



Tropentag 2024
September 11-13, 2024

Conference on International Research on Food Security, Natural Resource
Management and Rural Development
organised by the University of Natural Resources and Life Sciences, Vienna
(BOKU), Austria

The green credit plan: an initiative of Indian Government contributing towards natural climate solution

Vindhya Prasad Tewari^{a,*} and Ranjana Arya^b

^a President, International Society of Tropical Foresters India Chapter, Lucknow, India

^b GCR (Retd.), Arid Forest Research Institute, Jodhpur, India

* Corresponding author email: tewarivp@gmail.com

Abstract

Out of total 328.7 Mha of India's total geographical area, 96.4 Mha of land (29.3%) is affected by desertification/degradation and 26 Mha of degraded land is expected to be restored by the Indian Govt. by 2030. The Green Credit Program, launched by the Indian Govt. in October 2023, provides tradable credits for afforestation efforts. One green credit will be awarded per tree planted on identified land parcels subject to a minimum density of 1100 trees per ha based on local climatic and soil conditions. These credits will be made available for trading on a domestic market platform. The forest department will identify degraded land parcels under their control and make available them for plantation. So far, over 17, 000 hectares of such lands have been identified for tree plantation across 13 states under green credit program. After tree planting is completed, forest department will submit report to the Administrator who will evaluate and verify the work done and award green credits to applicant based on the total number of trees planted on the assigned land parcel that can be traded on a designated trading platform to be maintained by the administrator. This initiative is an innovative idea of the Govt. of India to tackle the climate change vagaries and provides a nature based climatic solution to the country who is facing the wrath of climate change.

Keywords: Green Credit, degraded lands, tree planting, climate change, natural climate solution

Introduction

India has committed to large-scale forest protection and tree-based landscape restoration as part of various domestic and international commitments including Bonn Challenge commitment to restore 21 million hectares of degraded and deforested land by 2030. In UNCCD COP14 meeting at New Delhi, PM of India declared the restore 26 million hectares of degraded and deforested land by 2030; an increase of 5 Mha to Bonn Challenge commitment. India has 94.6 million hectares of degraded land which is 29.3% of its geographical area. India's Nationally Determined Contribution (NDC) aims to improve forest and tree cover at large scales, to sequester an additional 2.5 to 3 billion tons CO₂ equivalent by 2030. Achieving the NDC goal requires not only protecting and improving existing forest cover but extending tree cover in 25 to 30 million hectares of mixed land uses, including agriculture.

Green Credit Program (GCP)

The Green Credit Rules have been notified by the Government of India on 12th October 2023 under the Environment Protection Act, 1986 resulting in award of Green Credits and to build an inventory of degraded land which can be utilized for Afforestation programs. This is a mechanism to

encourage voluntary plantation activity across the country (www.moefcc-gcp.in). It is emphasized to think towards how to develop business by using Green Credit Program aligning with the concept of 'Pro Planet People'.

It is an innovative market-based mechanism to incentivize voluntary environmental actions across diverse sectors, by various stakeholders like individuals, communities, private sector industries and companies. It is designed to foster a sustainable lifestyle and environmental conservation as part of the 'Life' initiative announced by the Prime Minister of India in United Nations Climate Change Conference of the Parties (COP26). The goal is to lay an emphasis on sustainability, reduce waste and improve the natural environment.

Aims

- To enhance India's forest and tree cover.
- To prepare an inventory of degraded land under the control and management of Forest Departments suitable for plantation.
- To encourage participation of individuals and various entities in pro-planet actions by rewarding Green Credits.

Objectives

- To establish a dynamic land bank for plantations accessible through a dedicated web portal which enables the registration of degraded forest lands by Forest departments.
- To encourage Government institutions/ PSUs/ NGOs/ Private Companies/ Organisations/ Philanthropies/ Individuals/ Group of Individuals registered under Societies Registration Act to select Plantation Blocks from the registered Plantation blocks to encourage afforestation.
- Issuance of Green Credits to serve as a key incentive for entities engaging in tree plantation.
- To streamline GCP operations through technology-based tools which ensure seamless registration, verification, and monitoring of plantation-related activities.

Covered Activities

The Green Credit program encompasses following key activities aimed at enhancing environmental sustainability:

- **Tree Plantation:** Planting trees to increase green cover and combat deforestation.
- **Water Management:** Implementing strategies to efficiently manage and conserve water resources.
- **Sustainable Agriculture:** Encouraging eco-friendly and sustainable agricultural practices.
- **Waste Management:** Executing effective waste management systems to reduce environmental pollution.
- **Air Pollution Reduction:** Initiatives intended to reduce air pollution and improve air quality.
- **Mangrove Conservation and Restoration:** Protecting and restoring mangrove ecosystems for ecological balance.

Governance and Administration

The operational framework of the Green Credit Program involves a process where individuals and corporations are given the opportunity to contribute financially to the restoration efforts of degraded forests. This is facilitated through applications to the Indian Council of Forestry Research and Education (ICFRE) which is an independent organization under the Ministry of Environment, Forest and Climate Change, Govt. of India. The ICFRE is responsible for supervising the financial contributions directed towards forest restoration, which is then executed by the respective State Forest Departments (SFDs).

Post the afforestation efforts, a period of two years is observed, after which the ICFRE will assess the planted trees (www.drishtiiias.com). Upon successful evaluation, each tree will be assigned a value equivalent to one 'green credit'. These accrued green credits can then be utilized by the funding organization in following manner:

- Firstly, they can serve as a compliance mechanism for organisations that have been mandated by forest laws to offset the diversion of forest land for non-forestry purposes by providing a comparable area of land for afforestation.
- Alternatively, these credits can be employed as a metric for reporting adherence to Environmental, Social and Governance (ESG) standards or fulfilling Corporate Social Responsibility (CSR) obligations.

Earning and Calculation of Green Credit

To earn Green Credits, participants need to register their environmental activities through a dedicated website. The activities will then be subjected to verification by a designated agency. Based on the agency's report, the administrator will grant the applicant a certificate of Green Credit. The calculation of Green Credit is determined by factors such as resource requirements, scale, scope, size, and other relevant parameters necessary to achieve the desired environmental outcomes.

An important component of the program is the establishment of a Green Credit Registry, which will help track and manage earned green credits. Furthermore, the administrator will create and maintain a trading platform to enable the trading of Green Credits in domestic market.

Significance

- Aligned India's Environmental Policies: India's environmental policies like the Environment Protection Act, 1986, and the National Environment Policy, 2006 provide a framework for protecting and improving the environment. These policies, alongside the GCP, aim to safeguard forests, wildlife, and the overall natural environment.
- Aligned with India's Climate Goals: The GCP is part of India's efforts to adhere to international commitments such as those made during COP26. It complements the Carbon Credit Trading Scheme introduced by the Conservation (Amendment) Act, 2022 and widens the scope of tradable credits beyond CO2 reductions to include a range of sustainable practices (www.drishtiiias.com).
- Aligned with Global Ecosystem Restoration Initiatives: The GCP aligns with the UN Decade on Ecosystem Restoration (2021-2030), which emphasises the augmentation of restoration efforts. In this regard, India's approach includes involving all stakeholders in the restoration process and leveraging traditional knowledge and conservation practices.

Methodology

The methodology for calculating green credit in respect of tree plantation has been notified by the Ministry of Environment, Forest and Climate Change, GoI vide Gazette notification dated 22 Feb. 2024. So far, over 267 land parcels (registered plantation blocks) covering about 17, 000 hectares of such lands have been identified for tree plantation across 13 states under GCP.

Challenges with the GCP

The scientific rationale behind assigning 'credits' based on the quantity of trees is not very clear. There is concern that these initiatives may be used to evade existing laws, particularly those dealing with forest conservation.

There is a risk of 'Permanence' of carbon credits, which means that an individual or a farmer may cut the trees after receiving payment for the carbon credit, or the trees may be burned in a fire or

attacked by pests, or the trees may not grow at the rate required, given the degraded or poor fertility status of soils and erratic rainfall (www.nextias.com).

The activities may or may not lead to real, measurable environmental benefits, particularly carbon sequestration benefits, contributing to the mitigation of climate change. Some of the perceived challenges are (www.drishtiiias.com):

Impact on Forest Ecology:

- The Green Credit Rules could be detrimental to forest ecology as it directs SFDs to identify ‘degraded land parcels’ for tree plantation to generate green credits. This approach has been criticised as unscientific and potentially disastrous for local ecosystems.
- The use of terms like ‘degraded’ for scrubland and open forests is considered vague and may lead to industrial-scale plantations that can irreversibly alter soil quality, replace local biodiversity, and harm ecosystem services.

Creation of Green Deserts:

- There is a fear that the Green Credit Rules might lead to the creation of ‘green deserts. This term refers to areas where tree plantations are established without considering the ecological complexities and biodiversity of the original landscape.
- The rules have been criticised for measuring forests solely by tree count, overlooking the multi-layered structure of a functional forest and its associated wildlife.

Methodological Concerns:

- The methodology for generating green credits, particularly through tree planting, has been questioned for its environmental soundness.
- There is apprehension that the methodology does not adequately address potential regulatory gaps and could lead to environmental degradation.

Pressure on Wastelands:

- The emphasis on planting trees on ‘degraded land parcels’ puts pressure on areas often categorized as wastelands, which are ecologically important.
- These areas, like grasslands, play an important role in carbon sequestration and support unique biodiversity. The push for afforestation in these areas could lead to a loss of endemic species and ecological functions.

Conclusions

Operationalization of GCP on a large scale requires the establishment of institutional arrangements with a steering committee and a technical committee. The government has selected the Indian Council of Forestry Research and Education (ICFRE) as the nodal agency.

Successful implementation of GCP requires developing a rigorous methodology to measure, verify, and report environmental benefits (www.nextias.com).

GCP is a market-based mechanism, which means there must be demand for the green credits, such as tons of carbon sequestered through tree planting. More importantly, there must be an attractive price for the green carbon credits.

The program is currently in a “pilot project” mode and how shrubs and grasses could be quantified in terms of green credits are still being worked out.

The focus should be shifted from tree count to biodiversity-based afforestation, where the goal is to restore diverse native species and ecosystems rather than simply planting large number of trees. This approach ensures that the newly established plantations mimic natural forests and support a wide range of wildlife.

Remote sensing and satellite imagery may be utilized to identify truly degraded lands suitable for tree plantations, minimising the risk of harming existing ecosystems.

Clear and transparent definitions of terms like "degraded land" and "wasteland" must be used within the program guidelines. Knowledge sharing and capacity building should be promoted among stakeholders, including forest departments, businesses, and NGOs, to ensure environmentally responsible practices.

References

https://www.moefcc-gcp.in/about/aboutGCP?utm_campaign=fullarticle&utm_medium=referral&utm_source=inshorts (Accessed 20th Sept. 2024).

<https://www.drishtias.com/daily-updates/daily-news-analysis/green-credit-program-1> (Accessed 20th Sept. 2024).

<https://www.nextias.com/ca/editorial-analysis/26-04-2024/green-credit-programme-an-opportunity-or-a-challenge> (Accessed 20th Sept. 2024).