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DRIVERS OF DEFORESTATION IN SOUTH AMERICA: FIRST RESULTS FROM A PAN-TROPICAL REMOTE SENSING ANALYSIS

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ABSTRACT:

Within the United Nations Framework Convention on Climate Change (UNFCCC) the Conference of the Parties has invited Parties, relevant organizations and stakeholders to support ongoing efforts, capacity building, demonstration activities and mobilization of resources relating to reducing emissions from deforestation and forest degradation, and to enhance forest carbon stocks in (sub)tropical non-annex I countries (REDD+). The UNFCCC considers addressing the drivers of deforestation and degradation crucial for the development and implementation of national REDD+ strategies and action plans, and encourages REDD+ countries to identify drivers and activities causing forest carbon emissions. Monitoring and tracking human activities that result in forest carbon change (e.g. deforestation by agricultural expansion, mining etc.) is crucial. Earth Observation data can be used to derive information on follow-up land use, type and intensity of land changes, and shape and pattern of deforestation. This can generate understanding about proximate causes and drivers of deforestation. This research assesses and quantifies deforestation drivers in South America in a systematic manner, building on the 2010 global Remote Sensing Survey of the FAO Forest Resource Assessment. Deforestation drivers are assessed by visual interpretation of forest change patches depicted from satellite imagery to derive follow-up land use of deforestation in the periods 1990 to 2000 and 2000 to 2005. This allows to quantify the role / proportion of deforestation drivers which are then used to assess forest carbon emissions per driver. The focus for this paper will be on presenting the methodology, trends and trajectories of regionally specific drivers of deforestation and associated carbon emissions.