LANDMARC: Land Use Based Mitigation for Resilient Climate Pathways

Description

Roughly 30% of Nationally Determined Contributions (NDCs) under the Paris Agreement (PA) include land-based mitigation measures, however, there significant uncertainties remain regarding their effectiveness for delivering negative emissions. Aside from the expected inability of all current NDCs to deliver on the goal to below 2 oC goal, the uncertainty caused by this situation adds to the risks to human wellbeing as a result of climate change. Land-use based mitigation technologies (LMTs) can play a crucial role in global efforts to meet the PA goals and the Sustainable Development Goals (SDGs). Considering the land-climate-development interface, LANDMARC aims to assess the impacts of LMTs as net sinks for greenhouse gas (GHGs) by applying a unique mixed-methods approach. LANDMARC assesses the potential and feasibility of LMTs in the AFOLU sector by: a)quantitatively assessing environmental, social-economic, co-benefits and trade-offs identified through a suite of monitoring tools and model system (including land use, climate and economic models) complemented by; b) qualitative assessments guided by stakeholder engagement. This mixed-method approach allows us to provide more detailed insights on the effectiveness and climate resilience of LMTs at different spatial scales (e.g. scaling up from local/national level to the regional/global level). These tools, services and approaches will contribute to land-based LMT decision support in the private sector and by policy makers. LANDMARC is an interdisciplinary consortium with expertise from ecology, engineering,climate sciences, global carbon cycle, soil sciences, satellite earth observation sciences, agronomy, economics, social sciences, and business. There is a balanced representation of partners from academia, SMEs, and NGOs from the EU,Africa, Asia and the Americas, which ensures a wide coverage of LMTs operating in different contexts (e.g. climates, land-use practices, socio-economic etc.) and spatial scales.

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