Community involvement with forest management can boost biodiversity

Forests can act as carbon sinks and help counteract climate change. A study of forestry practices in India shows that involving local communities in conservation efforts can boost the biodiversity and stability of forest ecosystems. Community-based forest management policies may therefore represent valid carbon mitigation strategies.

The EU aims to reduce its greenhouse gas emissions by more than 20 per cent of 1990 levels by 2020. One way to help achieve this may be to increase the carbon storage potential of forests. However, forest ecosystems are under threat from biodiversity loss caused by climate change and deforestation. The EU’s Biodiversity Action Plan, launched in 2006, called on member states to recognise the central role of biodiversity in reducing the impact of climate change and to develop programmes to conserve those species and habitats most at risk. Where possible, biodiversity programmes must be designed to increase community involvement in conservation.

In a recent study of forest management practices in India, it is stated that the ongoing community-based forest management (CBFM) programme could strengthen community livelihoods and avoid loss of biodiversity. They could also help to vastly increase the carbon storage potential of Indian forests. The study argues that CBFM of degraded (low carbon) forests to increase their potential carbon storage capacity should be formally recognised as a carbon mitigation strategy and accepted as a way for countries to earn carbon credits.

Conserving a diverse range of species is important because it increases the chance that enough will survive to form the basis of a stable, healthy ecosystem - meaning that, theoretically, at least some species will be able to adapt to their changing environment. Previous research has demonstrated that ecosystems containing higher numbers of different species are more resistant to extreme environmental conditions.

The study suggests that local communities should be involved in biodiversity conservation as they can provide a source of in-depth local knowledge about the habitat preferences of different species. Communities may also be keen to be involved in forest management to gain access to various non-timber products, including valuable resources such as fruits, fodder and handicraft materials which can help alleviate poverty.

CBFM could represent a viable strategy for increasing the carbon storage potential and economic value of forests, particularly in poor countries. It is predicted that emissions from rapidly developing countries such as India will soon begin to counteract the achievements of developed countries in reducing their carbon emissions. As emissions increase due to energy consumption in these countries, other strategies will need to be employed to remove carbon from the atmosphere. Forests as carbon sinks may therefore prove to be valuable resources.


Contact: preet_pal_singh@yahoo.com

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