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Business Line

Too hot for the Planet

India's Forest Rights Act



Serious attention must be paid, not only to the immediate outcome but also to the loss of the forested area's future carbon sequestration potential.

KUMAR KAKUMANU

India's Forest Rights Act, that aims to provide ownership of up to 50 million hectares of forest lands to 80 million tribal people, can potentially have a huge impact on the environment and push India into becoming one of the world's highest emitters of greenhouse gases. KUMAR KAKUMANU explains how.

The carbon markets of the world, developed as a result of the Kyoto Protocol, an international treaty established in 1997 with the goal that by 2008-2012, the industrialised countries are to reduce their greenhouse gas emissions by five per cent of their 1990 rates, have evolved mechanisms for trading of various types of carbon reduction credits.

Indian entities can sell carbon credits for various projects, such as producing clean energy, adopting effluent treatment plants based on green technologies, raising plantation forests, and others. The logic behind providing credits to plantation forests is that the trees are nature's factories that take in atmospheric CO₂ and, through a myriad chemical reactions, separate the carbon and store it in the soil through a process called biological carbon sequestration. Trees hold about 50 per cent of their mass as carbon; they help the soil retain carbon and provide many economic benefits while improving degraded lands.

Plantation forests, however, do not have any bio-diversity and many other ecological benefits that natural forests have. Natural forests are our planet's greatest resources. Taking a very long time to develop, they are host to a variety of plants, animals, microbes and others that contribute to Planet Earth's rich biodiversity.

The forests are nature's raw material factories and pharmacies that provide cures to many diseases, besides providing sustenance to millions of people. It is true that the biological carbon sequestration provided by the forests may not be as permanent and efficient as other methods such as geological sequestration (e.g. pumping liquefied carbon back into the earth). However, the natural forests are ready-made carbon sinks that took hundreds of years to arrive at their present state. When the forest is destroyed, sequestered carbon is released back into the atmosphere.

The resultant CO₂ in the air traps the earth's heat and is responsible for global warming which, in turn, is the cause for melting of glaciers, rising sea levels and a host of other problems. Even though deforestation does not release CO₂ as much as such activities as burning fossil fuels (coal, oil and gas), the ill-effects of destroying natural forests in terms of emissions cannot be ignored either. About 20 per cent of world's green-house gas emissions are the direct result of cutting down forests.

In this context, India's Forest Rights Act, that aims to provide legal ownership of up to 50 million hectares of forest lands to the 80 million tribal people and other forest dwellers, has the potential to cause a significant negative impact on the environment.

Loss of sequestration

Estimating conservatively, if, on average, 50 tonnes of sequestered CO₂ is released per acre of deforested land, the 50 million hectares of forest land, if distributed as a result of Forest Rights Act (and if deforested), would release a total of 6.25 billion tonnes of CO₂ into the atmosphere. Using the prices from the European carbon markets, if each tonne of CO₂ is valued at \$30, this amounts to a total of \$187.5 billion.

Also to be considered is the loss of the forest's future carbon sequestration potential. The 50 million hectares of forest

would further sequester about 200 million tonnes of CO₂ every year from the air. If one considers a 30-year time frame, this benefit would have a present value of about \$56 billion (using a discount rate of 10 per cent and at current carbon prices).

One could, however, argue that subsequent to deforestation, the land, if used for agriculture, and if managed in a sustainable manner by ecologically sensitive and carbon-friendly methods, the \$50-billion loss could be offset by resultant carbon sequestration. It would be an understatement to say this is impractical. The rest of the country is not up to any type of sustainable farming practices, let alone employing carbon-friendly methods, so how would one expect the forest-dwelling tribals to be capable of this?

Including the loss of future carbon sequestration potential, the total cost of the possible carbon damages of the Forest Rights Act would be close to \$250 billion. This is almost equal to entire forex reserves of the country and a quarter of India's trillion-dollar GDP. The damages would have been a third of India's GDP, had the dollar not depreciated against the rupee in the past year. The rationale behind the carbon impact analysis of the Forest Rights Act is to attempt to quantify the potential damages using measurable and accepted market methods, even though no international law at present requires India to actually pay this amount. The environmental damage of deforestation is real, whether included in the Kyoto Protocol or not.

Rationale of analysis

As the treaty currently stands, the Kyoto Protocol recognises carbon credits only to reforestation and afforestation, and does not regulate deforestation. It also does not give credit to avoided deforestation which, despite some dubious logic, is good for the environment (because then, for example, instead of implementing the Forest Rights Act, India could sell carbon credits for avoided deforestation of the 50 million hectares and use the proceeds to design and fund a number of eco-friendly tribal welfare projects!).

India is expected to receive \$4.2 billion worth of CDM credits in the next five years to fund Kyoto Protocol-compliant projects. At the same time, it has no obligation to comply with GHG emission reduction standards of Kyoto Protocol. This is because India is considered a developing country, and its economic growth will suffer if industrial emissions are regulated. This is all fine and, in fact, the basis of Kyoto Protocol lies in obligating the developed nations to pay for their past damages to the environment.

However, this argument can be challenged if one considers the deforestation aspect. CO₂ released into the atmosphere as a result of deforestation has nothing to do with hindering industrial growth. This has everything to do with government policies that do not take a holistic approach and consider the alternative and environmentally viable options for the welfare of the tribal population.

Potential deforestation

India, Asia's third-biggest economy, grew at an average of 8.6 per cent in the last four years and is expected to maintain a similar rate in the coming years. During this time, on one hand, using the economic growth argument, India is eligible to receive carbon credits while being exempt from having to pay for carbon damages. On the other hand, and during the same period, it enacted laws that could lead to extensive deforestation.

India (with its billion plus population!) argues that its per capita CO₂ emissions are low. However, this is only true if there is little or no on-going deforestation. If one includes the emissions due to potential deforestation (as a result of Forest Rights Act), India's total emissions would be on par with the top global industrial GHG emitting countries (read China and US).

If it is an internationally accepted notion that polluters and those entities responsible for GHG emissions are to pay for cleaning up, India's policies on climate change have to be seriously re-examined. In the light of the ongoing UN Conference on Climate Change in Bali, just how much longer "developing" countries such as India will be able to have the cake and eat it too is open to question.

(The author is a New York-based technology entrepreneur and a member of TigerFirst (<http://www.tigerfirst.in>), a nature conservation initiative based in Hyderabad. Email: kumar@tigerfirst.in).

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