Centre for Science and Environment

A POLICY BRIEF

REDD+
WHO DOES IT HELP?

Learnings from Asia and Africa

Research director: Chandra Bhushan

Writer: Ajay Kumar Saxena, Vivek Vyas, Shruti Agrawal and Soujanya Shrivastava

Editor: Souparno Banerjee

Design: Ajit Bajaj

Cover design: Ritika Bohra

Cover illustration: Tarique Aziz

Production: Rakesh Shrivastava and Gundhar Das

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Centre for Science and Environment
41, Tughlakabad Institutional Area
New Delhi 110 062
Phones: 91-11-40616000
Fax: 91-11-29955879
E-mail: cse@cseindia.org
Website: www.cseindia.org

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Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org

INTRODUCTION

Deforestation and forest degradation have been globally acknowledged to contribute significantly to greenhouse gas emissions and climate change. The most prominent global mechanism to tackle deforestation and forest degradation is called Reducing Emissions from Deforestation and Forest Degradation, or REDD+.

Since its formalisation in 2007 at the United Nations Conference of Parties (CoP) on climate change held in Bali, Indonesia, more than 300 REDD+ initiatives have taken off across the world, with mixed results. However, after a decade, there is no convincing evidence to establish the contribution of REDD+ in halting or reversing global deforestation trends. In fact, figures on tree cover losses released at the 2018 Tropical Forest Forum in Oslo, Norway show that 2016 and 2017 have been the worst years for tropical forests since 2001. In these two years, tree cover loss has amounted to an area of forest equivalent to the size of Vietnam.[1] The results have got the forest fraternity scratching their heads to figure out where their efforts have gone wrong.

Meanwhile, new research has highlighted that tropical forests can provide 23 per cent of the total climate change mitigation between now and 2030. Forests, therefore, have a much larger mitigation impact on climate change than had been previously imagined.[2] This should give a boost to forest-based mitigation strategies in the climate change discourse. Simultaneously, another study has found that indigenous people and local communities are able to achieve equivalent conservation outcomes by investing only a fraction of the total money spent on conservation by all other agencies.[3] This finding has implications for how REDD+ should be designed and financed.

This policy brief from Centre for Science and Environment (CSE) attempts to highlight the key reforms needed in the REDD+ mechanism, based on experiences from India, Kenya and Tanzania.

Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org

THE IMPORTANCE OF NATURAL FORESTS IN CLIMATE CHANGE

Forests are considered to be important carbon pools, continuously exchanging carbon dioxide (CO_2) with the atmosphere, both due to natural processes and human action. Globally, in 2005, forests stored an estimated 638 gigatonnes (GT) of carbon or 2,339 GT of CO_2, which was more than the amount of CO_2 present in the entire atmosphere.[4] The world's established forests remove 8.8 GT of CO_2 every year from the atmosphere.[5]

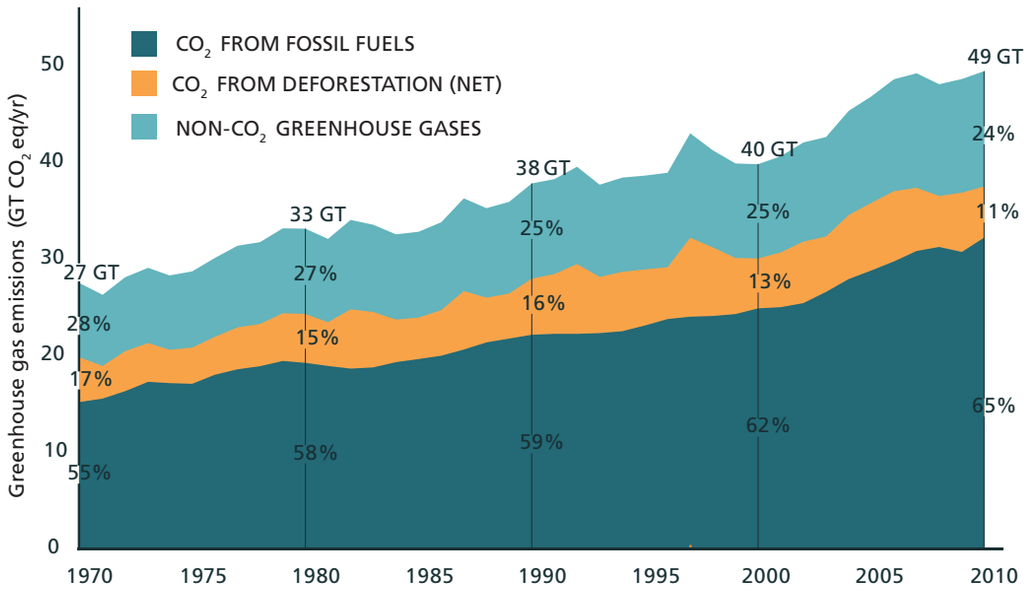
But deforestation and degradation of these forests is also one of the major triggers for climate change, accounting for more than 10 per cent of the world's total greenhouse gas (GHG) emissions[6] (see *Figure 1: Total annual greenhouse gas emissions 1970-2010*). Between 1850 and 1980, more than 100 GT of carbon was released into the atmosphere as a result of land use changes; this represented about one-third of the total anthropogenic carbon emissions over this period.[7]

The causes of deforestation are multiple and complex, and vary across countries. Demand for industrial timber, commercial agriculture, and local pressures from communities on forests for wood, food, fuel and farmland have been identified as the key factors.

Forest resources directly support the livelihoods of 90 per cent of the 1.2 billion people living in extreme poverty in the world; at the same time, they are home to nearly 90 per cent of the world's terrestrial biodiversity.[8] Therefore, the loss of forests jeopardises poverty alleviation efforts as well, making the poor more vulnerable to the vagaries of climate change. Efforts made towards stopping deforestation, thus, could count as one of the most direct actions to build resilience to climate impacts.

FIGURE 1: TOTAL ANNUAL GREENHOUSE GAS EMISSIONS 1970-2010

Deforestation and forest degradation account for over 10 per cent of global GHG emissions



Source: Center for Global Development, 2016

THE EVOLUTION OF REDD+

REDD+, an acronym for 'Reducing Emissions from Deforestation and Forest Degradation' in developing countries, is a mechanism that focuses on reducing emissions from the forestry sector. The concept of REDD+ has evolved continuously through different international climate negotiations. REDD+ was born as RED (Reducing Emissions from Deforestation) at the 11th Conference of Parties (CoP) on climate change held in Montreal in 2005, where it was forwarded as a submission by a group of nations led by Papua New Guinea, called the 'Coalition for Rainforest Nations'. The submission proposed that developing countries should be incentivised to protect their forests by making them worth more standing than cut. This would be done by providing these countries with access to carbon markets. RED subsequently evolved into REDD+ (see *Table 1: Evolution of REDD+*).

TABLE 1: EVOLUTION OF REDD+

The scope of REDD+ has enhanced over the years

Stages of REDD+	Year and forum	Scope
RED	2005, CoP 11 in Montreal	Reducing emissions from deforestation; only changes from forest to non-forest land cover types are included
REDD	2007, CoP 13 in Bali	As above, plus forest degradation or the shift to lower carbon stock densities within forests included
REDD+	2008, CoP 14 in Poznan	As above, plus enhancement of carbon stock, sustainable forest management and forest conservation included

Source: REDD Desk, Minang *et al*, 2009

The Bali Action Plan (BAP), decided at CoP 13 in 2007, provided a future roadmap for the development of REDD+. Some countries, including India, advocated the expansion of the scope of this mechanism to recognise the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in reducing emissions in developing countries.

In 2013, the CoP 19 held in Warsaw, Poland, adopted seven decisions of the Warsaw Framework that provide the fundamental architecture for REDD+. The current approach for REDD+ initiatives has three phases of implementation, as outlined under Warsaw Framework.

- **Phase I:** Development of national strategies or action plans, policies and measures, and capacity-building
- **Phase II:** Implementation of these plans, policies and measures
- **Phase III:** Results-based actions for reducing deforestation and forest degradation.

The Paris Agreement on climate change (signed in 2015 and brought into force in October 2016) has provided for intended nationally determined contributions (INDCs) as specific national emissions reduction targets. It also states that countries that are willing and able to reduce emissions from deforestation should be financially compensated for doing so — thus providing a scope for REDD+ to continue and expand and widening the scope of forestry in the climate change arena.

Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org

THE QUESTION OF FINANCE

There is a wide variation in the estimated costs of avoiding deforestation. According to Nicholas Stern's *The Economics of Climate Change*, the cost of avoiding deforestation in eight tropical countries responsible for 70 per cent of global emissions from deforestation is about US $5 billion per annum initially.[9] Maryanne Grieg-Gran, who has updated the Stern Report, estimates the cost of avoiding deforestation to be about US $6.5 billion.[10] Kindermann and others (2008) say that halving global emissions from deforestation between 2005 and 2030 — corresponding to a reduction in emissions of 1.7 to 2.5 GT of CO_2 — would require financial flows of US $17 to $28 billion per year to the developing countries responsible for these emission reductions.[11]

The actual flow of REDD+ finance has, however, been quite slack. From 2006 to 2014, the global aggregate pledges and investments for REDD+ totaled more than US $9.8 billion. However, more than 56 per cent of these pledges came in between 2006 and 2010, averaging about US $796 million annually since 2010.

The slowdown in political momentum in REDD+ and the global economic crisis have been held responsible for the poor quantum of REDD+ finance commitments post-2010. The private sector, according to some experts, was expected to provide much of the REDD+ finance. However, its share has not exceeded 10 per cent of the total finance commitments during 2016-14.[12] The major donor of REDD+ finance so far has been Norway International Climate and Forest Initiative, providing close to 70 per cent of the global funding for REDD+.[13] A number of bilateral and multilateral agencies have also been funding REDD+ activities (see *Figures 2 and 3).* Much of this funding has focused on building the capacities of national governments to implement REDD+, called 'REDD+ readiness'. The largest recipient of REDD+ finance has been Brazil, which is also the largest emitter from deforestation.

Estimates of the cost of avoiding deforestation vary

GETTYIMAGES

FIGURE 2: RELATIVE SIZES OF DONORS

About 70 per cent is provided by a single donor

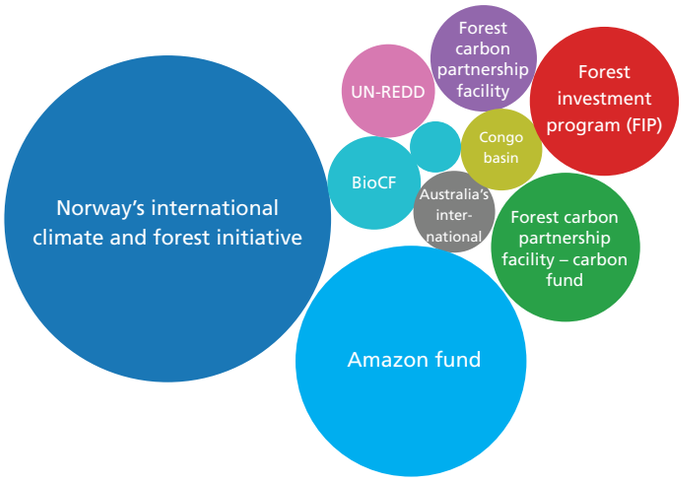
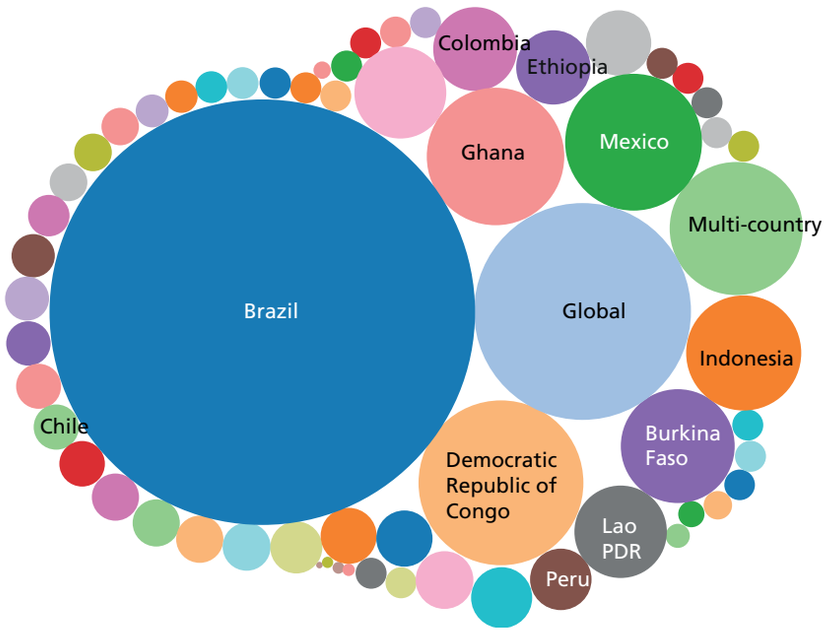


FIGURE 3: RELATIVE SIZES OF FUNDING — RECIPIENT COUNTRIES

Brazil, the largest emitter from deforestation, leads the group



Source: Climate Funds Update, 2016

Carbon credits from REDD+ projects have also been sold as offsets in voluntary carbon markets by project developers who get their projects validated and certified under generally agreed principles and methodologies. From 2013 to 2016, 68.6 million tonnes of CO_2 were sold as offsets for US $287.24 million, at an average price of US $4.2 per tonnes.[14]

THE OPPORTUNITY COST OF REDD+

REDD+ was conceptualised as a global Payment for Ecosystem Services (PES) system to make forests worth more standing than as suppliers of agricultural/crop land, pastures, unsustainable harvest of forest products, etc.[1] Since its inception, several studies established that reducing emissions from forest land-use change would be less expensive than reducing emissions from other sectors.[2] The 2006 Stern review was among the first estimations of REDD+ costs, with just US $5 billion required annually to compensate the opportunity cost of forest protection in eight developing countries. Most of these estimates were based on the opportunity costs of forgone alternative uses of forests — the estimated value of the goods produced/harvested from such alternative uses, also considered the drivers of deforestation and forest degradation. Opportunity cost was also envisaged to compensate the costs of switching to more environmentally benign practices.[3]

The approach of using opportunity cost to calculate the costs of REDD+ has been widely debated in the global forestry fora. Some experts have argued that only legally permitted change or use of forests should be compensated and illegal activities should not be rewarded. In cases where land-use change is legally allowed, it is not clear how forest-dependent communities could be compensated when the change of land-use or harvest of forest resources is for subsistence needs, especially local food security.[4] Opportunity costs are also unclear in instances when tenurial rights are not clear, though local communities might have customary rights over the same forests. Concerns have been expressed that such an approach could result in 'environmental blackmail' or perverse incentives.[5] Several experts have also argued that opportunity costs alone do not reflect the true costs of REDD+, and the costs of policy reforms, or those of law enforcement to halt and monitor illegal deforestation need to be built into the estimates of the real costs of reducing deforestation.[6]

More than a decade after the concept was introduced, the costs of REDD+ have proven to be much higher than generally recognised. The global carbon market and international actors with obligations to reduce emissions were expected to fully fund REDD+. However, a large number of REDD+ initiatives were found to be subsidised by local government and non-government actors.[7] The implementation and transaction costs of REDD+ have been high too, ranging from 33 per cent to 40 per cent in CSE's case studies. Direct payment to forest users facing restrictions remains rare,[8] as the cost of setting up and implementing a payment system is believed to be higher, compared to imposing direct restrictions on deforestation. For instance, Brazil, the largest emitter from deforestation, reduced its deforestation by 80 per cent in the decade following 2004 through a set of policy reforms, law enforcement and monitoring. Studies estimate that these measures cost the Brazilian government around US $2 billion over nine years, which is considerably lower than the costs of compensating all land users for forgone uses.[9]

Meanwhile, finance for REDD+ continues to be a contentious issue. Increasingly, consensus is building among the forestry fraternity that a global carbon market is unlikely to materialise[10], and that prices offered in carbon markets will not adequately compensate the opportunity costs of forgone forest uses. In India, for instance, fuelwood collection is believed to be the primary driver of forest degradation. CSE calculated the minimum carbon price needed to replace fuelwood with LPG stoves in India. Carbon will have to be priced for at least US $22.6 per tonnes of CO_2e, whereas the average price of carbon in voluntary markets has been just US $4.5 per tonnes of CO_2e.

The experiences that have emerged make it clear that the budgets for REDD+ will have to be a lot more realistic than they are now to reflect its true costs. We need greater consensus on the applicability of opportunity cost approach. The approach should definitely be used for forest-dependent communities and smallholders who voluntarily agree to forego alternative land uses. REDD+ budgets also need to factor in the costs of implementation, monitoring, policy reforms, etc. These will, in turn, be decided by the nature of tenurial arrangements, legality/illegality of deforestation and degradation drivers, among other things.

REDD+ IN INDIA

With a forest and tree cover of about 24.39 per cent of its total geographical area[15], India has perhaps the largest population in the world dependent on forests for livelihood and sustenance. Relentless withdrawal of biomass (mainly in the form of fuelwood), forest diversion for development projects, and encroachments have led to massive deforestation and degradation of Indian forests: this provides for a big and complex playground for REDD+ implementation.

India has been grappling with the idea of REDD+ since the origin of this concept. The Indian government has advocated in the United Nations Framework Convention on Climate Change (UNFCCC) that countries should be compensated for putting a stop to deforestation and stabilising and enhancing their forest cover. It has also contended that carbon sequestration is not the main benefit of REDD+ — the ecological and economic benefits accruing to the communities are more critical. India's approach of compensated conservation was recognised in the Action Plan 1/CP Para 1(b) (iii) at the CoP 13 in Bali.

As uncertainties prevail on international REDD+ finance, mobilising money for REDD+ from domestic sources is being discussed increasingly. India's decision in 2014 to include forest cover in its formula for allocating national revenues across states has been termed as the first 'ecological-fiscal transfer' for forest conservation in the world.[16]

Since 1994, the Forest Survey of India (FSI) has been periodically assessing the carbon stock in Indian forests. Overall — estimates the FSI — 973 million tonnes of carbon (MTC) was fixed over a period of 21 years.[17] The average annual increase in carbon sequestration, therefore, was 46.34 MTC, or 170.04 million tonnes (MT) CO_2 equivalent. This essentially means that on an average, about 170 MT of CO_2 equivalent has been sequestered annually in the last 20 years (1995–2015) through growth in existing forests.

India has the largest population in the world dependent on forests

ROHAN MUKERJEE

TABLE 2: WHAT THE LAWS SAY

Laws and schemes in India relevant to REDD+

Existing legislative framework	Relevant REDD+ features
National Forest Policy, 1988	Protection, conservation and improvement of existing forests
Forest Conservation Act, 1980	Regulation of non-forestry activities and prevention of deforestation
Joint forest management and farm forestry	Meeting the bona fide needs of forest-dependent communities, enhancement of carbon stocks through participatory afforestation measures, and safeguarding biomass requirements of local communities
Forest Rights Act, 2006	Safeguarding forest use rights of local communities, empowering them to manage and conserve forests and preventing diversion of forests in such areas by mandating prior consent of communities (Gram Sabhas)
Compensatory Afforestation Fund Act, 2016	Compensating forest losses diverted for non-forestry purposes by plantations and densification of degraded forests
Biological Diversity Act, 2002	Conservation, sustainable use and equitable benefit-sharing derived from biological resources with local communities
Wildlife (Protection) Act, 1972	Conservation of wildlife habitats and forests
Natural resource-based livelihood schemes: Various line departments and schemes have been focusing on watershed concepts of soil and moisture conservation, afforestation etc.	Enhancement of carbon stock and benefit sharing with local communities
Rural development schemes such as MNREGA and SGSY	
Afforestation and reforestation projects of the forest department -- Japan International Cooperation Agency (JICA) projects etc	Enhancement of carbon stock and sustainable forest management
14th Finance Commission	Allocation of state funds according to forest cover
Panchayat (Extension to Scheduled Areas) Act, 1996	Local communities managing and deriving benefits from local natural resources, including forests

Source: Collated from various sources by CSE researchers

Under its INDCs, India proposes to create a carbon sink of 2.5-3 billion tonnes of CO_2 by 2030 through the forestry sector.[18] Initiatives like the Green India Mission have been proposed to increase the country's forest cover by 5 million hectares (mha) and improve forest quality in another 5 mha. The implementation of other policies such as the National Afforestation Programme, the National Agro-forestry Policy, REDD+ policy, Joint Forest Management, Compensatory Afforestation etc are also expected to contribute to the goal.

In 2014, the country formulated a Draft National REDD+ Policy, which provides a comprehensive list of objectives but does not go into the details of how these would be achieved. Most of the responsibility for this has been placed on a proposed REDD+ architecture — the National REDD+ Authority and REDD+ Cells.

There remains a lack of clarity on how a REDD+ programme will be implemented at the ground level. The objectives and the strategy of the Draft Policy have been silent on the new forest management regime under the Forest Rights Act 2006. The policy acknowledges that the rights of forest-dependent communities will be safeguarded under FRA to achieve REDD+ objectives. However, it does not mention that communities whose rights are recognised under the Act will be supported financially and technically for small-scale REDD+ projects.

Instead, it limits such support to projects by forest department-controlled committees such as Joint Forest Management Committees and Eco-development Committees only. By doing so, the Draft Policy has not taken into account the paradigm shift that is happening in forest management. The old model under which forest departments used to be the sole decision-makers of forest management is slowly becoming untenable. Now, multiple institutions such as forest protection and forest rights committees have begun managing swathes of forest lands. The models developed for REDD+ need to be housed within this new reality.

But before developing a national REDD+ strategy, the various drivers of deforestation must be identified and addressed. This exercise needs to be carried out at all levels — national, state and local. The draft REDD+ policy has provisions in this regard, but they are generic; the drivers of deforestation and degradation need to be studied and targeted in a more structured fashion. The forestry wing of the Union Ministry of Environment, Forests and Climate Change (MoEF&CC) should be actively involved in this exercise. Macro-drivers like diversion of forest lands for non-forestry purposes can only be addressed through effective policy.

Since fuelwood extraction is a major cause of forest degradation, alternative sources of energy must be explored and provided to communities, but it will require large additional budgetary outlays and coordination with other ministries like rural development and petroleum and natural gas. Some drivers are region-specific (such as shifting cultivation in India's northeast) and need to be addressed at the state level. State forest departments can identify and inventorise these drivers of deforestation at the regional level.

Before developing a national REDD+ strategy, the various drivers of deforestation must be identified

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41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
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REDD+ initiatives in India

In the absence of a clear REDD+ policy or implementation framework, full-fledged REDD+ projects have not yet started in India. There have been a few projects and initiatives, however, by non-government players; these have been designed to work as pilot projects as well as to study the feasibility of large-scale initiatives (*see Table 3: The key projects*).

TABLE 3: THE KEY PROJECTS

Most have been designed as pilot or feasibility study projects

Implementing agency	Name of the project
Implementation projects	
Mawphlang Welfare Society	Synjuk Umiam Sub-watershed Community Forestry, Federation, also called the East Khasi Hills REDD+ project
Wild Life Trust of India	Garo Hills Wildlife Corridor Project
Meghalaya State REDD+ Cell	Umket RAID project
Readiness projects	
ICFRE (Indian Council for Forest Research and Education)	Uttarakhand REDD+ pilot project
TERI (The Energy Research Institute)	Preparedness for REDD+
Tetratech ARD	USAID-funded 'India Forest Partnership for Land Use Science' programme, or 'India Forest +'
NEHU (North-Eastern Hill University)	REDD+ strategy in Northeast India; CFANE: (Community Forest Alliance for Northeast)
RCNAEB, Regional Centre North East India for National Afforestation and Eco-Development Board, MOEF&CC	Feasibility study of REDD+ projects in the Northeast; capacity building regarding REDD+
Regional Centre for Development Cooperation	Saintala Forest Range of Balangir district
	Gandhamardan–Bargarh
Japan International Cooperation Agency	Evolving REDD+ readiness initiative under JICA assisted forest sector projects.
International Centre for Integrated Mountain Development, Nepal	Regional REDD+ initiative in Bhutan, India, Myanmar, Nepal
Indira Gandhi National Forest Academy	Cell for REDD+ in relation to global warming and climate change

Source: CSE

TAMBOR LYNGDOH

THE EAST KHASI HILLS PROJECT

THE EAST Khasi Hills REDD+ Project implemented by Mawphlong Welfare Society for 'restoring and conserving Meghalaya's hill forests through community action' is perhaps the only significant REDD+ project in India. The project is impacting 4,357 households — 25,411 people.[19]

The East Khasi Hills area has a number of traditionally conserved sacred groves; over the years, strict community regulations have ensured the protection of these primary forest areas with very rich biodiversity. But the region's remaining forests are rapidly disappearing due to a combination of factors: mining and quarrying, encroachment on forest lands, fodder and timber collection, and forest fires (see *Table 4: Deforestation in the East Khasi Hills — factors and measures*).

Initiated in 2010 with support from Community Forestry International, the key objectives of the project were building community capacity to implement resource planning systems and mitigation activities to reverse deforestation and degradation trends; assisting communities in forest monitoring, protection, and restoration activities for regeneration of 5,947 hectare of degraded forests; implementing soil and water conservation measures; enhancing the economic status of the people; supporting

TABLE 4: DEFORESTATION IN THE EAST KHASI HILLS — FACTORS AND MEASURES

While the region's sacred groves have been protected, the remaining forests are disappearing

Drivers of deforestation	Measures taken by the project
Forest fires	Preparation of fire control and fire combat plans; traditional control burning; construction of forest fire lines; establishing regulations on agricultural fires; social control through incentives and penalties
Fuelwood collection	Providing LPG connections, rice cookers, fuel-efficient stoves, smokeless chulhas and briquettes; village natural resource management plans (for enhancement of fuelwood production)
Free-range grazing	Community restrictions; animal exchange programme; stall-feeding of cattle (still in a nascent phase)
Coal and other mining	Community restrictions
Hillside mining and quarrying activities	No measures. Currently, the village council allocates or leases to individuals for use for a period of one-three years
Encroachment on forest land	Resettlement of encroachers; introduction of improved agricultural practices
Charcoal making and sale	No measures taken
Erosion and loss of biomass	Vegetative check-dams and afforestation

Source: Compiled from the Project Design Document

sustainable enterprise development among local communities through microfinance, sustainable farming and forestry systems by payment for ecosystem services (PES) or carbon sales; and improving environmental services.

Under the project, a system of punitive punishments has been developed locally for offences related to damaging forests. For minor offences like torching (not affecting a number of trees) and stealing, villagers decide the punishment, which is usually community service or ostracisation of the offender. In severe cases, the offender is handed over to the police for action by conventional judiciary.

The project authorities claim that there has been an increase in forest area and quality. Results of satellite imagery indicate that forest loss has reduced to 2.8 per cent per annum (2006–10) from 5.6 per cent per annum (2001–05), an almost 50 per cent dip over the first five years. The project has been registered with Plan Vivo, a certification body administering the Plan Vivo standard for community land use and forestry projects. As of June 2018, the project has been issued 118,404 Plan Vivo certificates (PVC), where every certificate represents the sequestration or reduction of one tonnes of CO_2e. As per the project description document, the project has sold 10,000 to 20,000 tonnes of CO_2 in the voluntary carbon markets during 2013-15. The revenue from the sale of such carbon credits is used to meet the project costs; what remains is given back to the communities.

The profits from carbon revenue are distributed to communities in two ways: as cash (for community interventions such as building water bodies, fencing etc) and in kind (in the form of provision of LPG connections, smokeless *chulhas* etc).

While the environmental and community benefits of the project are impressive, there have been a few challenges. The project area witnesses massive use of fuelwood and charcoal, but the project is yet to provide sustainable and scalable solutions and alternatives to fuelwood. Field visits to the project area revealed that some households are obtaining or buying fuelwood and charcoal from forests outside the project area to meet their daily fuel needs. This process, called leakage, defeats the purpose of the project to some extent.

As fuelwood removal is a big source of forest degradation in the project area, there is an opportunity cost incurred in restricting fuelwood use for the local communities. The project sells carbon credits at the average price of $5 per tonnes of CO_2, which cannot compensate the opportunity cost of replacing fuelwood with LPG in India (see *Box: Opportunity cost of replacing fuelwood with LPG*). Though the price of carbon is not the central motivation for communities in the Khasi Hills project, there is a need to increase the price of carbon credits to make the project viable and profitable in the long run.

OPPORTUNITY COST OF REPLACING FUELWOOD WITH LPG

Market price of carbon does not meet the opportunity cost of fuelwood withdrawal, the major driver of deforestation in India

A. **Annual fuelwood consumption in India (FAO, 2015)** = 385.25 million cu m or 231.15 million tonnes
Total carbon in fuelwood consumed = 231.15 x 0.45 = 104 million tonnes of carbon
Total annual CO_2 released by fuelwood consumption = 104 x 3.67 = 381 million tonnes CO_2e

B. **Number of forest dependent people in India =** 300 million
Cost of non-subsidized LPG cylinders per family = 670 x 12 = INR 8,040
Per capita annual cost of LPG cylinder (assuming a family of 4 people) = INR 2,010
Total cost required to replace fuelwood with LPG = 300 million x 2010 = INR 603,000 million

C. **Total potential Emission Reduction (ER) from fuelwood replacement = 381 million tonnes of CO_2e**
Cost of ERs = INR 603,000 million / 381 million CO_2e = **INR 1,582 or** US $**22.6 USD per tonne of CO_2e**

The calculations are based on the 2017 price of one LPG cylinder at Rs 670 and assume that one LPG cylinder will last a family of four households for one month. The other assumption is that the government would need to provide cylinders free-of-cost to fuelwood users for at least one year to bring about a behavior change. The calculations exclude the one-time cost of acquiring an LPG cylinder and other recurring costs such as transportation of cylinders to remote areas.

Source: CSE

Is India ready for REDD+?

India has 300 million people living in and around its forests. These people are poor and depend on natural forests for their sustenance. Expecting them to forego their practice of extraction of fuelwood and other forest products without incentives is a difficult proposition. Against this background, there also exist multiple competing demands on forests — for conservation, developmental projects, timber and non-timber products, and for grazing and other needs. For any significant REDD+ initiative in India, therefore, there are some very large dimensions to ponder over.

Restricting forest use under REDD+ can be economically viable only when the total incentive from REDD+ is more than the value of the forest usage. Ideally, REDD+ does not mean complete cessation of forest usage, but only sustainable usage. Already, there is a huge gap between demand and supply of both timber and fuelwood from forests in India. Most of this shortfall is met either through unsustainable consumption, trees outside forests or through imports. REDD+, if implemented only as a carbon project, can add a difficult demand on India's forests.

In terms of national monitoring, reporting and verification (MRV) capabilities, India has access to the latest remote sensing and forest monitoring technologies. But at the ground level, capacities of communities and forest department staff to use these technologies will need to be enhanced. Incentives will have to be built in for communities for monitoring of conservation and MRV efforts. This would include development of bottom-up participatory MRV-using institutions such as CFRMCs (Community Forest Resource Management Committees), JFMCs (Joint Forest Management Committees) and gram sabhas. The capacities of foresters who handle this work would also have to be drastically enhanced.

When it comes to safeguards, a lot needs to be done before REDD+ can be implemented in India. While India has been speaking about the concepts of conservation, sustainable management of forests and enhancement of forest carbon stocks in REDD+ dialogues globally, it has — on the other hand — been diverting thousands of hectares of forests to development projects; dense forests in the country are being converted into the open forest category.

Moreover, although the country has been projecting a constant or rising forest cover, the truth is that much of this so-called forest cover is being added in plantations, which cannot be called 'forests' by any means. A purely market-based REDD+ is likely to enhance this trend. Overall, India is not ready for REDD+ in its current design.

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41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org

REDD+ IN AFRICA

SHRUTI AGARWAL/CSE

Forests cover 675 mha of Africa — accounting for 23 per cent of the continent's land area. About 3.4 mha gets deforested every year, at a high rate of 0.49 per cent.[20] In fact, the largest forest loss in the last two decades has occurred in the tropics, with South America and Africa being the biggest contributors to the loss.[21]

Small-scale agricultural processes are considered the primary drivers of deforestation in Africa where a majority of poor households adopt low risk, low return agricultural activities. With an annual growth rate of 2.55 per cent from 2010 to 2015, Africa is projected to witness the highest population growth between now and 2050.[22] The pressure on forests, therefore, is bound to increase severely.

At least 29 African countries with significant deforestation rates have participated in the REDD+ processes and are at different stages of progress (see *Table 5: Tree cover loss and carbon emissions in key REDD+ countries in Africa*). REDD+ implementation in Africa is happening on two scales: one, where there are smaller, isolated REDD+ projects aiming to save endangered patches of forests and two, where there are jurisdictional REDD+ programmes spanning an entire district/province/landscape.

Africa hosts 136 forest carbon projects in 22 countries. Only 39 projects are REDD+ initiatives, while the remaining are afforestation and reforestation projects.[23]

TABLE 5: TREE COVER LOSS AND CARBON EMISSIONS IN KEY REDD+ COUNTRIES

Benin has had huge tree cover loss, while emissions are a problem in Congo

	Country	Tree cover loss from 2001-2016 ('000 ha)	Percentage tree cover loss	CO_2 emissions (million tonnes)
1	Angola	2,190.0	3.9	149
2	Benin	34.2	20.3	1.98
3	Cameroon	894.0	2.8	114
4	Central African Republic	634.0	1.3	59.3
5	Chad	27.7	6.8	1.53
6	Democratic Republic of Congo	10,500.0	5.3	1170
7	Equatorial Guinea	88.2	3.3	11.3
8	Ethiopia	330.0	2.7	30.4
9	Gabon	342.0	1.4	48.4
10	Ghana	820.0	11.8	78.1
11	Guinea	907.0	11.1	61.8
12	Guinea Bissau	111.0	10.4	7.14
13	Kenya	288.0	8.7	30.8
14	Ivory Coast	2,100.0	14.1	194
15	Liberia	1,120.0	11.9	120
16	Madagascar	2,760.0	16.1	292
17	Malawi	130.0	8.8	11.8
18	Morocco	31.7	4.9	2.85
19	Mozambique	2,500.0	8.7	186
20	Nigeria	567.0	5.6	44.5
21	Republic of Congo	586.0	2.2	67.5
22	South Sudan	109.0	1	6.04
23	Tanzania	2,000.0	7.6	149
24	Tunisia	16.9	7.6	1.65
25	Togo	36.7	6.6	2.25
26	Uganda	577.0	7.4	47.9
27	Zambia	1,280.0	5.3	104
28	Zimbabwe	165.0	11.6	16.1
29	Tunisia	16.9	7.6	1.65

Source: Compiled from Global Forest Watch, 2018

Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org

SHRUTI AGARWAL/CSE

FOUR AFRICAN PROJECTS

CSE'S CASE studies in Africa focus on four projects in Kenya and Tanzania, with the aim of understanding if the implementation of REDD+ is leading to sustainable forest management and livelihood benefits in these locations. As per the study results, all four projects have managed to successfully reduce deforestation and achieve carbon emission reduction from their project areas. The core strategy and focus of these projects for achieving REDD+ objectives have been different. While the projects in Kenya had forest protection as their strategy, REDD+ projects in Tanzania sought to strengthen land tenure and community forest management to achieve emission reduction.

TABLE 6: REDD+ CASE STUDIES IN AFRICA

Details of the four projects surveyed by CSE

Name of project	Location	Size of the project (ha)	Project duration	Estimated carbon dioxide emission reduction
Kasigau Corridor REDD+ Project	Kenya	200,000	30 years	52 million tonnes
Chyulu Hills REDD+ Project	Kenya	410,534	30 years	37 million tonnes
Making REDD+ work for communities – MJUMITA and TFCG	Tanzania	41,924	30 years	NA
REDD+ in Yaeda Valley	Tanzania	33,073	20 years	572,508 tonnes

Source: Project Design documents

Key observations

- All four projects chose such lands to be included in their project areas where the tenure was either secure or could be secured because of the existence of an enabling legal framework. In Kenya, the project areas comprised of large, privately owned ranches (Kasigau) or community-owned ranches and protected areas (Chyulu Hills). In both projects, the project area constituted important wildlife corridors too. In Tanzania, the project area comprised land falling within village boundaries over which legal titles could be obtained. In fact, the success of the projects to achieve carbon emission reduction can be largely attributed to the tenure security, where the nature and extent of rights on the lands in the project area were well-defined.

- Shifting cultivation and charcoal production constituted the major drivers of deforestation and forest degradation in all project areas. In Kenya, the initiatives included restricting these activities in the project areas and employing community members to patrol the forests. Pilot activities to improve agricultural productivity, produce charcoal sustainably, restore degraded landscapes and diversify livelihoods have also been undertaken. The replicability of these pilots,

however, remains uncertain at this point. In Tanzania, the project developers sought to secure legal titles for land within village boundaries and strengthen community forest management and village governance in project areas. Diversifying livelihoods and improving agricultural productivity also formed components of these protects.

- The MJUMITA-TFCG REDD+ project in Tanzania had not been able sell a single carbon credit — largely due to the 'voluntary' nature of carbon markets. Except this REDD+ project, carbon revenue has been flowing into the other projects, though the voluntary and unpredictable nature of carbon markets remains a challenge for all.

- In the absence of a universal benefit-sharing mechanism, project developers exercised discretion in deciding who benefits from carbon revenue. The Kasigau Corridor project pays one-third of the carbon revenue to landowners of the project area, while the remaining is used for operational costs and welfare programmes such as bursaries and schools and water infrastructure. The project does not make individual payments to community members who had restricted their use of project area. Project developers in the Chyulu Hills project believe their REDD+ initiatives are already in the interest of communities and the landscape, and carbon revenue would be used to scale up these initiatives, instead of directing the payments to communities whose communal lands make up a significant chunk of the project area.

- While the Kasigau project proponents argue that individual payments to communities would not be cost effective, another REDD+ project — MJUMITA — made 'trial' REDD+ payments in cash to individual community members for their performance in protecting forests and proving 'additionality'. In Yaeda valley, Tanzania, REDD+ payments are made for both individual benefits such as salaries of community guards and collective benefits to meet the education and health needs of target communities.

- The operational and implementation costs of these four REDD+ projects have been high, ranging from 33 per cent to 53 per cent, and are being met from the carbon revenue. It has been globally acknowledged that these costs have proven to be much higher than expected. This eats into the share of potential community benefits and also limits the ability of the project to make direct payments to stakeholders.

- REDD+ activities place restrictions on forest users for such use of forests that cause deforestation, degradation and carbon emission. There is, therefore, an opportunity cost associated with foregoing such activities. REDD+ was originally conceived as a mechanism to compensate these opportunity costs for forest users and incentivise forest protection from carbon revenue. In determining the share of communities foregoing the use of forests, it was expected that project proponents would base the calculation on the opportunity costs. However, except for the MJUMITA REDD+ project, none of the other projects had factored in the opportunity costs in calculating the rightful share of communities from the carbon revenue.

Within the REDD+ fraternity, there is consensus that benefits should not be directed to stakeholders for foregoing activities that are not legally permitted inside the project area. This explains the preference among project developers in Kasigau and Chyulu Hills for including protected areas and large private lands — where land use change is illegal and restrictions on forest use are already in place — in their project areas. REDD+, in these cases, becomes a tool to reinforce the restrictions and improve forest protection.

However, exclusionary conservation has been heavily criticised, and we should be worried if REDD+ becomes a mechanism to reinforce it. REDD+ projects in Tanzania provide hope as they have managed to achieve deforestation by strengthening community rights over their lands and improving village-level governance. This is particularly impressive as land-use change by communities in these project areas is a legally permissible activity.

Most of the smaller REDD+ projects, including the ones studied by CSE, are in the process of or hopeful of getting integrated into regional/jurisdictional REDD+ programmes. These programmes span millions of hectares of land and seek to engage actors not just

in forestry but also in agriculture, energy, transport, land, and mining to achieve climate-smart land use, protect forests, restore degraded land, and improve local livelihoods. Africa, in fact, has quickly moved into, and is now leading, the jurisdictional space in REDD+. However, the degree of success that jurisdictional programmes can achieve remains unclear at this point (see Box: *Why jurisdictional REDD+ is unlikely to succeed*).

WHY JURISDICTIONAL REDD+ IS UNLIKELY TO SUCCEED

Jurisdictional or sub-national REDD+ programmes grew out of the belief that individual REDD+ projects will not scale up, and will not deliver significant emission reductions in the long term. Convergence between government policies and programmes at multiple levels was also seen as crucial to the success of REDD+, and jurisdictional REDD+ seemed to offer the opportunity to engage multiple actors beyond forestry.

On one hand, such large-scale programmes can reduce the operational/transactional costs of REDD+ and contribute to a more robust multi-stakeholder process and policy-level changes. On the other hand, these programmes require political will to challenge powerful interests that benefit from deforestation.[1] These have been the long-standing issues of forest governance and whether REDD+ can address these challenges is uncertain, especially when most of these developing countries are characterised by poor governance, high corruption levels, and weak enforcement of law.

The most fundamental issue, however, with jurisdictional programmes is the significant possibility of re-centralisation of forest governance. Multilateral agencies such as the FCPF have provided for legally separating carbon rights from rights to land and forests in jurisdictional programmes. Such separation will undercut the need for equitable benefit-sharing and for initiating land and forest tenure reforms. Countries have been quick to nationalise carbon rights and introduce contracts for landowners to transfer carbon titles to governments in these cases, making benefits for communities discretionary for the latter[2] and thereby, centralising forest governance. There are also unresolved issues of tenure security in most jurisdictional programmes of Africa, where no credible measures have been proposed to permanently and legally secure community rights to land and forests. For instance, in the Republic of Congo and Cameroon, close to 65 per cent of the forests in the programme areas are legally classified as "permanent estate", where land titling is not allowed. This is despite global acknowledgement that tenure insecurity is an underlying factor for deforestation and that securing tenure lowers deforestation rates. With such unresolved issues, jurisdictional programmes are unlikely to succeed in achieving emission reduction from forests.

REDD+ IN UNFCCC

INTER-PRESS SERVICE, MALAYSIA

In 2013, the Warsaw REDD+ framework gave the first set of guidelines under UNFCCC for implementing REDD+. However, the vague directions provided by the framework have actually become impediments in implementation, even as different countries and stakeholders have interpreted them in their own ways. The underlying problem in designing a global framework for preventing forest losses is that drivers of deforestation, community composition and the economic and social fabric vary widely across countries. What adds to this complexity is the variety of sources of funds and mechanisms for disbursal of forest carbon money. Besides, REDD+ is not mandatory in nature and sufficient funding is not available for its large-scale implementation — which has contributed to its dismal performance so far.

Currently, bilateral cooperation and multilateral funds have played a prominent role in supporting REDD+ activities. Parties involved in bilateral agreements can incorporate tailor-made rules to fit REDD+ implementation to host countries' national circumstances and to donors' preferences; in contrast, CoP guidelines provide multilaterally agreed rules and a level playing field for all UNFCCC member countries.

Interestingly, advancement of REDD+ initiatives outside the UNFCCC has outpaced the guidance provided by the Convention. For example, many of the initiatives have developed their own set of safeguards and standards for REDD+. At the CoP 16 in Cancun, it was decided that the funding "may come from a variety of sources, public and private, bilateral and multilateral, including alternative sources" — this leaves enough scope for interpretation and holds no one responsible for providing funds for REDD+. In this scenario, it is unclear how such ground efforts will integrate and coordinate with the UNFCCC.

Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org

Another factor in the tardy progress of REDD+ is the way payments for it are made — they are offered as an incentive after mitigation efforts bear fruit, but not before. Therefore, countries willing to participate in REDD+ are expected to take the risk of investing in REDD+ initiatives without knowing whether these initiatives will provide sufficient emission reductions to compensate their forest-dependent people; these people would be foregoing the forest benefits they derive before REDD+ starts in their forests. A genuine concern about the future of REDD+ under UNFCCC is the provision for offsetting emissions.[24] Brazil, South Africa, India and China (the BASIC group) argue that offsetting can undermine the environmental integrity of emission reductions achieved and lead developed countries to avoid their domestic emission reduction targets. Another important critique of the framework is that by giving a financial value to the carbon stored in forests, REDD+ incentivises GHG emission reductions in forests, but not the other tangible and non-tangible benefits that forests provide, some of which are of much higher value than carbon.

Although the Warsaw Framework provided a roadmap for REDD+, clear and essential incentives for participation by developing countries are not yet in place in the UNFCCC or outside. Instead of concerted global efforts to reduce deforestation and forest degradation, multiple donor and funding agencies, applying their own sets of safeguards and standards, are triggering chaos.

The REDD+ rules developed under UNFCCC are difficult to implement, given the diversity in the forest governance contexts across countries. The UNFCCC has little funds for REDD+. The Green Climate Fund, touted as the most popular option to finance REDD+ under UNFCCC, has also failed to mobilise money from developed countries. This has further impacted the credibility of REDD+ under UNFCCC. As a result, REDD+ has been effectively driven by bilateral and multilateral agencies instead of the UNFCCC. Further discussions are needed on whether this trend should continue to be acceptable.

INDCs and forests

International climate negotiations are believed to have seen the greatest collective commitment to reduce emissions from land-use change, including forests, through the submission of INDCs.[25] Forests, which fall in the LULUCF sector, have been included within the scope of mitigation targets specified in the INDCs of a majority of developing parties. However, developed countries such as USA, Canada and the European Union have excluded commitments and contributions in the LULUCF sector (see *Table 7: Forest targets in INDCs of top GHG emitters*). While Canada's INDC states that the country will use a "production approach" to account for harvested wood products, EU-28 says it will come out with a policy on including LULUCF into the 2030 greenhouse gas mitigation framework when "technical conditions allow".

Some countries with rich forest resources, such as Russia and Indonesia, have failed to include specific forest targets in their INDCs — though they acknowledge the role of forests in reducing GHG emissions. For instance, Indonesia's INDC states that its commitment to reduce GHG emissions by 29 per cent by 2030 would be achieved through effective land use and spatial planning, sustainable forest management which includes spatial forestry programmes, restoring functions of degraded ecosystems, etc.

TABLE 7: FOREST TARGETS IN INDCs OF TOP GHG EMITTERS

Many developed countries have not committed or contributed

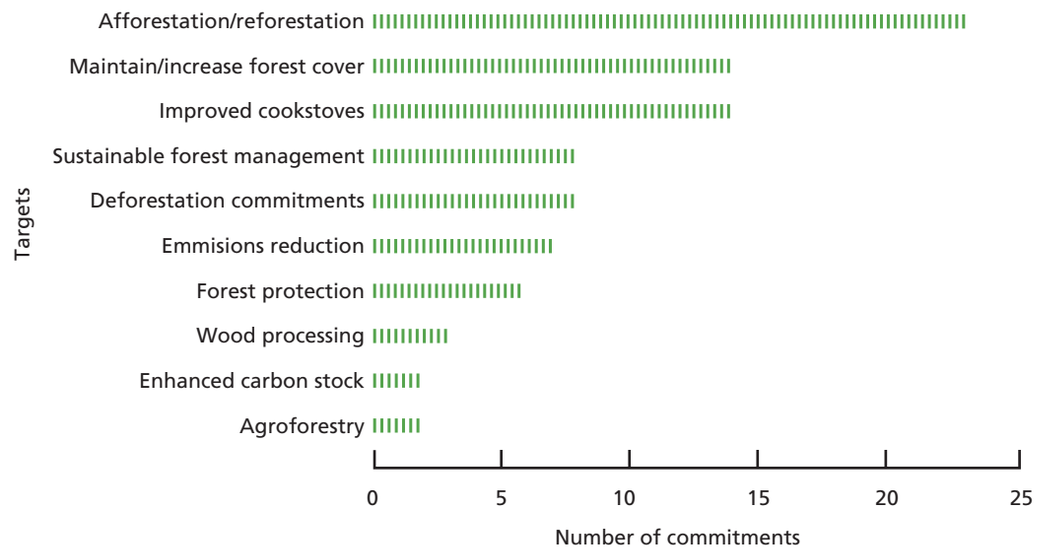
Country	Forest targets in INDCs
China	Enhance the forest stock volume by around 4.5 billion cubic meters by 2030
USA	No targets
EU 28	No targets
India	Create additional carbon sink of 2.5 to 3 billion tonnes of CO_2 equivalent through additional forest and tree cover by 2030
Russia	No targets
Japan	Removal of 27.8 million tonnes of CO_2 by 2030 through forest sink measures, i.e. forest management/forest industry measures
Brazil	i) Zero illegal deforestation by 2030 ii) Restoring and reforesting 12 million ha of forests by 2030
Indonesia	No targets
Canada	No targets
Mexico	Zero per cent rate of deforestation by 2030

Source: INDCs submitted to UNFCCC

An analysis of 75 INDCs by developing countries showed that forests had been discussed in some capacity in most INDCs, with a small number also specifying forest-based mitigation targets. The most common targets include afforestation, reforestation, restoration, enhancement of forest cover, and increasing uptake of improved cookstoves.

FIGURE 4: COMMON FOREST TARGETS IN INDCs OF 75 DEVELOPING COUNTRIES

Afforestation are at the top of the commitments chart—with close to 25 countries committed to meet the target



Source: WWF, 2015

Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org

REDD+ has also been included as a means of achieving mitigation targets for a number of countries such as Brazil, Colombia, Vietnam, Papua New Guinea, Chad, Zimbabwe. Papua New Guinea, for instance, has stated that its entire forestry effort will be coordinated through REDD+, while Chad, Zimbabwe and Sudan have detailed funding needs for the implementation of REDD+. However, not all countries participating in REDD+ make mention of it in their INDCs.[26] These include those with relatively high deforestation rates such as the Democratic Republic of Congo, Bolivia, Ghana, Nigeria, Madagascar, etc. Afforestation/reforestation, on the other hand, forms an integral part of their INDCs.

There is clearly a greater thrust in INDCs on enhancement of carbon sink, as compared to emission reductions from forests. Though the scope of REDD+ includes sink enhancement, a market-based REDD+ is unlikely to pay for the costs of sink enhancement. A paradigm shift is required to make REDD+ a meaningful instrument. It remains to be seen how this imperative will be incorporated in the Paris Rulebook in 2018.

RECOMMENDATIONS

Potentially, REDD+ can achieve synergy between climate change mitigation and equitable distribution of resources with local forest-dwelling communities. However, REDD+ has been driven by bilateral and multilateral agencies, and its market-based approach has failed to deliver adequate benefits to communities.

Countries have been taking domestic action to reduce deforestation with varying degrees of success. Simultaneously, the recognition of community rights over forests in developing countries has gained momentum, and the forest management outcomes have proven to be better in community-managed forests. REDD+ can boost these processes significantly. For this, it needs to be a bottom-up initiative owned largely by communities with technical and funding support from state/regional governments and national governments. The global community can support to fill the funding gaps which cannot be met from domestic sources.

A model REDD+ project should enable communities to manage and govern forests and practice sustainable forest management, which will provide livelihood benefits as well as carbon storage and enhancement in forests. This is possible if the following measures are taken into account:

- **Resolve tenure issues before implementing REDD+:** Tenurial insecurity and conflicts have long been acknowledged to be one of the underlying drivers of deforestation in most tropical developing countries. In places where legislative and policy frameworks do allow forest tenure reforms (such as the Forest Rights Act of 2006 in India and the Village Land Act of 1999 in Tanzania), the first step should be to guarantee that the customary rights of forest-dependent communities are recognised permanently and legally. In countries that do not have a near-future plan for such reforms, contractual arrangements that are respectful of customary rights of use, access and management of forests should be made with communities. The rationale is to ensure that communities should not feel threatened about losing traditional access to their lands and forests through the REDD+ processes. In forest areas where community use is limited, state and national governments should take over in implementing REDD+.

- **Ensure effective and meaningful participation of communities:** Effective and meaningful engagement of communities is an exception rather than the norm. Communities and all affected parties should be provided clear and substantive information on why and where REDD+ activities would be developed, and who is entitled to forest carbon and its correspondent benefit streams. This will inevitably be a time-taking process, but it must be done. Communities should then also have the right to stay in or opt out of the REDD+ process.

- **Develop clarity on carbon rights:** Governments in countries such as the Democratic Republic of Congo (DRC) and Nepal have nationalised carbon rights. This will compromise transparency in benefit-sharing with REDD+ incentives not reaching — or reaching only

Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org

partially and indirectly — through governmental programmes to communities. Forest carbon should belong to those with user and ownership rights on land and forests over which REDD+ is implemented. This will ensure that payments for carbon storage and enhancement are made to those directly involved in efforts to reduce deforestation and degradation.

- **Factor in opportunity costs in determining the carbon price:** In calculating the expected price of carbon, most REDD+ projects have not estimated the true opportunity costs of foregoing deforestation. Worse still, most projects have failed to realise the expected price and affected communities have not been adequately compensated. Households facing restrictions on land and resource use must be compensated from the carbon payments, and the compensation amount should be based on the opportunity costs of foregoing forest usage.

- **Develop basic protocols for benefit-sharing mechanism:** The lack of a standard benefit sharing mechanism has allowed REDD+ projects to exercise discretion in developing their own benefit sharing arrangements. Payments from carbon revenues should be linked to carbon rights, which in turn are linked to land and forest rights. A major proportion (at least 70 per cent) of the payments should be made directly to forest users as cash transfer based on the opportunity costs, while a small portion can be set aside for community development while ensuring equity in the payments system.

- **Ensure REDD+ is a fund-based mechanism:** As mentioned above, the costs of REDD+ have proven to be higher than initially expected; these costs cannot be met from the 'fluctuating' carbon market. REDD+ should, therefore, be a fund-based mechanism where national/regional/provincial governments mobilise sufficient funds from domestic and international sources and set them aside to build capacities of communities and local governments to implement their own REDD+ projects, and get rewarded based on their performance. Governments should factor in the opportunity costs of forgoing forest use in seeking funds for REDD+.

- **Prioritise smaller, community-owned projects to jurisdictional REDD+ programmes:** Tropical developing countries with the most forested regions in the world are often characterised by weak rule of law and low levels of public accountability. Unless this fundamental issue is addressed, jurisdictional REDD+ programmes will not be successful in achieving their objectives. Instead, they will threaten to re-centralise forest governance. The recommendation is that REDD+ should be initiated at smaller scales, where strong local institutions and community-managed forests are capable of delivering REDD+ benefits. Regional governments should take the lead in building capacities of communities to manage and monitor their forests.

- **Integrate REDD+ with sustainable forest management:** REDD+ should not become a mechanism to promote exclusionary conservation where protected areas and their buffer zones form the major chunk of the project area. Instead, REDD+ project areas should be a healthy mix of smallholder farms/land holdings and sustainably managed forest areas, preferably by communities.

- **Develop safeguards against land grabbing and resource alienation:** Examples of communities being alienated from their lands as well as forest resources in the name of REDD+ are aplenty across the globe. Given the dependence of large numbers of people on forests in countries like India, it becomes essential to develop safeguards for communities before REDD+ projects are taken up.

- **Build multi-stakeholder partnerships for implementing REDD+:** Projects related to REDD+ are complex and require complicated planning, implementation and monitoring; they require multiple skill sets which lie with the government (at various levels of hierarchy), private players, multilateral agencies, and people. Partnerships to achieve synergy between different components of a REDD+ project can reduce financial and logistical burden on a single partner.

- **Avoid complexities within existing legal framework:** As exemplified by India, where forestry is a labyrinth of numerous acts, policies, programmes, missions and projects dividing and criss-crossing into various levels of governance, REDD+ should not create another parallel governance paradigm — instead, it should integrate seamlessly with the existing framework. At best, REDD+ should be considered a tool of strengthening already existing local forest governance by providing additional funds for forest conservation and their sustainable use.

Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org

ANNEXURE

The CSE international workshop on REDD+

In February 2018, Centre for Science and Environment had convened an International Workshop on REDD+. The participants at this meet discussed how REDD+ projects have largely maintained or exacerbated the historical injustices done to local communities and facilitated the elite capture of REDD+ benefits. Other issues of relevance such as additionality, leakage, permanence, equity, constraints of involving the private sector, difficulties in involving local actors/small NGOs, benefit-sharing mechanisms, jurisdictional REDD+, etc were also discussed.

The Working Groups deliberated on answers to various questions about REDD+ implementation at the ground level — such as how do we balance global aspirations for carbon sequestration with local community needs from forests, especially in conditions where the situation is not a win-win? Where is the room in the 1.5°C carbon budget for offset crediting? What are/should be the consequences of non-payment for all actors in REDD+? What is the role of the private sector in REDD+? How do we internalise opportunity costs in the REDD+ mechanism? Whether it is market or non-market, what would be the governance structure under a non-market mechanism?

The Workshop also debated how emissions from survival use were different from emissions from industrial use. Problems in percolation of REDD+ funds, role of bureaucracy and judiciary in REDD+, subsidies, low REDD+ carbon prices that fail to meet opportunity costs, adaptation of CFM/JFM in the REDD+ paradigm, role of agroforestry, centralisation of forest governance, convergence of other programmes with REDD+, marrying frameworks of sustainable forest management and REDD+ etc were also discussed.

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Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062, India, Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org

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REDD+ is the most prominent global mechanism to tackle deforestation and forest degradation, which are known to contribute significantly to climate change. REDD+ projects should enable communities to manage and govern forests sustainably for livelihood benefits and carbon enhancement from forests. This policy brief recommends measures to achieve these objectives.

Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062, India
Ph: +91-11-40616000 Fax: +91-11-29955879
E-mail: shruti_agarwal@cseindia.org Website: www.cseindia.org