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# OBSERVATORY OF VIOLENT CONFLICT IN COLOMBIA

Project studied in summer course:  
“Social Innovation” Universidad  
Nacional de Colombia



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# OBSERVATORY OF THE VIOLENT CONFLICT IN COLOMBIA

UNIT: Institute of Political Studies and International Relations – IEPRI

Organization: Universidad Nacional de Colombia

## IDEA:

**Problem:** In Colombia, there are different kind of violence and the government, academia, and researchers need to characterize the different acts of violence in the Country, like:

- Violence against children
- Armed conflict
- Gender Violence
- Family violence
- Gangs, bands
- Soccer Violence
- Economic violence
- Political Violence
- Etc.

Decision makers in public policy needs to know the state of the violence, find patrons and common behavior, characteristics, actors, etc., that helps to identify solutions at violent conflict.

**Solution:** We propose to build a database that store the registers of media in Internet related with violent conflict in Colombia. The violent conflict not limits but include the armed conflict, including too every kind of violence, in every levels in the society. This database will be enable to free access for all society, especially, the scientific community in the world that is interested in make research on violence in Colombia or Latin America.

The observatory is developed in four phases:

The *first phase* is the development of software needed to capture the info from internet. For it is developed a web application for capture the title of new, date of publication and the body of the new (text) and analyze the info captured, create the reports and outputs.

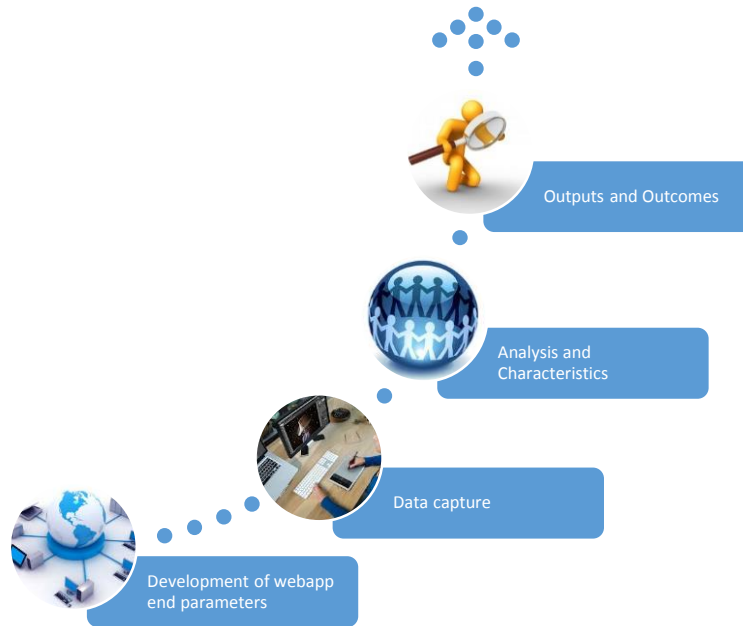
The *second phase* is the process of capture. For this process we will use the undergraduate students registered in program “Institutional co-responsibility” of the Universidad Nacional de Colombia. This program consists in a subsidy for students for transport or alimentation gave by University. Students like consideration works for administrative staff 32 hours in each period making administrative tasks.

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Considering that the app was developed on cloud architecture, the students would be able to capture the new from their houses, optimizing the use of time and reducing their costs.

The *third phase* is the analysis and characterization of records stored in database. For it, was opened call for internship, there, the students of programs related with human sciences, economic sciences and laws can to works analyzing the information and make their characterization. At the same time, this information generated is an input for that students write a report or article where we found a quantitative and qualitative analysis, it will be evaluated by two professors and will be valid for final assignment of the academic program, mandatory requirement for degree.

The fourth phase is related with the publication of results. Research Group will build indicators battery, when will describe the state of violence in Colombia. Further, the database will be available on the web for the entire community, allowing a free access like input of social research and decision making in the government.



*Image 1 Phases of Observatory. Source: Own creation*

## INTERVENTION:

For development of software tool is required a cloud infrastructure that enable:

1. The remote access for capture and analysis.
2. Web access for taking analyzed info for research and government decisions makers.

The development environment used for webapp is Oracle, considering that the University have license for that software. Will be developed under methodologies RAD (Rapid Application

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Development) using a Relational Database Management System Oracle Standard Version, Development Environment is Oracle Application Express and Web Server Oracle GlassFish. The development includes mobile apps that will permit access at the info everywhere at every time.

For hire the people that capture data through application from websites will be called using National Directorate of Welfare of the National University of Colombia, who promotes the program of subsidy. When we link a lot of students, we increase the number of beneficiaries and the project get a strong positive impact in the economy of the low income students. Due to the task of capture is very easy, we can hire students from all faculties.

For analysis, the IEPRI call for internship of students almost graduate. At moment, internship have not payment, but the idea is that will be remunerated.

This is one of obstacles presented, because most of enterprises offers remunerated internships, then, our internship is low attractive and number hired is very little. That create a gap between the captured records and analyzed record, generating a big problem.

As we can see, the capture is totally covered, the analysis is medium covered, but the technical team is very poor, only exists one systems' engineer candidate to the masters in Innovation management, but no more. He developed the application and coordinate the project but needs help for new developments. That is another critical obstacle.

Hitherto, two universities are interested to participate in project, University of the Andes and University of Antioquia, it may be an advantage.

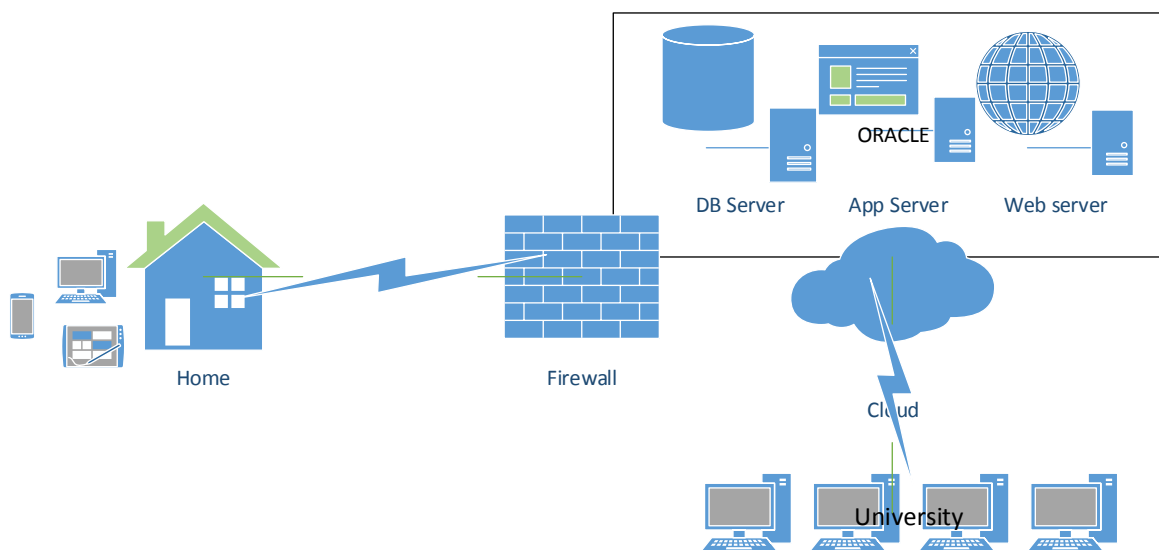


Image 2 Technological Architecture. Source: Own creation

The stakeholder involved in the project are:

- Low Income Undergraduate Students

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- Undergraduate Students in last period to do the internship.
- Researches in Human and Social Sciences, specially.
- Decision maker in public policy for security.

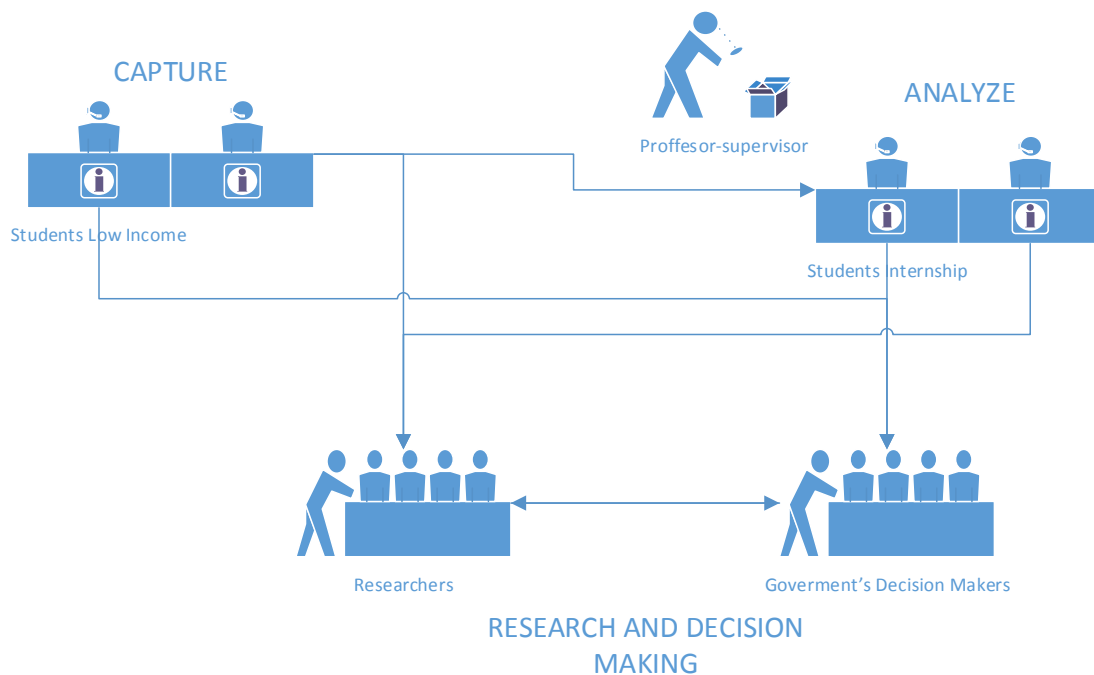


Image 3 Stakeholders Diagram. Source: Own creation

We have visited other institutions like Fedesarrollo and National Institute of Legal Medicine and are interested in participating within the project.

## IMPLEMENTATION

For the initial stage, the technological platform will be provided by the University, which includes servers, network and communication channel, pc, printer.

The human resources for capture and analyze tasks will be covered by the students described in the previous chapter. The app will be advanced by the engineer who developed the initial phase. We will require support from Engineering Faculty to accelerate the process of software construction.

Possible funding sources are:

- COLCIENCIAS
- General System of Royalties – Technology and Science Fund
- Ministry of TICS
- Institutional Calls for funding

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The screenshot shows the ObVio web application interface. At the top, there is a header with the logos of the Universidad Nacional de Colombia and the Instituto de Estudios Políticos y Relaciones Internacionales (IEPRI). The main title is "Observatorio de Conflicto Violento en Colombia". Below the header, there is a navigation bar with "INICIO", "SEDES U", and "CORREO" buttons. A user profile section shows the email "camoralesm@unal.edu.co" and a "Desconectar" button. The main content area is titled "Captura de Noticia" and contains a form with the following fields: "Fecha Noticia" (set to 18-JUL-2013), "Título" (empty text input), and "Periódico" (dropdown menu with "<SELECCIONE PERIÓDICO>"). Below the form is a large text area labeled "Cuerpo Noticia" for entering the news content. Buttons for "Cancelar" and "Crear" are located at the top right of the form area.

Image 4 Capture screen web application. Source: ObVio Software.

For the capture process, webpage was enabled for access it from the home, this is good for students because costs related with transportation and logistics are reduced.

The form to capture have the fields to capture the basic information. The *Universidad Nacional de Colombia* have a budget for a conditioned subsidy to help at students with expenses in alimentation and transportation and is distributed through a program. The administrative offices make requirements of students inscribed in this program, students must to support administrative tasks in return, for about 32 hours per period, generally in presence mode.

In the Institute, we converts 32 hours to 800 registers (previous measurements) and allow remote work. That is more attractive for students and we link in period 2013-I about 102 students from eleven faculties.

This work mode allow three advantages, between others:

1. Allow to increase the number of students that receive subsidies.
2. The students are involved in research projects instead of administrative tasks.

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3. The program’s activities not are crossed with time destined to educational activities.

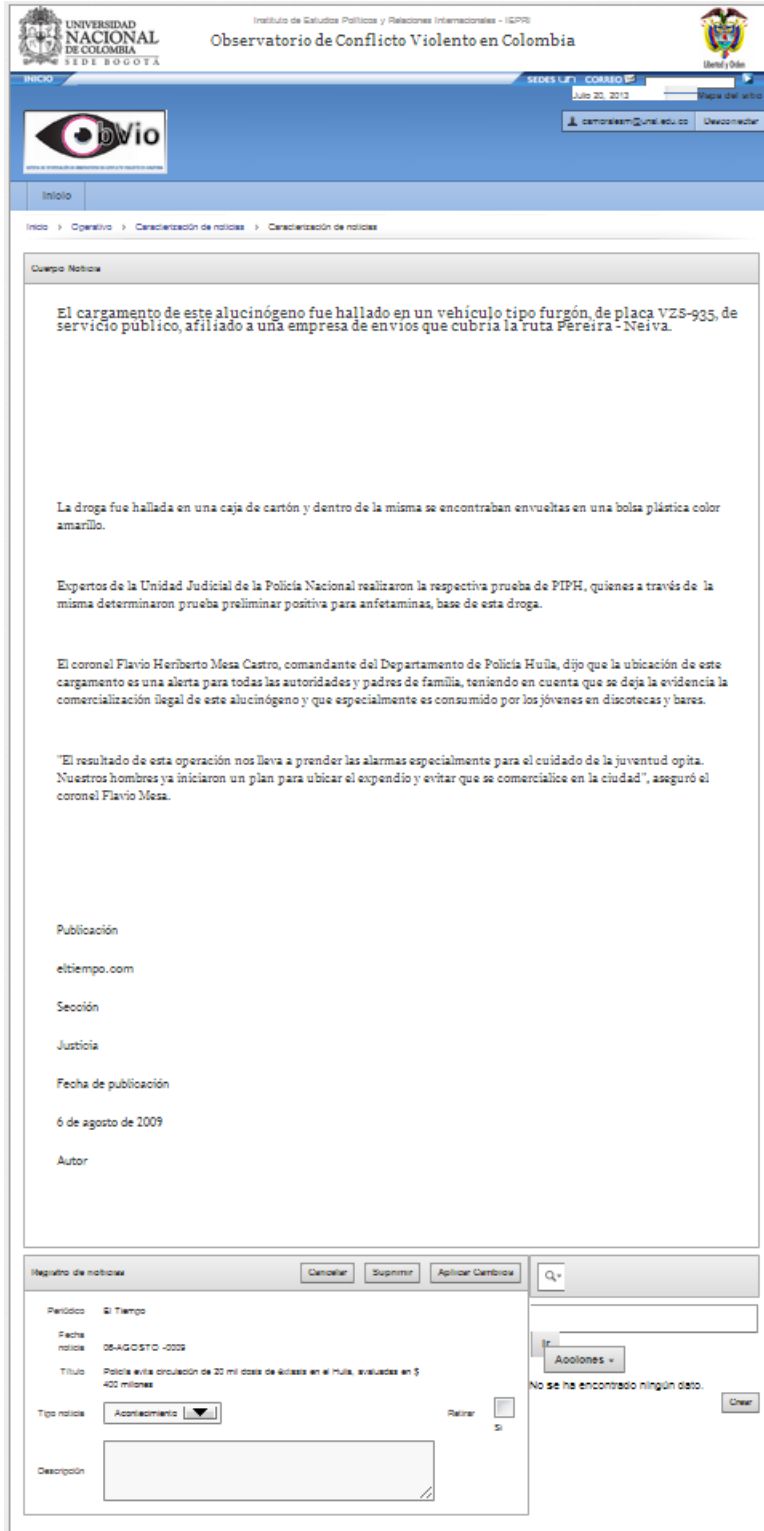


Image 5 Captured New and its classification. Source: ObVio Software.



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In the phase “characterization” is enabled two forms for it. The first one permits classify the new by type of notice and analyst make a brief abstract about the new.

After of very much analysis made for expert professor in this area, have identified the actors in violent conflict and have been classified in social spheres and sub-levels. This info is parametric data within the software that is used in the second form for characterize the new. In analysis phase, is identified geographical reference and measurements involved in the violent acts, for example, munition, drugs confiscated, death people, injured people, equipment, vehicles, etc.

UNIVERSIDAD NACIONAL DE COLOMBIA SEDE BOGOTÁ

Instituto de Estudios Políticos y Relaciones Internacionales - IEPRI

Observatorio de Conflicto Violento en Colombia

LIBERTAD Y ORDEN

INICIO SEDES CORREO

Julio 20, 2013 16:59:10 Mapa del sitio

camoralesm@unal.edu.co Desconectar

Registro de acción

Cancelar Crear

Tipo interacción:  Acción:

Actor 1 (Activo)

Esfera:  Nivel:  Entidad:

Identidad 1:  Identidad 2:  Detalle:

Actor 2 (Pasivo)

Esfera:  Nivel:  Entidad:

Identidad 1:  Identidad 2:  Detalle:

Unidades

Tipo unidad:  Unidad:  Cantidad:  Detalle unidad:

Ubicaci3n

País:  Departamento:  Ciudad:  Ubicaci3n exacta:

Image 6 News’s Characterization in software. Source: ObVio Software.

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The first people that use this analyzed info are the student that characterize because this work is made in framework of internship and they must to write a qualitative and quantitative report for degree's requisite relating and using this data.

Whereas the analyzed info is aimed to research like input, is mandatory develop tools that allow access that work. In this moment we are working in that development, only was created one interactive report that is used for revision of info and access of students for their reports.

We are researching topics related with NoSQL queries, semantic queries, qualitative analysis using TICS, etc. to strengthen the query tools.

The screenshot displays the ObVio web application interface. At the top, it features the logos of the Universidad Nacional de Colombia and the Instituto de Estudios Políticos y Relaciones Internacionales (IEPRI). The main header reads "Observatorio de Conflicto Violento en Colombia". A navigation bar includes "INICIO", "SEDES", and "CORREO". The user is logged in as "camoralesm@unal.edu.co" with a "Desconectar" button. The main content area shows a breadcrumb trail: "Inicio > Reportes > Reportes Administrativos > RegistrosUsuario". Below this, there are filters for "Vista de Informe" and "Fila 1 de 48990". The central part of the page is a detailed record for a news article, listing various metadata fields such as "Nato Acto", "Periodico", "Fecha", "Tipo Noticia", "Titulo", "Descripcion", "Usuario", "Fecha", "Caracteriza", "Esfera Ac", "Nivel Ac", "Entidad Ac", "Identidad1 Ac", "Identidad2 Ac", "Accion", "Interaccion", "Esfera Pa", "Nivel Pa", "Entidad Pa", "Identidad1 Pa", "Identidad2 Pa", "Detalle Ac", "Detalle Pa", "Recolector", "Cantidad", "Unidad", "Ciudad", and "Nnot Noticia". The footer contains contact information for the Universidad Nacional de Colombia, logos for "Gobierno en línea" and "agencia.un de noticias", and a "PBX: 3165000" number.

Nato Acto	187
Periodico	El espacio
Fecha	27/11/12
Tipo Noticia	Acontecimiento
Titulo	Participación de la sociedad civil en proceso de paz es esencial, dice Santos
Descripcion	El presidente Juan Manuel Santos, dijo hoy que la participación de la sociedad civil "es esencial" en el proceso de paz que adelanta el Gobierno con las FARC en La Habana.
Usuario	DORTEGAO
Fecha	07/02/13 09:28:34,971000
Caracteriza	
Esfera Ac	Estatal
Nivel Ac	NACIONAL
Entidad Ac	GOBIERNO NACIONAL
Identidad1 Ac	PRESIDENCIA
Identidad2 Ac	Despacho Presidencial
Accion	pronunciamientos
Interaccion	Politico
Esfera Pa	Conflicto
Nivel Pa	CONFLICTO ARMADO
Entidad Pa	GUERRILLA
Identidad1 Pa	FARC
Identidad2 Pa	No Aplica/No Especifica
Detalle Ac	Juan Manuel Santos, Presidente
Detalle Pa	Proceso de paz
Recolector	CAMORALESM@UNAL.EDU.CO
Cantidad	-
Unidad	No Aplica/ No Especifica
Ciudad	BOGOTA D.C.
Nnot Noticia	1572

Image 7 Example of analyzed record. Source: ObVio Software.

## IMPACT

In the IEPRI we hope have effect principally in two field:

1. Research in Violence and related.
2. Public Policy in Security.

The outcome are aimed to research', community, not only in Colombia, else in Latin America and other countries interested in that problematic. We hope support the growing scientific production with quality. Using biliometrics and scienciometrics tools will be made the indicators for impact measure in scientific publication.

Another target is government actors, especially whom make decisions about security issues in different levels as cities, regions, departments and all country.

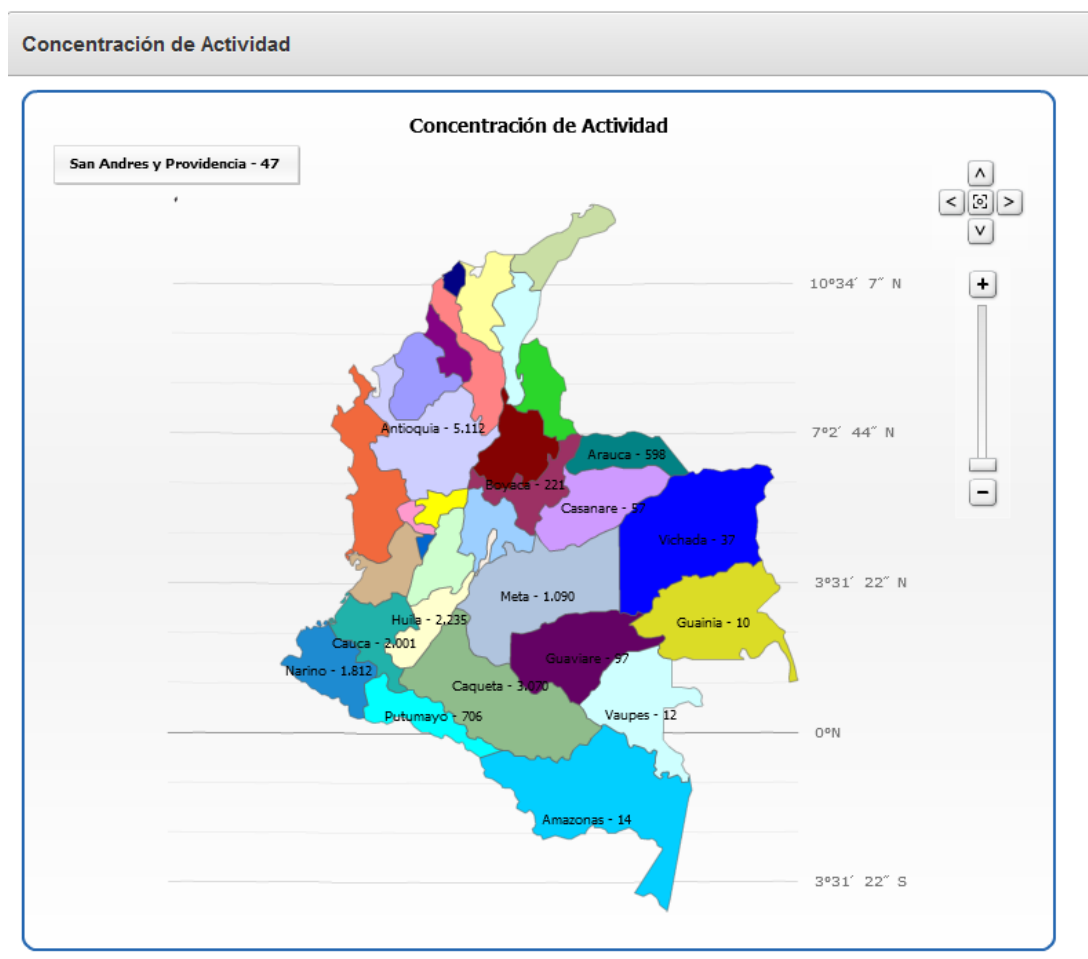


Image 8 Example of Char Map in Software. Source: ObVio Software.

## REFERENCES

ObVio Software. Institute of Political Studies and International Relations. Universidad Nacional de Colombia. [www.obvio.unal.edu.co](http://www.obvio.unal.edu.co)