CLIMATIC X in Sri Lanka

Sri Lanka is a country with significant potential for carbon removal through nature-based solutions (NBS) and renewable energy (RE) initiatives. With its vast forest cover, agricultural land, and untapped solar potential, Sri Lanka can play a crucial role in mitigating climate change and generating economic benefits from carbon credits.

This plan outlines a comprehensive strategy to harness Sri Lanka's potential for carbon removal, leveraging NBS and RE to create a sustainable and profitable venture.

Mission Statement

To establish Sri Lanka as a global leader in carbon removal, utilizing nature-based solutions and renewable energy to generate high-quality carbon credits, contribute to climate change mitigation, and foster sustainable economic growth.

Project Objectives

Develop and implement high-impact NBS projects, such as reforestation, sustainable agriculture practices, and mangrove restoration, to enhance carbon sequestration.

Collaborate with international organizations and other countries to promote the use of carbon credits and attract investment in Sri Lanka's carbon removal projects.

Establish a robust carbon credit market infrastructure, including clear regulations, transparent pricing mechanisms, and reliable verification and certification processes.

Generate annual revenue from carbon credit sales, utilizing the funds to support project development, community engagement, and environmental conservation initiatives.

Breakdown of Sri Lanka's land coverage areas:

- Forest land: 30.22% (includes dense forest, open forest, and scrub)
- Agricultural land: 47.65% (includes tea, rubber, coconut, paddy, palmyrah, oil palm, cinnamon, mixed tree & other cultivation.
- Wetland: 1.09% (includes marsh, swamp, mangrove, villu)
- Water bodies: 5.71%
- Built-up land: 1.30% (includes homesteads/home gardens)
- Other land uses: 13.94% (includes rocks, sandy areas, bare land)

These figures are based on data from the Land Use Policy Planning Department of Sri Lanka.

An estimate of how much carbon Sri Lanka can generate annually from its forest and agricultural land

Forest land:

Total forest area: 30.22% of 25,146 sq km = 7,589 sq km

Average carbon sequestration rate for tropical forests: 5 tonnes of CO2 per hectare per year

Total carbon sequestration potential for forest land: 7,589 sq km * 5 tonnes/ha/year * 100 ha/sq km = 37,995,600 tonnes of CO2 per year

Agricultural land:

Total agricultural area: 47.65% of 25,146 sq km = 11,982 sq km

Average carbon sequestration rate for agricultural land: 1 tonne of CO_2 per hectare per year

Total carbon sequestration potential for agricultural land: 11,982 sq km * 1 tonne/ha/year * 100 ha/sq km = 11,982,000 tonnes of CO_2 per year

Total carbon sequestration potential for Sri Lanka:

Total carbon sequestration potential for forest land + total carbon sequestration potential for agricultural land = 37,995,600 tonnes of CO2 per year + 11,982,000 tonnes of CO2 per year = 49,977,600 tonnes of CO2 per year

Economic Impact

The revenue generated from carbon credits could be used to fund various economic development initiatives, such education, and healthcare.

Contribution to GDP: 0.25-1% (based on Sri Lanka's 2023 GDP of $80 billion)

Job Creation: Potentially thousands of new jobs in forestry, agriculture, and carbon credit trading

Environmental Impact

By generating carbon credits, Sri Lanka would be incentivized to implement sustainable land management practices, such as reforestation and soil conservation.

- Reduction in Greenhouse Gas Emissions: 50 million tonnes of CO2 per year
- Improved Air Quality
- Conservation of Biodiversity

Competitive Advantages

Emerging carbon credit market: Sri Lanka's carbon credit market is in its early stages, presenting an opportunity to establish a leading position in this growing market.

Favorable government policies: The Sri Lankan government has demonstrated commitment to climate action and carbon removal, providing an enabling environment for project development.

Abundant natural resources: Sri Lanka's extensive forest cover, agricultural land, and solar potential provide a strong foundation for carbon removal projects.

Experienced workforce: Sri Lanka possesses a skilled workforce in forestry, agriculture, and renewable energy, ensuring the expertise required for project implementation.

Marketing Strategy

Establish a strong online presence: Create a user-friendly website and maintain active social media channels to showcase carbon removal projects and engage with potential partners.

Participate in industry events and conferences: Attend international carbon credit conferences, environmental summits, and renewable energy events to network with potential buyers, investors, and partners.

Collaborate with industry experts: Partner with carbon market specialists, environmental organizations, and renewable energy consultants to enhance credibility and reach.

Develop targeted marketing campaigns: Tailor marketing materials and outreach efforts to specific target audiences, highlighting the unique benefits of Sri Lanka's carbon removal projects.

Additional Considerations

Despite the potential benefits, there are also some challenges that the Sri Lankan government will need to address in order to fully realize the potential of its carbon credit market. These challenges include -

Development of Carbon Credit Market Infrastructure: Sri Lanka will need to develop a robust carbon credit market infrastructure, including clear regulations, transparent pricing mechanisms, and reliable verification and certification processes.

Investment in Nature-Based Solutions: Sri Lanka will need to invest in reforestation, sustainable agriculture practices, and other nature-based solutions to maximize its carbon potential.

Promoting the use of carbon credits - The Sri Lankan government will need to raise awareness of the benefits of carbon credits and encourage both domestic and international buyers to purchase carbon credits from Sri Lanka.

International Cooperation: Sri Lanka should collaborate with international organizations and other countries to promote the use of carbon credits and attract investment in nature-based solutions.

The potential to generate carbon credits from Sri Lanka's forest and agricultural land presents a significant opportunity for the country to boost its economy, improve its environment, and contribute to global efforts to mitigate climate change. With careful planning and investment, Sri Lanka can overcome the challenges it faces and become a leader in the carbon credit market.

An overview of the carbon sequestration potential of Uva province, Sri Lanka

Based on the article "Modeling predictive assessment of carbon storage using InVEST model in Uva province, Sri Lanka":

Key Findings

The study estimated that Uva province, Sri Lanka, currently stores approximately 9,663.5 million tons of carbon. This carbon is stored in four main carbon pools:

- Above ground biomass: 4,965.7 million tons
- Below ground biomass: 1,605.6 million tons
- Soil organic matter: 2,950.2 million tons
- Dead organic matter: 141.9 million tons