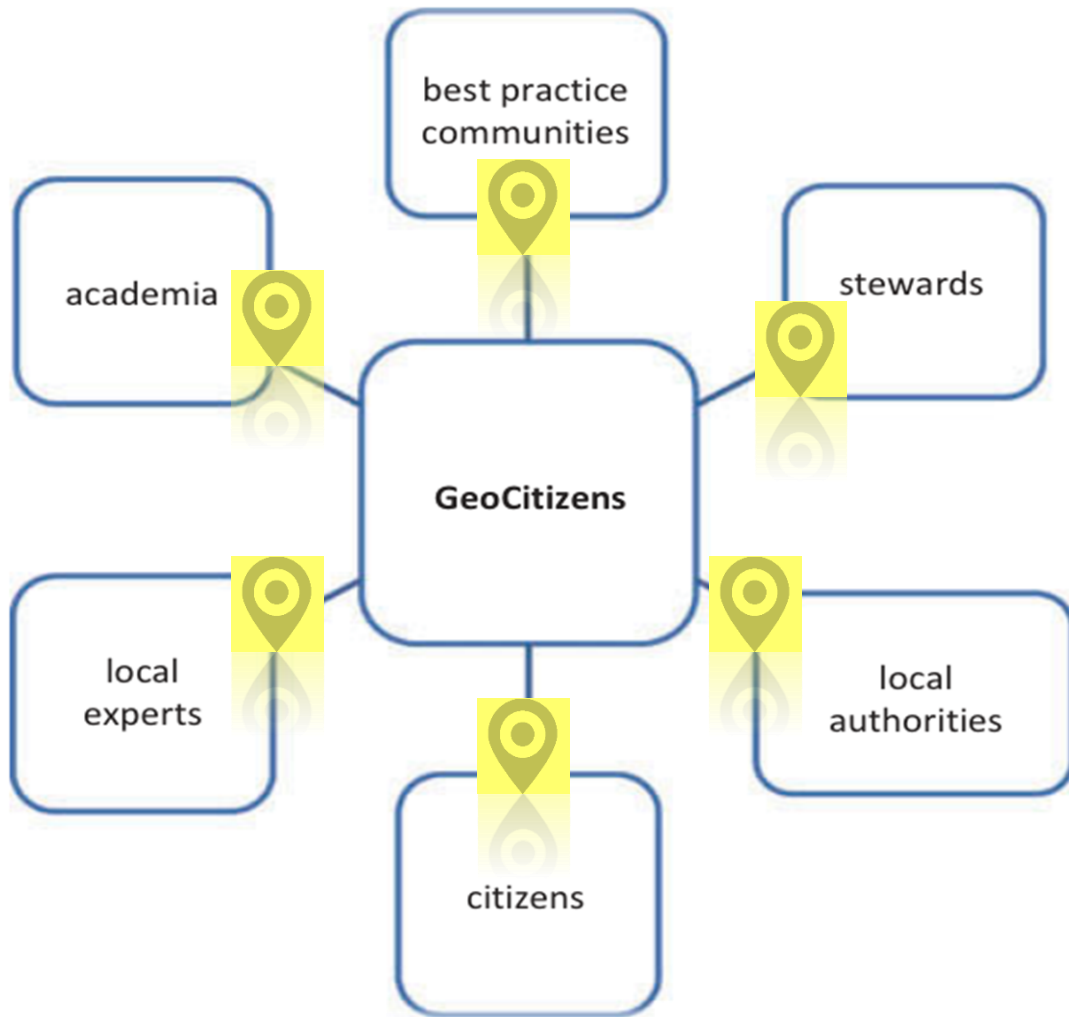


Further activities:

- 📍 Sharing Best Practice Cases among communities, creating community networks
- 📍 Adopting projects through (local) enterprises (ej. award for the best implementation project)

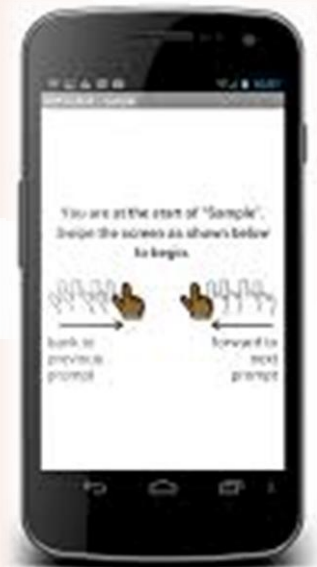


# Who are the GeoCitizens? Who can contribute?



# User Interfaces

- 📍 ODK app on Smartphone/Tablets with QoL Survey
- 📍 GeoCitizen reporting app for Android and iPhone (multi-language)
- 📍 GeoCitizen/GeoCiudadano desktop version 1.0  
[www.geociudadano.org](http://www.geociudadano.org) (beta-version)  
*New design release January 2017*
- 📍 Blog with Manuals, instructive Videos, Examples
- 📍 Connected Social Media Platforms
- 📍 ArcGIServer – full integration of (communal) GI-services



# Links of Interest

- 📍 Atzmanstorfer, K. et al., 2014, The GeoCitizen-approach: community-based spatial planning – an Ecuadorian case study, Cartography and Geographic Information Science, Taylor & Francis. <http://bit.ly/1qd0QDW>
- 📍 Die Kichwa Krieger und das Öl:  
<https://www.youtube.com/watch?v=-RSOsVRuRcM>
- 📍 Laxmi Ramasubramanian, (2012),  
Geographic Information  
Science and Public Participation. Springer Link.
- 📍 <http://blog.geocomunidad.org/en/>

