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Mapping Biomass for REDD in the Largest Forest of Central Africa: the Democratic Republic of Congo

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With the support of the International Climate Initiative (ICI) of the Federal Ministry of the Environment, Conservation, and Nuclear Security, the implementation of the German Development Bank KfW, the World Wide Fund for Nature (WWF) Germany, the University of California Los Angeles (UCLA) and local DRC partners will produce a national scale biomass map for the entire forest coverage of the Democratic Republic of Congo (DRC) along with feasibility assessments of different forest protection measures within a framework of a REDD+ model project.

The « Carbon Map and Model (CO_2M&M) » project will produce a national forest biomass map for the DRC, which will enable quantitative assessments of carbon stocks and emissions in the largest forest of the Congo Basin. This effort will support the national REDD (Reducing Emissions from Deforestation and Degradation) program in DRC, which plays a major role in sustainable development and poverty alleviation. This map will be developed from field data, complemented by airborne LiDAR (Light Detection and Ranging) and aerial photos, systematically sampled throughout the forests of the DRC and up-scaled to satellite images to accurately estimate carbon content in all forested areas. The second component of the project is to develop specific approaches for model REDD projects in key landscapes.

This project represents the largest LiDAR-derived mapping effort in Africa, under unprecedented logistical constraints, which will provide one of the poorest nations in the world with the richest airborne and satellites derived datasets for analyzing forest structure, biomass and biodiversity.