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ABSTRACT BOOK
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Ensuring community benefits; case study of REDD+ in Ghana

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In the last decade, United Nations negotiations have been on going on using forests to mitigate climate change via the mechanism known as Reduced Emissions from Deforestation and Forest Degradation plus the added value of conservation, enhancement of forest carbon stocks and sustainable forest management (REDD+). With support from organisations like the World Bank and the collaborative efforts of UNDP, UNEP and FAO, forest countries across the globe have started to get REDD+ ready. Getting REDD+ ready includes running pilot projects and implementing other readiness initiatives to feed into the systems and strategies countries are laying out for REDD+ and to reform already existing climate and forest governance institutions. The purpose of this research is to understand how local communities harness such new carbon economy opportunities (or not). The study is a multi-sited case study approach in Ghana employing systematic literature review, semi-structured interviews, actor mapping, focus groups and document analysis as the main methods of identifying what can be learnt at the international level from the local level implementation of such carbon mechanisms.

Future scenarios for the north of Amapá State considering REDD+ as a conservation tool

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The ecosystem services provided by forests are important for ecosystem maintenance, and support, protect or affect the activities and human well-being. Much of the forests in the north region of Eastern Amazon are under some type of protection, being one of the most pristine areas of the Amazon. In Amapá these forests may be threatened by being in an area of the border with French Guiana, where the current political development of the State is being targeted, resulting in actions that modify the current scenario and pressure on natural resources in the region.

This study assessed how the provision and maintenance of ecosystem services such as carbon stocks can contribute to local and regional sustainable development. This study allowed creating development scenarios for the northern region of Amapa to 2030. These results contribute to the discussion of a policy to subsidize programs aiming at reduction of emissions from deforestation and degradation (REDD) and payment for ecosystem services (PES) implementation, by defining priority areas in the border region between Amapa and French Guiana.

This study was conducted in the northern region of the State of Amapa across the municipalities of Calçoene and Oiapoque. This area lays within the Guyana Shield, which is characterized by a low population density, difficult access to remote forest areas and for being a geological and biological unit where high levels of endemism and biodiversity exists.

The opportunity cost of avoiding forest conversion was generated using information of the net present value (NPV) of four land use activities (forest, cattle ranching, and gold mining) and the average carbon stock values of these land use categories. This latter data was associated with a land transition matrix, processed using the REDD Abacus SP software. The output was the differences derived from the returns of the forest and those land uses that will replace it, with differences in carbon stocks of the emissions avoided by not converting the forest to other uses. Three opportunity cost scenarios were modelled to which a sensitivity analysis was done and, based on these results, scenarios were simulated.

The cumulative reduction of forest cover in 2030 was higher in the pessimistic scenario compared to the other two simulated scenarios. In the optimistic scenario, we observed a clear effect in reducing deforestation by implementing a program of PES-REDD+, which resulted in a level of deforestation close to the historical projection.

The opportunity cost of avoiding the conversion of land use at the current per ton of carbon price (R$ 14.6/tCO2e = $ 7.5/tCO2e) varied between R$ 3.00/tCO2e and R$ 2410.00/tCO2e, corresponding to a potential annual reduction of emissions between 0.14 and 0.02 tCO2e per hectare. The largest potential abatement of emissions derived from avoiding forest conversion to cattle ranching activities (0.14 tCO2e.ha-1.year-1) at a cost of R$ 3.00/tCO2e. Included variations in profitability (NPV) of land uses associated with the three scenarios of deforestation, livestock continue to be the most attractive activity for the implementation of a REDD + project.

In modeling the opportunity cost in terms of the three scenarios of deforestation, we found that the pastures activities remained as the most attractive activity for developing REDD+ projects, with an average cost of R $ 4.93 ± 2.73/tCO2e for the three scenarios, at the current average price per ton of carbon. This shows the potential of establishing a program of payment for environmental services with small cattle ranching producers who practice a low-productivity activity.

The balance between the implementation of conservation policies and economic development will give the state alternatives for successfully implement REDD+ mechanism. However, this success will depend on strengthening institutional capacities and land regularization measures, which will provide the necessary information to the construction of the policies and the REDD+ strategy of the state. This study gives various elements to support the construction of such a policy, especially for the construction of its baseline.

2220 - Landscape level adaptation and mitigation: integrating science, policy and practice

ORAL PRESENTATIONS

Adaptation Services : How biodiversity can support climate adaptation pathways

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The IPPC Climate Change 2014 Synthesis Report states it is very likely that surface temperature and sea levels will continue to rise and that extreme weather events become more frequent and severe. The interaction of climate change with other drivers of global change amplifies existing risks to social-ecological systems, and creates new ones. Adaptation to climate change should therefore