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INTERNATIONAL REDD+ ARCHITECTURE AND ITS RELEVANCE FOR INDIA

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Introduction

Forests are a resource of local, national, and global concern. They provide a range of ecosystem goods and services that include carbon sequestration and storage. Deforestation and forest degradation in tropical regions is the second largest source of global greenhouse gas (GHG) emissions. Various studies estimate its share in total global anthropogenic GHG emissions to be between 12 and 20 per cent (Ghazoul et al, 2010; IPCC, 2007). After the potential of the forestry sector to contribute significantly to a low-cost global mitigation portfolio was recognized in the international climate change arena, REDD+ and forestry became central to discussions under the United Nations Framework Convention on Climate Change (UNFCCC).

The concept was first introduced in its preliminary form at the climate change negotiations during the Third Meeting of the Conference of Parties to the UNFCCC (COP-3) in 1997; to enlist carbon services of forests under the Clean Development Mechanism (CDM), and account for emissions and removals from Land-Use, Land-Use Change, and Forestry (LULUCF) activities. In 2005 at COP-11, “Reducing Emissions from Deforestation (RED) in developing countries: approaches to stimulate action” was introduced as an agenda item in the negotiations. The abysmal performance of Annex I parties in meeting their mitigation pledges under the Kyoto Protocol has garnered the international community’s attention towards the forestry sector, which was seen as a low-hanging fruit to facilitate Annex I parties in meeting their mitigation pledges. However, conservation of forests comes with a significant opportunity cost for developing countries, as

reserving forests implies foregoing the benefits that would have been generated by exploiting these resources, or from adopting alternative land use practices. Further, the on-site benefits of forests are lower than the potential benefits of alternative land uses. Therefore, in order to safeguard the forests against activities that prove to be destructive to its interests, and to protect the rights of local forest dependent communities, new elements were introduced and the scope of RED was enhanced to include the issues of forest degradation (REDD) and compensated conservation (REDD+).

India has played an important role in REDD+ negotiations and has been instrumental in shaping the REDD+ mechanism by emphasizing the role of conservation and sustainable forest management in mitigating carbon emissions. In international negotiations, India’s position on REDD+ underscores the need for reducing emissions through conservation, sustainable management of forests, and enhancement of forest carbon stocks, in addition to reducing emissions from deforestation and forest degradation. India’s stand was accepted at COP-13 in 2007 and figured in the Bali Action Plan which guides the current negotiations on REDD+.

As the modalities of the international REDD+ architecture are being negotiated, while operating principles are being discussed, and methodologies getting refined, countries need to undertake preparedness activities in order to benefit from the emerging mechanism that would not only have carbon benefits for the global community, but also contribute significantly towards meeting the sustainable development objectives of developing countries.

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India's preparedness for REDD+

At the national level, India has a robust policy and legal framework in the form of the Wildlife Protection Act, 1972; Forest Conservation Act, 1980; National Forest Policy, 1988; National Environmental Policy 2006; and Forest Rights Act 2006 for the sustainable management of its forests.

India's National Forest Policy, formulated four years before the Earth Summit (UNCED 1992), embodies all elements – social, environment, and economic – of Sustainable Forest Management. The principal aim of India's National Forest Policy is to ensure environmental stability and maintenance of ecological balance, including atmospheric equilibrium, which is vital for the sustenance of all life forms – human, animal, and plant. The derivation of direct economic benefit is subordinate to this principal aim.

India's National Forest Policy is in alignment with the four global objectives agreed in 2006 by all member countries of United Nations under the umbrella of United Nations Forum on Forests (UNFF). These global objectives aim to:

- 1. Reverse the loss of forest cover worldwide** through sustainable forest management, including protection, restoration, afforestation, and reforestation; and increase efforts to prevent forest degradation
- 2. Enhance forest-based economic, social, and environmental benefits,** including improving the livelihoods of forest dependent people
- 3. Increase significantly the area of protected forests worldwide** and other areas of sustainably managed forests, as well as the proportion of forest products from sustainably managed forests

- 4. Reverse the decline in official development assistance for sustainable forest management** and mobilize significantly increased, new, and additional financial resources from all sources for the implementation of sustainable forest management

India has already demonstrated its commitment in climate negotiations by declaring that, even as it pursues its social and economic development objectives, it will not allow its per capita GHG emissions to exceed the average per capita emissions of developed countries¹. Conservation, expansion, and improvement in the quality of its forests is a national priority for India as it is not only a cost-effective mitigation measure against climate change, but also generates benefits in terms of ensuring qualitative and sustained flow of ecosystem goods and services, vital for the sustenance of local forest dependent communities (MoEF, undated; Sarkar, 2011).

A range of policies and programmes have been initiated at the national level to address the impacts of climate change in the context of sustainable development. The National Mission for a Green India (GIM)² is one of eight Missions prepared under the aegis of the National Action Plan on Climate Change (NAPCC). Its objective is to increase forest cover by over five million ha and improve the quality of forests over another five million ha during the next ten years; enhance annual CO₂ sequestration by 50 to 60 million tonnes by the year 2020; and increase forest-based livelihood income of about three million households living in and around the forest.

The National Afforestation Programme (NAP) aims to restore degraded forests with active participation of local communities. Subsequently,

¹ MoEF(2009). <http://pib.nic.in/newsite/erelease.aspx?relid=49738>. Last Accessed on 11th July 2012. Ministry of Environment and Forests. Press Information Bureau, Government of India

² moef.nic.in/downloads/public-information/GIM-Report-PMCCC.pdf. Last accesses on: 12th July 2012.

for regeneration of degraded forests in the country, the Government of India has reviewed the NAP based on feedback from implementing states and other stakeholders (GoI 2011)³. The MoEF is implementing a centrally sponsored scheme, namely “Intensification of Forest Management Scheme”, which aims at the creation of infrastructure for the development, protection, and conservation of forest resources in the country.

For India, carbon service from forests and plantations is one of the co-benefits and not the primary objective of forest management. Therefore, as India is poised to pilot REDD+ projects in the country, it is important to revisit some of the issues underpinning the design of an appropriate national architecture.

Design and implementation of REDD+ activities

Irrespective of the final design of the REDD+ mechanism, provisions have to be made to deliver on finance to support eligible projects; Monitoring Reporting and Verification (MRV) to ensure activities are in alignment with the principles of the Framework Convention on Climate Change and; safeguards, so that REDD+ helps in conserving, maintaining and enhancing ecological services and contributes to the socio-economic development of forest dependent communities.

Finance

REDD+ is a financial instrument to incentivize avoided deforestation and degradation of forests, conservation, and sustainable management of forests with a view to reduce GHG emissions. It aims at compensating forest owners in developing countries for conserving forests by assigning

a value to the forest carbon stock, one of the ecosystem services that forests provide. The notion of REDD+ is based on two basic premises. Firstly, countries conserving forests forego the economic gain from harvesting them, as well as the benefits from alternative land use, and hence the need to be compensated for the same. Secondly, costs involved in conservation and sustainable management of forests need to be shared by developed countries too, as forests provide a range of offsite ecosystem services. Given the livelihood linkage of forests in many developing countries, forest conservation imposes several direct and indirect costs. Hence, any financial mechanism to compensate some of these costs by developed countries would encourage sustainable management of forests in developing countries. *The Eliasch Review* (2008) estimates that even if forest carbon is included in global emissions trading; the cost of halving net global carbon dioxide emissions from forests by 2030 would still be a substantial sum of US \$ 17-33 billion annually. The review identifies two types of financing needs that would arise regardless of the final design of the REDD+ mechanism. These are:

- (i) Upfront capacity-building (readiness) costs, which will require upfront investments in REDD+ infrastructure, monitoring systems, forest and carbon density data, and stakeholder participation
- (ii) On-going emission reduction costs, which include:
 - a. Forest protection costs for implementation of Policies and Measures (PAMs) to attract REDD+ investments
 - b. Opportunity costs for compensating foregone profits from reducing forest emissions

³ MoEF (2011) <http://www.pib.nic.in/newsite/erelease.aspx?relid=78545> Ministry of Environment and Forests Press Information Bureau, Government of India Last accesses on: 12th July 2012

Financing REDD+ has remained one of the bottlenecks because of the huge uncertainty involving the mechanisms for its operation. However, since COP-11 in 2005, it has largely been recognized that developed countries should financially support developing countries in implementing REDD+ activities.

Official Development Assistance (ODA) tends to be a short-term source of finance and therefore is less suited to long-cycle carbon forestry projects (Estrada Porrúra et al. 2007). This makes ODA better suited for developing the national REDD+ strategy and undertaking preparedness activities. Voluntary markets have been the predominant source of finance for the forestry sector and in 2007, contributed towards 18 per cent of all projects, globally (Hamilton et al. 2008). The compliance market is currently restricted to afforestation/reforestation under the Clean Development Mechanism (CDM), and it is still not clear if it would become part of the future REDD+ mechanism.

India, in its submission to the UNFCCC (MoEF 2009), recommends a flexible combination of market based and non-market based approaches for providing positive incentives for the two types of carbon stocks under the REDD+ regime: (a) change in carbon stocks that includes incremental carbon stocks and reduced deforestation, and (b) baseline carbon stocks. The market-based approaches that would be developed for incentivizing removals and emission reductions to be separate from the CDM market and conservation of forest carbon stocks could be incentivized through non-market based mechanisms.

Monitoring, Reporting, and Verification

One of the critical methodological issues for REDD+ implementation is fixing the reference baselines for emission measurements and modalities for MRV. Some countries argue for a historical baseline whereas others advocate using a global baseline (Dooley, 2008). A decision of COP-16 on The Cancun Agreements⁴, requests developing countries to develop a national strategy or action plan; a national forest reference emission level and/or forest reference level (or as an interim measure, sub-national ones); and a robust and transparent national forest monitoring system (possibly with sub-national monitoring and reporting as an interim measure).

India is of the view that the Reference Level (RL)/Reference Emission Level (REL) need to be fixed in an open and transparent manner following the procedure agreed by the Parties for the purpose⁵. India's National Forest Policy led to a programme named Joint Forest Management (JFM) mechanism following a circular issued by MoEF in 1990, emphasizing that state governments involve local forest communities, who would receive a pre-determined share from the forest produce. As a result, the states issued enabling JFM resolutions and people's participation became central to Sustainable Forest Management (SFM). Therefore, in the absence of an agreed RL/REL at the international level, 1990 can be adopted as the baseline for REDD+ projects in India.

In addition to the above-mentioned issues, implementing of REDD+ faces a host of operational challenges particularly on measuring

⁴ FCCC/CP/2010/7/Add.1. The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention". United Nations Framework Convention on Climate Change. (Decision 1/CP.16, available at: <http://unfccc.int/documentation/decisions/items/3597.php?dec=j&such=j&cp=/CP#beg>). Last Accessed on 11th July 2012.

⁵ Views submitted by India on modalities and procedures for financing results-based actions and considering activities related to decision 1/CP.16, paragraphs 68–70 and 72 (Decision [1/CP.17] Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, paragraph 69

additionality of carbon stocks; assessing **system leakage** so that the avoided deforestation in one area is not displaced to another; and ensuring **Permanence** of carbon storage even after the REDD+ project period has ended (Ghazoul et al., 2010). Therefore, MRV would entail monitoring not only the project period and the project site, but continued monitoring over an extended period to ensure permanence and assess the degree of leakage, if any.

In India, the challenge before the forestry sector is not so much related to checking deforestation as it lies in managing degradation. It is particularly difficult to curb forest degradation due to widespread poverty, and overwhelming dependence of local forest communities on forest resources for subsistence and livelihood. Even introducing new policies and schemes to reduce the dependence on forests would be a slow process subject to myriad operational challenges. As a result, MRV of forest degradation presents much greater challenges in terms of technical and cost implications as evaluating carbon emissions from degradation would require extensive on-site monitoring, since remote sensing has its limitations and is not suitable for this purpose (Foody, 2002). Although India possesses an established system of monitoring Sustainable Forest Management (SFM) activities by means of eight criteria and forty-three indicators developed under the Bhopal-India process (1998); new techniques and methods need to evolve for measuring aspects such as leakage and additionality of forest carbon stocks.

Safeguards

The IPCC (2007) report lays emphasis on good governance practices that respect both procedural as well as consequential equity, i.e. equity in the decision-making process as well as the resultant outcome. Social accountability involves informed actions based on rigorous analysis of data, where stakeholders use their interpretation of such data and their rights responsibly, not only to assert their interests and the concerns of the

marginalized, but also to develop their ability to influence and negotiate directly with official decision makers (ANSA 2010). The design of the REDD+ architecture should ensure that it not only contributes to GHG emissions reductions but also ensures compliance with the necessary social and environmental safeguards.

At the international level, the need for developing a Safeguards Information System (SIS) in developing countries has received attention for obtaining results based finance by providing information on how safeguards are addressed and respected. At COP-17 in Durban (Decision 12/CP.17 Para 5) it was agreed that a summary of information on how safeguards are being addressed and respected should be provided periodically in national communications by the developing country undertaking REDD+ activities, or through communication channels agreed by the COP.

In India, there are safeguards already in place to protect the customary rights and traditions of tribes, forest dwellers, and other local communities. Policy and legal instruments exist in the form of Joint Forest Management programmes, the Forest Rights Act, and the Biological Diversity Act, whose provisions ensure the rights of local communities and enable them to be key players in the local-level governance of natural resources. After successfully involving communities in the protection and management of forests, Joint Forest Management (JFM) has recently been integrated into a more democratic organization of local governance, the Gram Sabha. JFM is evolving into JFM+ by involving the livelihood concerns of forest dependent communities along with protection and management of forests. The Forest Rights Act has further strengthened the legal framework in the country for safeguarding the rights of tribal and other forest dwellers. India will also adopt, as appropriate, the modalities of the system as would be agreed in the Subsidiary Body for Scientific and Technical Advice (SBSTA) for

providing information on internal safeguards to the UNFCCC, including ensuring participation of local communities, and conservation of natural forests and their ecosystem services.

The principal beneficiaries of resources generated from trading of enhanced carbon would be the forest dependent communities involved in the conservation of forests. The Government of India is committed to ensure that full and adequate incentives from REDD+ go to the local communities as and when these become available⁶. A part of the incentives are expected to be invested in conservation and improvement of the varied ecosystem services derived from the resource base of forests including biodiversity, and Non Timber Forest Products (NTFPs) among others.

Institutional arrangement

The REDD+ architecture at the international level recognizes the sovereign rights of the nations to design and implement nationally appropriate policies and measures. Therefore, flexibility to accommodate different national circumstances would be inherent to its design. The Conference of Parties (COP) to the UNFCCC needs to have provisions for balanced representation from both developing and developed country parties to ensure transparency, equity and accountability in the decision making process.

The institutional mechanism at the international level, while providing overall oversight for REDD+ mechanism, will incentivize measurable actions on REDD+ that are in accordance with the objectives of the Framework Convention on climate change.

The National REDD+ Cell set up at the Ministry of Environment and Forests (MoEF) will play a key role in designing and implementing

REDD+ strategies at the national and sub-national level, consistent with the mechanism at the international level. It will coordinate REDD+ related activities at the national level and guide and the State REDD+ Cells to collect, process and manage all relevant information and data relating to forest carbon accounting. Other functions may include guiding the formulation, development, funding, implementation, monitoring and evaluation of REDD+ activities in the States. It would also help identify REDD+ opportunities and work with State Forest Departments (SFDs) for REDD+ project development. The Cell would also assist MoEF and its affiliated agencies in developing and implementing appropriate policies relating to REDD+ implementation in the country, mobilize and disburse resources and will engage with the Centres of Excellence to provide technical guidance and support to the States, as required. The Cell would also actively participate in the negotiations on REDD+ under the UNFCCC.

A State REDD+ Cell could be set up in the State Forest Department and its functions could include overseeing the project preparation and project implementation by the Joint Forest Management Committees (JFMCs) or Village Forest Protection Committees (VFPCs). It shall also be responsible for ensuring that projects are designed in compliance with the national guidelines, and once the requirements are met, would submit the project to the National REDD+ Cell for financing. In addition, the State REDD+ Cell shall organize training and capacity building seminars and workshops for officials of the State Forest Department and village level institutions through Forest Divisions which will be the main implementing agency for REDD+ programmes on the ground.

⁶ Views submitted by India on modalities and procedures for financing results-based actions and considering activities related to decision 1/CP.16, paragraphs 68–70 and 72 (*Decision [–/CP.17] Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, paragraph 69*)

The village-level forest governance unit shall be responsible for REDD+ project formulation. The JFMCs, VFPCs could directly be involved in the implementation of REDD+ projects under the technical guidance of Divisional Forest Officer concerned or his representatives. The Gram Sabha will be the centric body to constitute the Joint Forest Management Committee for conservation, protection and management of forests, with benefit sharing from forests on the principle of sustainable harvests as laid down in the management plan of the respective area within their jurisdiction. The Forest Department shall provide technical guidance to the Gram Sabha, and also monitor implementation of the management plan.

Monitoring of the REDD+ projects shall be done by the National REDD+ Cell together with the State REDD+ Cell. The data on changes in forest carbon stocks for estimating forest degradation can be collected using RS/GIS along with required ground truthing (actual measurements on the project site). To ensure transparency, provisions will be made to involve and engage local communities, civil society organizations and other stakeholders, who would be trained by the FSI and Forest Department on technological, methodological, policy, and financial aspects of MRV processes and procedures. MoEF may designate Centres of Excellence to support both national as well as state REDD+ Cells. These Centres of Excellence will provide capacity-building support and perform other facilitating functions as may be required. Engaging with grassroots/civil society organizations will also help raise awareness on the issue among forest dependent communities.

MRV will be carried out by independent experts not involved in any of the processes of preparing the forest carbon stocks inventory. Local forest dependent communities, civil societies and other interested entities will be fully involved and informed about the technological, methodological, policy, and financial aspects of

the Measuring, Reporting and Verification (MRV) processes and procedures.

Key issues and priorities

Forest degradation

India has 78.29 million ha (Mha) under forest & tree cover India which is 23.81 % of the geographical area of the country (FSI 2011). India is one of the few tropical countries where forest cover has stabilized over the period from 1947 to 2007; and between 1997 and 2007, it further increased by 3.13 m ha (FSI 2009). Forest resources support livelihoods of approximately 200 million people in India. In addition to the livelihood dependence of the local communities, prevalence of widespread poverty, a shrinking common property resource base, and increasing human and livestock population are factors responsible for unsustainable harvest of forest produce and major causes of forest degradation in the country (WB, 2000).

Since India's forest policy gives priority to the rights of local communities on forest resources for meeting their subsistence needs, it is therefore a challenge to enhance forest carbon stock without undermining the dependence of the local forest dependent communities. Prioritizing generation of natural resource based employment opportunities for the forest dependent communities could reduce dependence and address the problem of unsustainable harvests while enhancing the carbon stocks.

An integrated approach and inter-departmental coordination

Critical inter-linkages between forest resources, rural livelihoods, as well as competing land use demands, proliferate deforestation and forest degradation (Davidar, 2010; Chhatre and Agrawal, 2009; Mahapatra and Kant, 2005; Wunder, 2001). The forest sector alone cannot bear the burden of supporting livelihoods of a large section of population living in and

around forest areas. Linkages with other sectors, especially agriculture, health, rural development, and energy programmes need to be studied in depth, to develop a synergistic approach to address the challenge, by dove-tailing various poverty alleviation programmes, prioritizing development of forest based enterprises, and increasing agricultural productivity in lands adjoining forests for yielding food, fodder and fuel-wood. The forestry sector can play a pivotal role in this due to its large-scale presence in interior areas, through JFM Committees. Ministries such as Ministry of Rural Development, Ministry of New and Renewable Energy among others must come forward to provide alternate livelihood opportunities, as there is great scope of convergence of developmental programmes of Rural Development, Tribal and Social Welfare, Health and Education, and Power Departments, in areas within the forests and fringe forest areas.

Centre and State government dialogue

Regular consultations between Centre and State governments are a prerequisite for successful implementation of REDD+ at the local level. The State level REDD+ Cell should actively coordinate with and act as a link between the National level REDD+ Cell and the village-level forest governance unit. To take on board views of all stakeholders, pre-negotiation consultation, and post-policy formulation briefing on REDD+ issues needs to be institutionalized.

Building capacities

Capacity building is a key requirement for the REDD+ readiness process. Capacity has to be built for all officials at all tiers of forest governance, supporting institutions and the local forest dependent communities, on various issues ranging from general awareness about forest policies and programmes to the benefit-sharing mechanism under REDD+, MRV, and social and environmental safeguards. The role of local communities is vital in not only addressing the

drivers of forest degradation but also enhancing the carbon stock through conservation, protection and reforestation. The carbon stock of Indian forests in 2004 has been estimated by Forest Survey of India (FSI 2011) to be 6663 m tones, which can be increased significantly with the involvement of local communities. There is also a need to build capacity on methodologies for carbon assessment and procedures for project preparation under REDD+.

The National REDD+ Cell would take the lead to build the capacity of the State REDD+ Cell and State Forest Departments (SFDs) on these issues. The SFDs would further sensitize the JFMCs and local level institutions on REDD+. A simple and systematic approach needs to be adopted to ensure that stakeholders can easily understand their role and responsibilities.

Support for one pilot in each state

As the REDD+ mechanism is being negotiated by member countries of the UNFCCC and the intricacies worked out, undertaking pilot REDD+ projects would help generate valuable experience before REDD+ is fully operationalized at the national level. Pilot projects will also help field-testing of the methodologies and provide important learnings, which can address research gaps, help refine SFM methodology and provide policy inputs for large-scale design of REDD+ projects. In the process, this would help build technical capability and also help identify barriers to operationalizing REDD+. It is therefore, imperative that at least one pilot study be undertaken in each state of the country. The pilot projects will be undertaken with the help of village-level Forest Resource Committees at Gram Sabhas, Van Panchayats and JFMCs, among others. These could be the implementing institutions for undertaking REDD+ pilots in India, with support from the State Forest Department.

Funds for SMF

The Rio Principles adopted at the 1992 United

Nations Conference on Environment and Development underscore that States have common but differentiated responsibilities regarding collective global interests and concerns related to forests, and the sovereign right to utilize their resources to meet their national policy objectives. At the same time, it was also emphasized that international cooperation should focus on building human and institutional capacity in developing countries to conserve and manage their forests. The recently concluded United Nations Conference on Sustainable Development at Rio in 2012 recognizes the need for strengthening cooperation arrangements for REDD+ in the areas of finance, trade, transfer of environmentally sound technologies, capacity building and governance, and benefit sharing, among other key areas, which will be in accordance with national legislation and priorities.

India has stabilized its forest cover from 1947 to 2007 owing to effective legislative and policy measures. Despite the fact that India is a developing country and the financial resources allocated to the forestry sector are inadequate to meet the demands of the forestry sector, several ambitious policies and programmes such as the NAP and GIM are being implemented in the country. It is estimated that addition or improvement of forest and tree cover by implementing these programmes will add 2 million tonnes of carbon incrementally every year, and post 2020 the forest and tree cover will be adding at least 20 million tonnes of carbon every year. This would require an investment of INR 90 billion (USD 2 billion) every year for ten years (MoEF, undated).

India's sustained efforts for conserving and expanding its forest and tree resources have the possibility of being rewarded for providing carbon

service to the international community, in addition to providing traditional goods and services to local communities (Ravindranath 2008). The international community should come forward to finance programmes that contribute to sustainable development of forests whereby carbon in Indian forests is enhanced without undermining the other services from forest ecosystems⁷.

The Government of India may establish linkage with Forest Carbon Partnership Facility (FCPF) of the World Bank and UN-REDD programmes to access adequate financial resources necessary to build capacity of communities and forest officials for the implementation of REDD+. The Government of India may also explore the possibility of attracting funds from voluntary markets and carbon trading under REDD+.

The additional money generated through additional carbon added or carbon saved will supplement incentives already derived by JFMCs through harvesting of Non-Timber Forest Products (NTFPs), and would help support livelihoods of communities and contribute to overall socio-economic development. Incentives received from REDD+ would be passed to local communities involved in conservation and management of the forests to ensure sustained protection of India's forests.

Clarity in methodology

The progress with the REDD+ negotiations is marred due to ambiguity on key definitions like forest degradation, sustainable management of forests, deforestation and sustainable harvest. The concept of Sustainable Forest Management (SFM) was first articulated in the Forest Principles at the Earth Summit in Rio in 1992. As the concept of SFM evolved, the 14 members of the Collaborative Partnership on Forests (consisting of international

⁷ United Nations 2005 Millennium Ecosystem Assessment (MEA), grouped ecosystem services into four broad categories: provisioning, such as the production of food and water; regulating, such as the control of climate and disease; supporting, such as nutrient cycles and crop pollination; and cultural, such as spiritual and recreational benefits.

organizations and secretariats) recognized that ‘SFM provides an effective framework for forest-based climate change mitigation and adaptation’. It was emphasized that without a comprehensive approach to forests (recognizing that countries manage their forest estates for multiple socio-economic, productive, and environmental functions) and without sound policy, legislative, and governance frameworks, forestry-related climate change mitigation and adaptation efforts on the ground will not be successful. The Bali Action Plan (COP-13) introduces the term Sustainable Management of Forests (SMF) in the context of REDD+. It defines REDD+ as: “Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries”.

Therefore, in order to take the process forward there is a need to bring clarity on the usage of the terms, SMF, SFM and forest degradation. Also, while REDD+ talks about the compensation of carbon sequestration services, more clarity is required on the compensation mechanism of other ecosystem services, particularly intangible services.

In summary

REDD+ presents opportunities to cater to the varied needs and interests of a wide range of stakeholders. On the one hand, it lends itself towards meeting emission reduction targets of Annex I countries, and on the other, it has the potential to contribute significantly towards strengthening SFM and sustainable development efforts in developing countries. However, implementing REDD+ at the national and local level requires reducing gaps in understanding the issue as well as increasing capacity (technical, human and financial). Inadequate means of implementation remains another grey area for

effective implementation of SMF, particularly in developing countries.

India has played a pivotal role in framing the modalities of REDD+ in international negotiations on climate change. Because of its efforts for conservation and management of its forest resources, India is favourably placed to gain access to both financial and technical resources available under the provisions of UNFCCC. The resources generated from REDD+ will not only help strengthen implementation of existing forest policies and programmes but also contribute towards community development, biodiversity conservation, enhancing provision of ecosystem services including carbon services as one of the co-benefits.

The current levels of assistance under ODA are largely insufficient for meeting SFM and REDD+ objectives, and therefore, adequate funding should be made available under the existing financial mechanism to support all eligible proposals.

While the developing countries must show political commitment for sustainable development of forests, the developed countries must support the developing country parties to further strengthen their commitment towards REDD+. Additional operating funds should be made available for on-going SFM activities that help enhance carbon stocks and contribute towards continued delivery of the full range of goods and ecosystem services.

At the international level, the REDD+ architecture should be responsive to the differential national circumstances of member countries, levels of development and their varying levels of preparedness for undertaking REDD+ activities. It also has to be sensitive to the sovereign rights of nations to design appropriate and nationally acceptable policies and strategies, and must be flexible enough to allow for any mid-course corrections in its design as may be required.

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