Rolando Ocampo- ECLAC Covid19 Observatory

The new global scenario in times of COVID-19 makes it necessary to take urgent measures and assess the impacts they will have. ECLAC has built this Observatory to support review and follow-up over the medium and long terms and at the request of CELAC.

The Observatory tracks the public policies that the 33 countries of the Latin America and Caribbean region are implementing to limit the impact of the COVID-19 pandemic and offers analyses of the economic and social impacts that these policies will have at the national and sectorial levels.

The content of the observatory is divided in the following sections:
- Special reports (April, 3 – 21)
- Information tools
- News
- Activities
- Tracking
- GEOPORTAL

The COVID-19 Geoportal Geoportal facilitates the visualization and monitoring of the national measures the Latin American and Caribbean region are implementing as input for the analysis. These measures have been classified into five types: Movements, Health, Economy, Employment, Social Protection, Education and Gender.

The information is accessible by country through an interactive map with downloadable country files with measures data taken at the national level in each of the categories, indicating the date, the authority that issues it, as well as the amount and source of financing of the measure, if applicable. In addition, the country report includes a calendar to visualize the dates on which the measures were issued.

The information contained in the geoportal allows comparative analysis between countries and at the regional level. Among the products resulting from the analysis of the information contained in the geoportal, thematic reports have been generated for each section, which will be updated periodically, including the new section on gender measures.

ECLAC has developed a remotely managed web form that allows new data on national measures to be uploaded to a centralized database, so that they can be updated in the Geoportal. For these purposes, instructions have been created to fill out the web form, as well as individual users and passwords for representatives of ECLAC headquarters, subregional headquarters and national offices, responsible for updating the information of the 33 countries of the region.

The Observatory is being updated regularly to provide the latest information on policy measures to face the coronavirus COVID-19 pandemic in Latin America and the Caribbean.

Survey on geospatial support to COVID-19 in the Americas: Summary

ECLAC toghether with UN-GGIM Americas developed a 10-question questionnaire to find out what the response situation of the countries has been to the COVID-19 contingency. In the first place, of the total of 36 countries in the Americas region, 20 participated in the questionnaire, these countries are the following: Jamaica, Sint Maarten, Peru, Guyana, Honduras, Colombia, Barbados, Antigua & Barbuda, Dominica, Uruguay, Panama, El Salvador, Brazil, Guatemala, USA, Argentina, Ecuador, Chile, Mexico and the Dominican Republic. Of these 20 countries, 17 reported using geospatial resources to handle the data load of COVID-19, some of the most frequent uses are the distribution maps of: confirmed, recovered cases, deaths, quarantine areas, availability of beds, follow-up of infected, etc. In addition, many countries report that they are making vulnerability maps, logistics maps to support distribution, heat maps, and finally, the development visualizers or geostatistical dashboards.

About the institutions or agencies that are supporting the delivery of data of all kinds, for their subsequent geospatial processing, three response contexts were identified. First, the most recurrent pattern is for countries to activate their own emergency protocols, where a collaborative chain is activated from multiple entities, whether public or private; in general, it is the National Emergency System that coordinates and collects the information, and then the Institutes of geography and/or statistics process the information in geospatial products. The second context of response is that countries create exceptional working committees, made up of ministries, institutions or offices that have competence in the matter. Finally, in case the countries do not have protocols or exceptional committees, the ministerial plans are adjusted to address the most urgent problems, as well as request external or internal assistance from experts who have competence in the problem to be solved. It should be noted that these three response contexts are not mutually exclusive, and there are some countries that have responded in various ways. In general, the institutions/agencies that most frequently coordinate the geospatial response are the geography/statistics Institutes, followed by the government ministries, emergency offices or census offices.

Concerning the difficulties faced by the countries, the following gaps were identified: 1) data accessibility: in some cases the data is not public, is not disaggregated, or is not interoperable; 2) teamwork and capacity of GIS professionals: the need to have more professionals and with new/better technical skills, 3) the need for authorities to know the importance and usefulness of investing in GIS professionals and infrastructure, 4) technical aspects of GIS: need to improve the current working infrastructure and 5) need to develop geodatabases that allow the storage, access and deployment of information, or an SDI for countries that do not yet have one.

Based on the above, countries require support, especially in the area of increasing capacities and technical training to manage GIS, with an emphasis on the field of health and on the effective creation dashboards, followed by easier data access, and insist on the integration statistic and geospatial data. Later, was mentioned the importance of increasing the inter-institutional instances, where different matters can come together to, for example, generate vulnerability models. Also, there is interest in exploring software that allows information management in real time. As final request, it is needed to increase the dissemination of geospatial products generated by each country, either in forums or summits, in order to get the most out of geospatial products and reach as many stakeholders ass possible, such as authorities and citizenship.

TERRITORIAL VIEWER COVID-19 IDE Chile

The generation of this COVID-19 Territorial Viewer is due to the joint work between the Executive Secretariat of the National System for Coordination of Territorial Information (SNIT) and the institutions that are part of the Multisectoral Working Group for Territory Information in Emergency Management, Disasters and Catastrophes, which is coordinated by this Secretariat, under the Ministry of National Assets.

The COVID-19 Territorial Viewer is open to citizens and contains the following information:

Tables with statistics for the country and by region: a panel is shown with data on total confirmed cases, those new cases of the day, number of critical patients, number of deceased patients, number of recovered patients and total examinations performed. In addition, a graph is shown with the daily progress by region of confirmed cases, deceased patients, examinations performed, new cases and those who are hospitalized. This is updated based on the daily report of the Ministry of Health.

Active cases by commune: with red dots the total number of infected people in each commune is shown. This data is obtained from the epidemiological report that is presented approximately every 48 hours.

Active cases per 100,000 inhabitants, by commune: a layer with different shades of blue is displayed, which shows the rate of active cases per 100,000 inhabitants per commune. This indicator serves to make the communes with the largest population comparable to the smallest.

Communes in quarantine: with a dark green layer, those communes that are in quarantine (or parts of them) are shown, specifying on the map which part of the commune is affected.

Communes with sanitary cord: with a purple layer, the communes subject to sanitary cord are shown.

Daily progress charts: The viewer also allows you to show the daily progress of these statistics. This level of detail is available for each region in confirmed cases, deceased patients, examinations performed, new cases and those who are in beds in the Intensive Care Unit (ICU). In addition, there is information at the regional level of active cases, updated every 24 hours according to the Coronavirus Report issued by the Ministry of Health.

https://idechile.maps.arcgis.com/apps/opsdashboard/index.html#/6662268991094e439cee1a6f9f0e46ea

Presentation: COVID Colombia Vulnerability Index

The purpose of this paper is to present the Colombian experience in the calculation and dissemination of a vulnerability index by CODIV in urban areas.

Since March 17, the National Planning Department -DNP-, the Institute of Technological Evaluation in Health -IETS- and the National Administrative Department of Statistics -DANE- are collaborating with the Ministry of Health and Social Protection and the National Institute of Health to provide statistical information and build tools that make it easier for the high government to make decisions with greater certainty for dealing with the emergency caused by COVID-19.

The objective of the project focused on identifying, to the greatest possible degree of disaggregation (block), the population in the country's municipalities that due to their demographic characteristics and their health conditions may have more complications in case of getting COVID-19, having into account, among other considerations, the epidemiological criteria identified. The methodological proposal developed was to, based on the information from the 2018 CNPV and with the necessary administrative records, seek to target this population to the highest possible level of disaggregation. The administrative registers with which we are working are: the National Identification File -ANI- and the Civil Birth Registry -RCN- of the National Registry of Civil Status; the Unique Database of Health Affiliation -BDUA-; and the individual registries of health service provision -RIPS-

Construction of the vulnerability index

The steps for the construction of the index are the following:

1. Determine the proportion of individuals per block that has the following comorbidities, using the 2018 National Population and Housing Census -CNPV- and the Individual Registry of Health Benefits -RIPS-.
   The pathologies identified as risk factors that can generate complications in people with COVID-19, with their respective ICD 10 codes, are the following: hypertension, diabetes, ischemic heart disease, chronic lung disease, and cancer.
   Likewise, based on the data from the Population and Housing Census, the average of people over 60 years of age per block living in one-person and family homes was identified at the block level, crowding, among others.
2. A database was consolidated that has 407,277 rows that represent all blocks in head of 1102 municipalities in the country with the variables described
3. The unsupervised learning technique kmeans by municipal head was applied determining the number of groups
4. The vulnerability level is assigned to each cluster

Geoviewer vulnerability index

To facilitate the dissemination and consultation of the calculated vulnerability index, a Geoviewer was published, that presents the geographic distribution information of the statistical analyzes carried out.

The viewer allows you to consult information on:

- Multidimensional poverty measure:

- Groups by vulnerability level, according to the information presented in the previous section.
- Health Care Institutions (IPS): The viewer will group the number of IPS according to the level of detail displayed on the map.
- Population over 60 years
- Population older than 70 years

This information can be filtered by department or consulted interactively for the entire country. The transparency tool allows you to grade the visibility of the information of interest displayed. The height tool enables a 3D view of the displayed variable.

Applications

The use of the information generated has allowed:

- Georeferencing of COVID cases and identification of the relationship with the vulnerability index
- Analysis of the spatial and temporal evolution of the cases: the georeferencing of the positive cases and their analysis of expansion over time, makes it possible to spatially identify the new sources of contagion
- Intervention strategies in the territory, which allow more forceful isolation measures to be taken.

Reeview of the presentation of the GeoDashboard developed by INEGI with context indicators of COVID-19

The development of this geoportal is the result of teamwork, several colleagues joined their capacities, talents, knowledge and enthusiasm for its achievement. A thanks to all of them.

This GeoDashboard now is considered in a development stage, the last details are being refined for its publication.

To carry out the GeoDashboard, statistical and geographic data from various sources are integrated, namely: The data corresponding to the Pandemic (Confirmed cases, deaths, among others), are provided daily by the Ministry of Health of Mexico; The social lag index is an indicator prepared by the National Council for the Evaluation of Social Development Policy (CONEVAL); and finally, data and indicators from censuses and surveys prepared by INEGI are included. Regarding the mapping used, it refers to the National Geostatistical Framework.

Additionally, the location and contact details of the Economic Units are available, whose sector is of interest, for example, hospitals, pharmacies, supermarkets, among others.

The data and indicators are disaggregated at the municipality level, and some of them at the State level.

The GeoDashboard is based on the Open stream, that is, Open Data, Open Standards and Open Source, so it can be transferred to other countries without major difficulties.

Choropleth Maps.

The GeoDashboard generates coroplet maps for 28 indicators grouped into 9 themes, the largest disaggregation is at the municipal level.

Municipal statistics sheet

For each of the country's municipalities, a file was generated with context data and indicators, now there are 65 indicators, grouped into 8 topics, just select the municipality of interest and you can consult the corresponding file.

An additional functionality, oriented towards the general public, is the possibility of finding nearby economic establishments from their location. Currently, hospitals, pharmacies, shopping malls, banks, gas stations, parcel services and restaurants are located.

For all data and indicators, the source is provided, so that the user is certain of them.

INEGI data can be downloaded from the GeoDashboard, in open data format. For those data that are not produced by INEGI, the URL is provided for download.

There will be a short live presentation of the GeoDashboard to show its functionality.

Next steps:

- Complete the development and proceed to its publication, which will occur in the coming days.
- The relevance of including more data and context indicators on various statistical topics is evaluated.
- New functionalities will be added, such as elaboration of comparative graphs.

COVID-19: Strategies for a Geospatial Response in the Americas, the case of Panama

In this presentation we will address the initiatives we have taken to support government's response to COVID-19. Analyzed mainly from the geospatial information point of view from the two most successful government plans: Protect Yourself, Panama and Solidarity Panama. The first plan focused on health, with six application measures: stay at home, ROSA virtual clinic, portable sample collection booths, personal individual notification of negative results, modular hospital, and recovery phase. The second plan, Solidarity Panama, focused on meeting the basic needs of the population, due to the economic and social impact caused by COVID-19.

In the case of Panama, the baseline geospatial information comes from the National Cartography that is the responsibility of the National Geographic Institute Tommy Guardia. However, it is complemented with information from other institutions. In this sense, the cooperation that exists between the member institutions of the Panamanian Spatial Data Infrastructure to provide complementary geospatial information is of great benefit. For this contingency, new cartographic maps have been prepared to meet immediate needs. Among the products developed are:

a. Maps for air navigation
b. Logistics maps
c. Maps for waste collection routes
d. Maps to assess population density
e. Maps for local governments

These maps are of vital importance because they allow the distribution of the benefits stemming from the Solidarity Panama plan, such as: food, medical assistance in areas of difficult access, generally in indigenous areas; the physical delivery of the solidarity bonds in those cases where it was not possible to deliver digitally. These maps also allowed the planning of new routes for waste/rubbish collection urban areas, most importantly, allowed the planning of strategies to address social problems where there is a higher population density.

The information generated remains available for download on the Geospatial Hub platform https://geo-01.innovacion.gob.pa/ platform which integrates the National Catalog of Metadata, map viewers, and geospatial information. This platform offers vital support to institutions for the development of direct and indirect geospatial tools, such as: https://geosocial.maps.arcgis.com/apps/opsdashboard/index.html#/2c6e932c690d467b85375af5 2b614472

The platform is a type of dashboard for the Ministry of Health in collaboration with the National Authority of Government Innovation, with the objective to make the statistical data of COVID-19 widely available. On the site the user can find current, recovered, hospitalizations and mortality of COVID-19 cases at different geographic and political scales, such as boroughs, province, and the country. In addition, the data can be filtered to be viewed by men/women, age, as well as the path and advancement of pandemic. This dashboard is a component of the Protect Yourself, Panama plan.

There are other non-direct tools that are used in the field of research. For example, the National Secretariat of Science and Technology in March 2020 put out a request for proposals to the

Panamanian scientific-technological community, as well as entrepreneurs and innovators, to develop research initiatives for quick and effective care in the country regarding the global health and social emergency caused by the COVID-19 pandemic. Thirty-two out of the 291 proposal received by the Secretariat were prioritized, and these proposals will use geo-referenced information as a core part of their research. With it they can develop project locations and sites, databases, test analyses, assess challenges at different geographic scales, among others.