

CentroGeo identifies forests with bigger carbon credit potential

December 9 2013



Using satellite images, researchers at the Center of Geography and Geomatics (CentroGeo) estimate the quantity of carbon that Mexican forests store and identify the species that best serve as a reservoir.

This is relevant because the interest that organizations and enterprises have for giving, as an incentive, economic resources to countries with preserved forest zones (payment scheme of environmental services).



José Luis Silvan Cárdenas, head of the Project, said that the intention is to implement a permanent monitoring system with the help of <u>satellite</u> <u>images</u> to quantify the biomass or aerial live mass that generates a tree, specially the canopy that is the upper part of the tree (leafs and branches) and in second term the trunk.

Currently, there are samples of a section of the Montes Azules Reservation in Chiapas, southeast of the country, and of the conservation floor of Mexico City with species of pine and oyamel.

The specialist at Centro Geo indicated that satellite images allow to monitor different biophysical variables, including <u>forest biomass</u>. Additionally, field work was also carried out to measure the trunk's diameter, the height and specific weight of the wood, besides comparing it to model information and data from satellite images.





Within the first results of the Project are that in Mexico City's conservation floor, the oyamel harness the sun more efficiently in its leafs, therefore has better photosynthesis and carbon capture processes.

Another important point was confirmed by proving that the leaf's size does influence in the greenery of the trees, because when having a small structure, the light can interact more times with elements of the canopy before being reflected to the exterior giving the possibility of creating more photosynthesis.

Silvan Cárdenas explained that currently the most popular method for measuring trees biomass is by field sampling by the Forest National Commission, but the process is multiannual and not continual.

Geospatial information has been used since the 60's, however, in the last years technological development have facilitated its application in diverse fields.

According to the researcher, the project is in a modeling stage where variables as reflection, transmition and light absorption are related, as well as structural parameters, including foliar density and height, expecting to build maps of each region's biomass.

He added that this results hope to support public conservation politics and have an evaluation and monitoring system that determines the current state of the national forest resources.

Provided by Investigación y Desarrollo

Citation: CentroGeo identifies forests with bigger carbon credit potential (2013, December 9) retrieved 27 April 2024 from https://phys.org/news/2013-12-centrogeo-forests-bigger-carbon-credit.html



This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.