

CCAL – MONITORING CARBON STOCKS OF THE AMAZON STATES

BACKGROUND

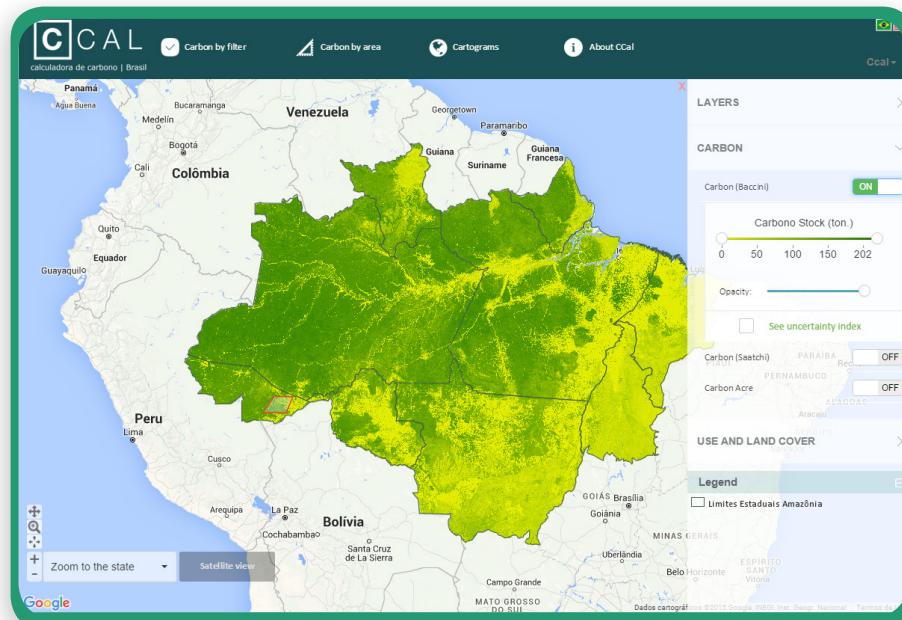
REDD+ is a compensation mechanism for reducing emissions from deforestation and forest degradation of relevant importance to support the rural transition to a low carbon economy. Amazon states have advanced in the REDD+ debate, and some already have their own legislation on the topic. In this context, MRV systems are crucial to assist states in the Monitoring,

OBJECTIVES OF CCAL

CCAL is a web-based carbon calculator designed to support public managers, especially those linked to state level REDD+ programs, in the development of strategies for reducing emissions from deforestation and forest degradation.

The system aims to provide operational support to carbon monitoring, including estimates of stock gains and losses, emissions released, avoided emissions, and baseline calculations. Estimations are available in different scales, from state level (jurisdiction), to land tenure categories and municipal territories (sub-jurisdiction).

The CCal also aims to contribute to increase knowledge and expertise of government staff as regards REDD+ programs, in the design and implementation of jurisdictional REDD+, as well as to reduce uncertainties by improving carbon accounting in states.



Reporting and Verification of carbon stocks and to measure performance of sub-programs and projects, providing greater credibility to investors and supporting decision-making for public managers. In the understanding that monitoring carbon stocks is vital to measuring the reduction of emissions from deforestation and degradation, we created the CCal.

HOW CCAL WORKS

The system, developed and validated in workshops with Amazonian State technicians, brings together a geographic data set, such as forest cover maps, areas under forest regrowth, regrowth age, temperature, rainfall, soil type, biomass from various sources and their associated uncertainties, municipi-

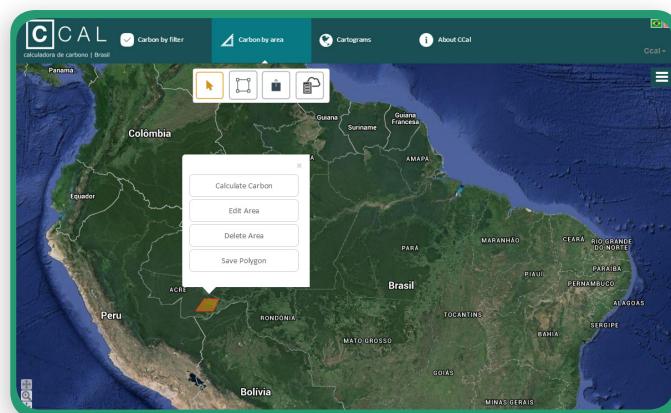
pal information, and maps of the main land tenure categories in the Amazon.

These maps are referenced into the system to generate a database whose main results are carbon stocks, potential forest regrowth, and avoided carbon emissions.

The system operates online and provides a display module with information relevant to the topic, to include carbon stocks and its associated uncertainties; deforestation dynamics; and supporting data, such as protected areas, indigenous lands, and settlement projects.

The CCAL was designed to summarize, in the form of reports, the historical and current situation of carbon stocks in the state as a whole, in municipalities, and in land categories (including indigenous lands, protected areas, private land, settlements, public lands), reaching even the individual level of each of these categories.

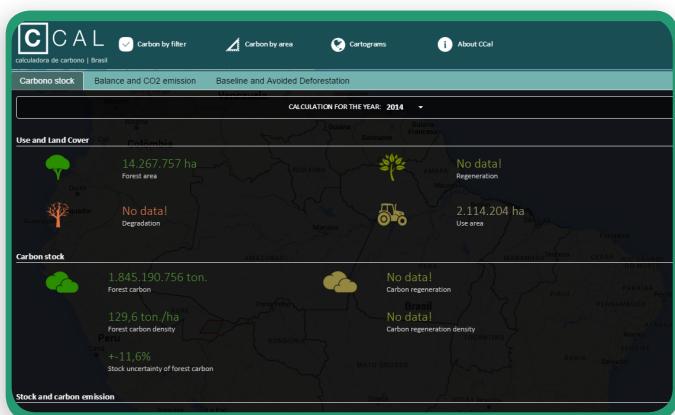
In addition the CCAL allows new areas to be included in the system by inputting the polygon on screen, or by uploading polygons, allowing for reports to be generated on these new areas. The system also allows comparisons between and within states in terms of their performance on Carbon emissions.



Drawing and uploading your own polygons

RESULTS

CCAL results are summarized in reports and infographics showing carbon stocks in aerial biomass by type of land cover, carbon stocks time series, the net balance of losses through primary forest deforestation, forest regrowth, gains through potential carbon accumulation by forest regrowth, in addition to the calculation of avoided deforestation in relation to historical baselines by state, land use category, municipality, etc.



CCAL report screen

CHALLENGES

One of the main challenges of CCAL concerns the scale and regularity of forest regrowth and degradation data. This challenge is going to be overcome by using the biomass gain a loss time series dataset provided by the Woods Hole Research Center.

The other challenge is CCAL's expansion to other Tropical forest countries where data availability is different. To meet this challenge we are developing a pilot for 5 Departments of the Peruvian Amazon and 3 States of Mexico.

This tool has great potential to be expanded to other states of the Brazilian Amazon as well as to other countries.