

Introducing the Prototype of SIAGRO+: ECLAC Mexico's Agricultural and Climate Change Open-Source Database

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History of SIAGRO

- The Agricultural Development and Climate Change Unit (UDACC) has been working on agricultural information in Mexico, Central American region, and parts of the Caribbean for more than 30 years ... used to be paper based.
- In 2014, with funding from IFAD, “SIAGRO- GIPP (Gestión de Información para Políticas Públicas)” was created. The indicators were then absorbed into CEPALSTAT.
- Currently located in “Temas Transversales -> Estadísticas de la actividad agropecuaria, desarrollo rural y seguridad alimentaria y nutricional de Centroamérica y México ”
- Originally supported themes of agricultural activities, food security, and rural development. In 2021, two sections on climate data were added: historical data and climate change scenarios.



Need for Improvement

- Situated far away and hidden from sight.
- Limited data visualization alternatives.
- Difficult to navigate and identify indicators.
- Need for finer tuned metadata and transparency in source origination.
- The two sections on climate data are slow to render due to the large amount of data points.
- Stringent centralized standards make it difficult for new developments and experimentations with new ventures.



Progress

- Improved documentation and detailed notes on each indicator, also known as the “Master SIAGRO Guide”.
- Monitoring dashboard to track the latest availability of information has been created.
- The section on historical climate data (1901 to present) has been completely automated, with code reuse. (100,000+ data points).
- A prototype for climate change scenarios disaggregated down to the municipal level is available.
- Continued collaboration with the FAO (Questionnaires on Agricultural Activities).



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Proposal of SIAGRO+

- A data platform branched out from the main CEPALSTAT website, created by (mostly) open-source technologies.
- Still uses indicator data from CEPALSTAT via the API and other manners.
- The stack consists of Python (Django), HTML, CSS (Bootstrap), JavaScript (D3.js), and in the future PostgreSQL (PostGIS), among others.
- Data to be compliant with internationally accepted standards of dissemination. Examples include: ISIC4, SNA, COICOP, COFOG, CPC, HS codes, SEEA etc. vs outdated or regional classifications.
- In progress: Whenever possible, data from official sources will be used and references to third party non-UN databases will be removed and replaced.
- SIAGRO+ aims to be comprehensive and dedicated to the Member States of the region while still maintaining **statistical independence, impartiality**, and within **the highest ethical standards** expected of international civil service.



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Live Demonstration of the Prototype Followed by Feedback Survey



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Desired Features

- In the feedback survey you will find a question that asks for features that are being considered in SIAGRO+.
- Download rendered graphics
- Download dataset
- WikiPage
- CEPALSTAT API tutorial
- Geoportal
- Blog for updates
- Mobile site compatibility
- Usage of Mixed (and Derived) Indicators
- Other (Let us know in the survey!)



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Next Steps

- To fill in the rest of the indicators with remaining content based on the feedback
- Incorporate a Relational Database Management System (RDBMS) into SIAGRO+ in the backend.
- Add elements of data engineering, e.g Apache Airflow. Scheduling of updates and automatic data acquisition- web scraping, web automation and crawlers, extractions from non-traditional sources, etc.



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THANK YOU VERY MUCH!

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