

# India Climate Watch

Spotlight on India and the climate negotiations



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## From the Editor's desk

The countdown to Copenhagen has begun. On August 28th we passed the 100 day mark to the commencement of negotiations at the UN climate summit in December. The day also saw the launch of a movement that has been in the making for much of this year – the launch of the TckTckTck campaign – denoting the sound of a ticking clock - by the Global Campaign for Climate Action (GCCA). The campaign marks an unprecedented coming together of the world's leading and lesser known organizations working on climate change – from heavyweights such as Greenpeace, Amnesty, WWF and Oxfam, to the Climate Action Network (CAN), faith-based organizations, youth groups and trade unions. CSM is also a founding member. The campaign has a simple 'ask' – a fair, ambitious and binding (FAB) agreement at Copenhagen to succeed the Kyoto Protocol which will expire in 2012. Activities were held around the world to mark the launch of the campaign. In Delhi, Chinese and Indian activists came together around a melting ice statue to represent the lives of young children today which hang in the balance. A poignant message from citizens of two of the world's emergent superpowers.

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## Bonn 3 - A Summary

### WANTED! Political momentum for Copenhagen

If Bonn2, the last round of negotiations in April, ended on a low note, the break in between has helped bring energy back into climate negotiations. Events after Bonn-2 saw a steady build-up of political momentum. In July, the G8 in L'Aquila and the Major Economies Forum (MEF) included a welcome commitment to keep global warming below 2°C. India too signed the statement, despite a political ruckus back home. British PM Gordon Brown became the first Annex I leader to put down a US\$ 100 billion figure for mitigation and adaptation for developing countries. A successful United States-China bilateral on climate change meant more cooperation from both sides – the two largest emitters. Closer home, a visit from the US Secretary of State, Hillary Clinton to India as part of her Asia tour included a bilateral on climate change.

### Bonn times III

Delegates from all over the world met for a third time this year (for 5 days in August) to carry forward the United Nations climate talks (the UNFCCC) in Bonn. They met to whittle down a rather bloated 200-page 'revised negotiating text' that had grown in size during Bonn2 because all interested countries (in their favourite negotiating blocks) adding their own lengthy paragraphs.

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## From the Editor's desk

On his own journey of Sino-Indian diplomacy, the Minister of Environment and Forests, Jairam Ramesh, visited Beijing in August to discuss the climate negotiations and cooperation between the two countries. On the face of it, the two countries have a united front on the negotiations, both being members of the G77 political bloc, but the posturing is tactical. Behind the scenes, the situation is more complex. As the world's largest emitter, China has its own interests and relationships. For example, the country has been pursuing a wide-ranging bilateral dialogue with the United States on climate and energy cooperation with expectations of a deal between the two largest global emitters imminent. China has also benefitted from several years of serious government study of climate change impacts across the vast country and now has a head start in most policy areas compared to India. The country's highest political body, the National People's Congress also for the first time in its history issued a draft resolution on climate change which could turn into legislation in the near future.

The country is also discussing the necessity of capping its emissions at the highest political levels. Recently a leading Chinese think-tank issued a detailed 900-page report on a CO2 mitigation strategy that would see China's emissions peak at 2030. Not music to India's ears. The response of the Indian government has been to criticize China for daring to speak about emissions reduction targets at a time when it is trying to scotch such discussions. In China, however, despite diplomatic assurances to Ramesh, the debate on caps and peaks is well underway. No responsible emergent superpower can afford to do any less.

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## Bonn 3 - A Summary (continued...)

(Continued from Page 1)

The draft text is intended to be the 'first cut' of an agreement that will be the successor to the Kyoto Protocol (lapsing in 2012) and that will move global action to the next commitment stage after 2012. However, with Copenhagen less than four months away, there is serious concern that there are fewer excuses for not rounding off a satisfactory deal.

At Bonn3, Parties started off with an attempt at finding 'areas of convergence' in the revised negotiating text. It was clear right from the start that the undercurrents of divergence were not going to remain 'outside the purview of this negotiation'. The process of consolidating text would be as political as it would be difficult.

Sure enough, some Parties (including G77 and China and the AOSIS), were of the opinion that the suggestions they had included were no longer recognizable as 'their own'. This turn-around from the previous session, smacked of lack of trust.

The move was also a step backward - something that an exasperated Executive Secretary Yvo de Boer and AWG-LCA Chair Michael Cutajar alluded to in one session - implying that the already glacial pace of negotiations would slow even further.

Nevertheless, some progress had been made in 'consolidating' the text on technology transfer, adaptation, REDD and capacity building - necessary but not sufficient progress, given that Copenhagen is but three 'negotiating weeks' away.



## Low emission targets

For all the optimism and political momentum that the MEF and other summits provided, Annex 1 countries, with notable exceptions such as the EU, continued to issue emissions reductions targets far below what the science requires. The demand from G77/China was a 40% cut by 2020 at 1990 levels, while AOSIS demands are concurrent with the latest science. However, the current average Annex 1 totals are way below this demand and play fast and loose with base years.

The Alliance of Small Island States (AOSIS) had number crunched the collective Annex I targets. The results were not pretty. For all the talk of commitments, the average for the group amounted only to a puny 18 percent reduction below 1990 levels. Disappointing given that science is calling for an 85% reduction by 2050.

Targets announced during Bonn3 pushed the average by a miniscule amount. New Zealand's 'conditional' target contributed little to the pool and Japan expressed the view that failing to reach 25-40% reductions by 2050 is 'not wrong'. Australia's Senate rejected Premier Rudd's already low and conditional targets just before Bonn3 ended.

Many fear that the 'numbers' will be left in limbo until the last day at Copenhagen, despite Annex I members like the EU asking for a top-down, scientifically informed, ambitious target.

Lack of progress on mid-term targets remains one worry. Another is the lack of progress on the finance pillar – either in terms of figures or architecture. With only 118 days from Bonn3 to Copenhagen, Annex1 parties have moved little on capacity building, technology transfer and financial mechanisms for adaptation and mitigation. There is no 'ambitious plan' with 'clear mid-term targets' for movement to a low-carbon economy. Figures on finance to support mitigation and adaptation in developing countries, an obvious priority for the 'most at-risk' countries, remain uncertain.

The United States, in an NGO briefing, openly stated that 'there is no big money coming', that 'there are some countries that should not expect finances, and who should come on board and accept targets', and that intellectual property rights 'could not be given away at low cost'.

The AOSIS and the LDCs remain the few strong voices of reason, repeatedly reminding Parties that our common future and atmosphere is at stake here - that the atmosphere should be more important than market mechanisms or making money.

Overall, there were but minor areas of convergence. If the G77 and China asked for 'technology transfer and economical capacity building', the developed countries reiterated their willingness to deploy 'innovation centres', 'research facilities', and 'market mechanisms' to help developing countries address their mitigation and adaptation requirements. If developing countries asked for stronger targets from Annex I and greater ambition, developed countries asked for key developing countries to come on board for 'additional targets to be met'.

The role of external forums also came under scrutiny with the United States highlighting the importance of external forums that involved 'key countries' (G8, G20 and MEF summits), and the need to bring in new text. Those not involved in these exclusive groups of large powerful countries and major emitters – ie. the 170-plus countries with little presence but with the greatest vulnerability to climate change, e.g. AOSIS, LDCs, SIDs and African Countries – were understandably wary of being iced out of discussions that could affect them the most.

The G77 and China as a block (India is a part of this block), strongly opposed linking these external fora to the UNFCCC process, saying that while these were clearly meant to build political momentum, their outcomes could not be 'copy pasted' into the Convention text without consensus.



## Low emission targets (continued...)

India and China also made formal submissions to the Secretariat on emission reductions affecting decisions to curb emissions through taxation, and said that an open and international economic system is critical to progress and equality.

Yvo de Boer's closing comments through a press conference, made clear his disappointment with the lack of progress. He said "If we continue at this rate, we are not going to make it".

We must take heart however in some key opportunities to build more 'political momentum' prior to the Bangkok session. Finance is a key stumbling block, and Finance ministers are the next potential game-changers in this highly political negotiation process. The G20 summit on September 24-25 will discuss climate finance, and comes just after the UN General Assembly Summit in New York. All these come just prior to Bangkok.

If serious progress is not made in the Bangkok session, and the Bangkok process is not 'considerably accelerated', we can have few expectations from Barcelona or even Copenhagen. The chance to capitalize on opportune summits and build serious political momentum is now.

***For daily CSM reports from Bonn3, see our Portal: [www.climatechallengeindia.org](http://www.climatechallengeindia.org)***

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## Overview of India's submissions to UNFCCC

Early in August 2009, the Ministry of Environment and Forests (MoEF) released a compilation of the Gol's submissions to the UNFCCC. Entitled "Climate Change Negotiations – India's submissions to the UNFCCC", the publication is intended to educate the public about the logic behind India's approach to the climate negotiations, and the country's submissions from 2008 up until 2009.

The Gol has maintained that poverty and economic reform are prime national policy objectives that cannot be compromised, but that economic development must in the long term, be driven by sustainability principles, with the co-benefits of reduced emissions. The submissions in this report are based on this approach, but also make strong demands on developed countries to assist in mitigation and adaptation efforts through financial, technological and capacity enhancing measures.

The report seeks to explain the negotiation process in simple English, demystifies complicated UNFCCC jargon, gives the average interested citizen a perspective on where negotiations stand, what India's contributions are, suggested text as contributed by India, and a layperson's explanation of the legal terms and statements.

The report also cross references explanations and submissions to the Convention and the Bali Action Plan, and clarifies what India's interpretation of each statement is. For example, the 'ultimate objective of the Convention' that must be achieved 'in accordance with the relevant provisions of the Convention' refer to accordance with Commitments in Article 4, and Principles enunciated in Article 2 of the Convention.

Submissions under the Kyoto Protocol (KP) detail the scale of emission reductions that Annex I Parties should achieve (collectively), and the use of clean development mechanisms (CDMs) under the Protocol for developed countries to meet some of their emission targets. Most demands are in keeping with IPCC (Intergovernmental Panel on Climate Change) reports.

The KP-submissions also include a detailed proposal for rules and guidelines for the treatment of Land Use Land Use Change and Forestry (LULUCF) and other CDM activities. India sees LULUCF as a



mechanism to boost its forestry operations, and a monetary incentive for its existing forests, and this is the context under which it has submitted this text to the UNFCCC.

Under submissions for Long-Term Cooperative Action (LCA) under the Bali Action Plan, where Parties agreed to decide on medium and long-term targets and cooperative action, India's submissions include several interventions. These include details of text on Shared Vision; Measurable, Reportable and Verifiable (MRV) mitigation actions of developing and developed countries (separately); Nationally Appropriate Mitigation Actions (NAMAs) of developing countries, Reduced Deforestation in developing countries (REDD), Sustainable Forest Management (SFM), and Afforestation and Reforestation (A&R); enhancing action on adaptation, improving the architecture for financial commitments and flow of finances; and technology transfer mechanisms.

India is part of the G77/China negotiating block with takes common positions at the UNFCCC. Most submissions detailed in the guide are in line with G77/ China policies and positions, which more or less stress the principles of historical responsibility, and payment to developing countries for 'using up' their development space.

## Vulnerable nations unite on climate change

One of the key political events at Bonn3 was the unprecedented coming together of 80 of the world's most vulnerable countries – members of the erstwhile political blocs of AOSIS (Alliance of Small Island States) and the Least Developed Countries (LDCs) . Collectively accounting for less than 1% of global emissions, the new grouping joined forces to demand that "the new Copenhagen climate agreement limit temperature increases to as far below 1.5 degrees Celsius as possible." Urging countries to go even further than the 2 degrees target-long called for by the European Union and of late agreed to by the G8 and major emerging powers such as India the new political grouping of vulnerable countries expressed dismay at the lack of progress and ambition of the talks.

Ambassador Dessima Williams, Permanent Representative of Grenada to the United Nations and Chair of the Alliance of Small Island States, called on delegates: "With less than 115 days left to Copenhagen, the time for posturing and pretension is over. ... Current pledges by industrialized countries add up to emission reductions in the range of 10 to 16 per cent below 1990 levels by 2020. This risks taking us on a path to temperature increases in excess of 3 degrees above pre-industrial levels. Such a path would be catastrophic for all countries."

AOSIS and the Group of LDCs are lobbying for a more ambitious target of 350 degrees parts per million (ppm) of carbon dioxide equivalent, as advocated most notably by US scientist, James Hansen, as opposed to the 450 degrees ppm currently on the table at the UNFCCC talks.

AOSIS and the LDC Group are calling for the following:

- (i) Industrialized countries to collectively reduce their greenhouse gas emissions by at least 45 per cent below 1990 levels by 2020;
- (ii) Global emissions to peak by 2015, and fall quickly thereafter to ensure that total global emissions are reduced to at least 85 percent below 1990 levels by 2050 enabling emissions to decline to 350 ppm;
- (iii) Financial support for adaptation and mitigation targeted at the most vulnerable and poorest countries of approximately 1 per cent of the industrialized world's GDP, or approximately US\$400 billion annually, in addition to current development aid.

Bruno Sekoli from Lesotho, the Chair of the group of LDCs reminded negotiators: "Climate change is here, and already delivering damage. ... We will not allow negotiators and governments to continue to ignore the human costs of climate change – hunger, disease, poverty and lost livelihoods are all on our doorstep. These impacts have the potential to threaten social and political stability, and in some cases, the very survival of low-lying island states".

Ambassador Williams highlighted the urgency of their fight, "We need to see the leadership and ambition that is often claimed in the media, but in reality, has yet to emerge in the negotiating room." Expressing the common fear of the group of vulnerable countries, she concluded "The window of opportunity is closing quickly. Copenhagen is the last chance to avoid a global human tragedy."



## Climate reporting - What the papers say

An overview of reports appearing in the Indian press on key climate-related issues:

### GOI and State Governments

- ♦Jairam Ramesh in China to discuss climate change strategy. India-China agree that they will take a common stand at UNFCCC, say no to legally binding emission targets
- ♦ PM's council on climate change meets to finalise National Mission on Enhanced Energy Efficiency
- ♦PM convenes first-ever meeting of state environment ministers. Asks states to roll out climate change and conservation plans by December. Special ask for hill states to speed up their preparations and plans
- ♦PM's council on climate change meets to discuss National Solar Mission. Key ministries voice concerns, eventually okay 92,000 crore package (over 30 years) to boost solar energy contribution to energy sector to 20 percent
- ♦India-China for joint research on Himalayas and glacier systems
- ♦India, China, Brazil oppose G20 climate finance proposal to contain greenhouse gases. Say self-financing is not an option
- ♦Department of Science and Technology (DST) initiates National Programme on Co2 Sequestration Research. Carbon dioxide capture and storage (CCS) is an approach to mitigating climate change that is still under research and development, but could be a promising option for continued carbon-based fuel source use
- ♦Gujarat will come out on top of the solar energy charts in India in the next few years.
- ♦Gujarat govt to invest in 34 projects at a total investment of 2.4 billion US Dollars – avoiding 1.25 million tones of CO2 emissions each year
- ♦India releases “India's forest and tree cover” report - Jairam Ramesh says 'forests will save India'
- ♦Haryana Government signs an MOU with private investors to produce 215 MW of electricity from renewable sources
- ♦MNRE: capital cost of solar power projects could come down from 6-8 crores to 14 crore (current)
- ♦India releases “Climate Change Negotiations; India's submissions to the UNFCCC” – detailing India's submissions over 2008-09 to UNFCCC Secretariat

### GOI at Bonn

- ♦Sticks to prior stands, says revised negotiating text must not be inconsistent with Bali Action Plan and Kyoto Protocol
- ♦Scope for collaboration on 'transformational' technologies not 'marginal' technologies
- ♦India raises concerns about double counting emissions 'here, there and there'
- ♦Calls for separation of developed and developing country NAMAs and MRV's
- ♦Opposes external text from outside international fora into UNFCCC process
- ♦India tells NGOs plan for COP15 is not fixed, will decide track depending on developments

### More news

- ♦Third-largest store of ice in Tibet receding fast says study from China
- ♦World Ocean temperatures at all-time high in July
- ♦Patna: Students call for more renewable energy in India
- ♦China sets firm emission targets, says will peak by 2030
- ♦Shirdi temple complex goes solar – joins Tirupathi and Mt Abu – makes annual savings of 100,000 kg of LPG p/yr
- ♦Villagers in Alibaugh protest against 10,000 MW power plant in the region. Form human windmill in massive show of protest



- ◆ Chennai NGO Pasumai Thayagam puts up countdown clock at Spencer Mall
- ◆ Ban-Ki Moon warns of climate catastrophe without global deal

## Business and Industry

- ◆ Industries meet on corporate opportunities and climate change at a summit organized by NEERI
- ◆ SME's more green energy targets to bring in more investments
- ◆ CII outlines green building code
- ◆ India has fastest rate of CDM clearance

## Himalayan glacier melt - the science base

The Himalayas and its melting glaciers have come under scrutiny in recent weeks since controversial statements made by India's environment minister, Jairam Ramesh, suggested that glacier melt was not as serious as many scientists and other observers believed. Here we take a look at some of the latest science on the subject.

First, some important vital statistics:

The Himalayas span five countries and are home to unique mountain species and human cultures. They also have the largest concentration of glaciers outside the polar ice caps, feed nine major river systems in Asia, and are a lifeline to an estimated 1 billion people. Melt water from glaciers provides a key source of water for the region in the summer months; as much as 70 % in the Ganges and 50-60% in other rivers.

Such high concentrations of freshwater reserves are not found outside of the Poles, and have earned the Himalayas the title 'The Third Pole'. However, there is little doubt that the glaciers of the Hindu Kush Himalayan (HKH) region are melting and that the melting is accompanied by a long-term increase of near-surface temperature.

A warming trend has been observed since the beginning of the Industrial revolution (approx 1750) and corresponds with a temperature rise of 0.3 °C in the first half of the 20th century. A second burst of warming in the latter half of the 20th century (the last 25 years) by another 0.3 °C has resulted in an overall temperature increase of nearly 0.74 degrees C.

Glaciers are highly sensitive to temperature changes, and this warming trend has resulted in glaciers across the globe retreating dramatically. A 1997 study of 200 glaciers worldwide by Dyurgerov and Meier concluded that the reduction in global glacier extent amounted to between 6,000 and 8,000 km<sup>2</sup> over the 30 year period from 1961 to 1990.

In line with the worldwide trend, Himalayan glaciers have also been found to be in a general state of retreat since 1850. However, what has been of particular concern to scientists has been the accelerated rate of glacier retreat, ranging anywhere between 10 and 60 m per year in recent years.

A 1999 report from the International Commission for Snow and Ice (ICSI) stated: "glaciers in the Himalayas are receding faster than in any other part of the world, and if the present rate continues, the likelihood of them disappearing by the year 2035 is very high".

The most striking examples of glacier retreat from the Indo-China region are some of the following: the Gangotri glacier in India by nearly 23 m per year (currently); the formation of the 1km long Imja lake formed from the meltwater of the Imja glacier in Nepal; and the retreat of the Khumbu Glacier by over 5km since the time Sir Edmund Hillary and Tenzing Norgay climbed the Everest.



## Himalayan glacier melt - the science base (continued...)

The China Glacier Inventory shows substantial melting of virtually all glaciers in the Qinghai region of Tibet – a major source of the Yangtze river.

Field monitoring of Himalayan glaciers is a difficult process, owing to which field-based records over the long term are only available for select Himalayan glaciers. Indian Remote Satellites (IRS) are regularly used to monitor small glaciers and ice fields, as are field photographs of glacier terminus and estimation of areal extent of glaciers.

Analytical studies from the region suggest a reduction in the maximum flow-period and increase in glacial melt-water runoff by 33-38% and loss in glaciated area. Annual ice thickness loss in the Western Himalayas is estimated at about 0.8m per year between 1999 and 2004. This has serious implications not just for the glacial systems themselves, but also for people living downstream, particularly in the longer term.

Nearly 500 million people are dependent on the Ganges, Brahmaputra and Indus river basins. Severe glacial melt causes a declining trend in river discharge, and changes freshwater flow regimes. This can have impacts on biodiversity, water supplies, infrastructure, industry and agriculture. Another serious issue is the increase in number and extent of glacial lakes. This in turn increases the potential threat of glacial lake outburst floods (GLOFs) causing catastrophic discharges of water .

The frequency of GLOFs in the Himalayan region has increased in the second half of the 20th century, and the damage to lives and infrastructure estimated at close to USD 3 million.

Studies from the Chinese Academy of Sciences report 5.5 percent shrinkage in the volume of China's glaciers over the last 24 years. In the Indian Himalaya, significant glacial retreats have been recorded in the last three decades, particularly in the Siachen, Pindari, Gangotri and Milam Glaciers. Most regularly monitored glaciers show frontal recession, substantial thinning and a reduced area and volume. Although glaciers in Bhutan have been less well-studied, there are some indications of glaciers such as the Tarina retreating at a rate of 35 m per year between 1967 and 1988. In the Nepalese Himalaya, glaciers show remarkable changes from the 1960s to 2001, with an average minimum retreat rate of 10m per year.

Several studies now monitor glacier retreat through the growth of glacial lakes. The other objective of studying glacial lakes in the Himalaya is to serve as an early warning system in the event of GLOFs. One example of a GLOF was the outbreak of the Dig Tsho glacial lake in Nepal in 1985.

### Recent research initiatives

India and China have reportedly recently agreed to work together on glacier research. This is in addition to the Department of Science and Technology (DST) and the Indian Space Research Organisations' (ISRO) initiatives to monitor receding glaciers. DST is also in the process of establishing a National Centre for Himalayan Glaciology. Funds are also expected from the NAPCC mission on Sustainable Himalayan Ecosystems.

Monitoring studies initiated by ICIMOD and the UNEP in the Hindu Kush Himalayas undertake large-scale documenting and monitoring of GLOFs. These programmes aim at engaging key stakeholders to assess socio-economic impacts of GLOFs, needs and capacity assessments and building community-based preparedness and early warning systems. WWF India continues its long-term monitoring and mass-balance research of the Gangotri and Chota Sigri Glaciers.

A number of glaciers have been taken up for monitoring studies in the different parts of Indian Himalaya by several Government agencies such as the Wadia Institute of Himalayan Geology (WIHG), Dehradun; Geological Survey of India (GSI); Snow and Avalanche Study Establishment (SASE), Chandigarh.



The most recent scientific undertaking for Himalayan Glacier research has been the EU-initiated 'High Noon' Project in February 2009. It aims at assessing the impact of Himalayan glaciers retreat and possible changes of the Indian summer monsoon on the distribution of water resources in Northern India. The EU has earmarked 3 million Euros (approximately INR 19.5 crores) for this 3-year project.

With such initiatives and their combined research capacity, policymakers may be in a better position to judge the severity of glacier melt and its implications for regional water and food security among other impacts. Notwithstanding the necessity of further research, India's policymakers might be better advised to take a proactive approach and conduct risk analyses as a first line of defence for what could turn into a major security issue in years to come.

## India's green cover as a carbon sink

### Why forests matter

Forests matter in the climate change debate because rising temperatures are likely to have a broadly negative impact on forest ecosystems. Tropical deforestation currently accounts for about 20 percent of global greenhouse gas emissions each year. These are some of the reasons why deforestation and land use change are being addressed in the context of the UN's climate discussions. The other aspects of the focus on deforestation are the need to promote conservation, prevent biodiversity loss and protect vulnerable indigenous communities and forest dwellers.

Deforestation is a serious issue in South America, SE Asia and Central Africa, as well as several other developing countries, where the monetary benefits of deforestation currently far outweigh the benefits of preservation. Given the potential impacts of climate change, developing countries are likely to come under severe stress in the future, in combating its adverse effects. This is very likely to place additional stress on country forest resources.

### Forests in the UNFCCC process – REDD and REDD+

Under the current UNFCCC mechanisms, there are no monetary benefits or positive incentives to 'reduce emissions from deforestation and degradation' – REDD for short - or other forest-based activities. This implies there is little incentive for Indonesia for example, to stop deforestation for timber or conversion of forests to oil-palm plantations.

Recognising this issue and the need to bring in international-level policy controls to curb deforestation, Papua New Guinea, Costa Rica and a group of tropical forest nations put forward a proposal to the UNFCCC in 2005, to consider approaches to Reduce Emissions from Deforestation and Degradation (REDD) that could tie in with the UNFCCC process.

Since then there has been broad agreement that climate change mitigation efforts should address deforestation, and should incentivize forest conservation through a variety of market and non-market mechanisms.

Developing countries in which deforestation rates are more or less stabilized, are keen to introduce incentives for avoided deforestation, as well as for Sustainable Forestry Management (SFM) and Afforestation and Reforestation (A&R). Taken together, these measures are called 'REDD plus'.

### India's stance

India and other developing countries have argued the case along these lines. They have made a case for payment for lost opportunity costs, and incentives to conserve forest land. They argue that these costs must be met at least in 'substantial part', by global climate agreements, since it is 'in the interest of the global climate' to preserve these forests.



## India's green cover as a carbon sink (continued...)

In support of this position, India's ministry of environment and forests (MoEF) recently released a report, "India's Forest and Tree Cover: Contribution as a Carbon Sink". This report argues that forests have a significant role to play in carbon storage and sequestration, therefore playing a significant role in mitigating climate change. The report suggests that forests can absorb a certain proportion of India's own emissions now and in the future.

In addition to the global importance of forests, India's National Green Mission under the GoI's National Action Plan on Climate Change (NAPCC) focuses on 'enhancing ecosystem services and carbon sinks through afforestation on degraded land'. This mission is in line with the national policy of expanding forest and tree cover to 33 percent of the total land area of the country.

The report bases itself on Forest Survey of India (FSI) data on forest cover, which states that India currently has 23.4 percent (76.87 million ha) of geographical area under forest and tree cover.

The forest and tree cover report suggests that carbon stocks in India's forests have increased from 6244.78 million tonnes (mt) to 6621.55 mt between 1995 and 2005 – an annual increment of 136.15 mt of CO<sub>2</sub> equivalent. It details the proportion of emissions the country can offset in the future by increasing and maintaining forest cover. Estimates for country-wide emission levels in 2010 and 2020 stand at 45% and 95% (respectively) above 2000 emission levels. Calculations based on a continued increase in forest cover over the coming years, suggests that forests would still be able to offset 6.53% and 4.87% of projected annual emissions in 2010 and 2020 respectively.

The report also aims at reviewing methods used to assess forest carbon stocks, and possible ways to increase the carbon storage capacity of forests.

### What's wrong with the GoI's REDD+ approach?

There are several issues of concern in the report and implications for forest conservation, arising from the report.

The first is that the report relies almost entirely on government figures drawn from the Indian Forest Survey. These figures are not independently verified and do little to address the skepticism with which many in the conservation community regard official Forest Survey of India figures. For example, officially the government does not admit that there has been loss of forest cover. But its own 2005 FSI assessment reports a 'marginal' loss of forest cover (728 sq.km – an area larger than Mumbai city) between 2002 and 2004. This constitutes a 0.11% loss of forest cover (official figures) - an important discrepancy because loss of forests means loss of biodiversity, vital habitats for endangered species and overall reduction in ecosystem functions.

A related concern is that creating monetary incentives for large forest cover numbers could lead to the artificial inflation of the proportion of forest cover in India. In much the same way as tiger numbers in Rajasthan's Sariska Tiger Reserve were inflated to satisfy political and commercial interests, when in reality there were no tigers left in the reserve.

A few other points are worth noting here in the context of the report:

1. Forest cover in India is defined as all lands, more than one hectare in area with a tree canopy density of more than 10% - there is no distinction between natural forests and plantations
2. The value of 23.4 percent includes forest cover (20.6%) and tree cover (2.8%), where tree cover is defined as tree patches outside recorded forest areas exclusive of forest cover, less than the minimum 'mappable' area of one hectare. This value is also an estimate, not an actual value
3. Forest cover mapping undertaken by FSI does not make any distinction between tree species (plantations are therefore considered forests), or land ownership (private land with shade-coffee for example, also gets classified as forest)



## India's green cover as a carbon sink (continued...)

4. National Parks, Wildlife Sanctuaries and Conservation reserves cover a mere 4.74% of the country's geographical area. The question therefore remains as to how increasing 'forest cover' can practically help preserve ecosystems, conserve endangered species, and prevent biodiversity loss
5. Active 'afforestation' must be carried only in objectively classified 'degraded' land. Scrub forests cannot for example be classified as degraded land. Nor can naturally occurring grassland within protected areas or naturally low-density forests be 'reforested' or 'afforested' simply to boost up carbon stocks

These and other concerns suggest that REDD plus proposals must be subjected to greater scrutiny as to their actual environmental and social benefits. It would not be in the national interest to reduce the quality of India's forests, the biodiversity they support, the communities they shelter and the ecosystem services that they provide. With the experience of the dubious climate and environmental benefits of many CDM projects in India, another proposal which is predicated on the prospect of 'easy money' needs to be studied with greater care than it appears the GoI has given it so far.

## Climate Calendar: September - December 2009

16 -17 September	:	MEF meets in Washington DC, USA
20 - 26 September	:	UN Climate Week, New York, USA
22 September	:	High-level event on Climate Change, UN General Assembly
24 - 25 September	:	G20, Pittsburgh, USA
24 - 25 September	:	Green Jobs Fair, New Delhi, India
28 September - 9 October	:	UNFCCC meeting, Bangkok, Thailand
14 - 16 October	:	Clean Tech Forum, New Delhi, India
19 - 20 October	:	South Asia Regional Conference, New Delhi, India
23 - 24 October	:	Technology & Development Conference, New Delhi, India
2 - 6 November	:	UNFCCC meeting, Barcelona, Spain
7-19 December	:	COP15 UN climate change conference, Copenhagen



## About the Centre for Social Markets (CSM):

CSM is an independent non-profit organization dedicated to making markets work for the triple bottom line - people, planet and profit. Through offices in India and the United Kingdom, and an international network of partners and associates, CSM promotes responsible entrepreneurship, ethics and accountability worldwide. Founded in 2000 by Indian social entrepreneur, Malini Mehra, CSM is a values-based organisation committed to sustainable development and human rights.

From 2007 onwards, CSM has focused its attention on three major programme areas where it will seek to bring challenge and leadership:

- (1) Climate Change - lead a major public engagement initiative - 'Climate Challenge India' - to promote a pro-active domestic response to climate change in India;
- (2) India as a Global Player - examine India's emergence as a player on the global stage with particular reference to sustainability and human rights issues; and
- (3) Corporate Responsibility - focus on core research, education and policy dialogue on issues such as diversity and climate change as India Inc. goes global.

