

India Climate Watch

Spotlight on India and the climate negotiations



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From the Editor's desk

June marks the midway point to COP15 at Copenhagen in December. The month was busy on the climate calendar with the UNFCCC negotiations at Bonn2, the Major Economies Forum (MEF) hosted by Mexico, and the passage through the US House of Representatives of the Waxman-Markey bill. The bill divided opinion but was a landmark in being the first time the US has agreed to control its carbon emissions. US NGOs hailed victory but what looked like big stuff in Washington DC seemed a small step when viewed from far away. In Geneva, at the Global Humanitarian Forum, the President of the Pacific island nation of Kiribati, spoke with calm dignity of the resettlement plans his nation was undertaking as they lost their island home to climate induced sea-level rise. To those countries on the frontline of climate extinction such as his, the tactics being followed by the major and the emerging powers in Bonn and Mexico must seem bloodless and cynical. The voices of vulnerable nations such as his many of them united under the AOSIS (Alliance of Small Island States) umbrella barely get a look in these days. But at Geneva their call was unequivocal their survival was contingent on all nations reducing their emissions without delay no-one had a license to pollute anymore. A clear challenge to the ideologues of G77/China and Annex 1 parties if ever there was one. Was anyone listening?

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Bonn 2 - Negotiating Text Appears

The second meeting of the UNFCCC negotiations on climate was held in Bonn from 1-12 June. Called 'Bonn2' - a 'Bonn3' will be coming up in August - the highlight of the event was the appearance of negotiating texts from a number of countries and news from the US that the Waxman-Markey bill - the country's first emissions control legislation - was likely to be passed by the House of Representatives. While these may have been the highlights for many - finally there was text on the table (which grew four-fold over the course of the negotiations) and the US Congress appeared to be coming on board - Bonn2 was marked more by low-lights than highlights. As CSM's man in Bonn' reports back, there was a deep sense of despondency that talks were not on track to deliver the progress we hoped for at COP15 in December.

An air of gloom

The atmosphere on the first day was pessimistic. Catching parts of passing conversations, one could hear the pessimism. Asked how they felt about the process and where it stood, most delegates expressed pessimism. A few allowed room for pleasant surprises. Is this what one might call allowing a little cautious optimism?

At the opening of the plenary of the Ad-hoc Working Group on Long-term Commitment to Action (AWG-LCA), the Chair requested all parties to use the draft text that he had crafted as a starting point to arrive at a negotiating text. His language reminded the parties of the need for expediency also. Parties generally made statements agreeing to do so.

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From the Editor's desk

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While there was a great deal of disappointment in the air this June, a surprise move by Gordon Brown at the end of the month brought some cheer. On 26th June, the British premier announced his call for a \$100 billion per annum by 2020 international finance package of new public-private finance to help developing countries adapt to climate change, preserve forests and build low carbon economies. The move was designed to bring new impetus into negotiations that were becoming cagey and cynical by putting a high number out there that could raise the bar. The UK aim was to chart a high-ambition path now rather than wait when it might be too late. This is as it should be more nations need to put their cards on the table now and shift the ambition level up several gears.

While the number was not as high as many wished, the Brown announcement did provide a shot in the arm on stalled finance discussions. The Pan-African Parliamentary Network on Climate Change (PAPNCC) came forward to welcome the move as did many others. In India there was an odd silence. The press which had faithfully reported the returning Indian delegation's disappointment with Bonn2 and the Mexico MEF meeting were caught napping on the Brown announcement. Strange. This was one of the most constructive moves on the climate front all month and yet it was barely picked up. Perhaps because the Government itself had little to say on the subject. There was scant comment other than a press report quoting a senior negotiator saying, "It's just a drop, but at least somebody has said something at last". Compared to the trillions spent in bailing out failed banks, it might well be a drop in the bucket. But negativity will not win the day. Being positive might be hard, but it's going to be essential for the next six months. Only then will we be able to defeat the self-fulfilling prophecy that failure at COP15 is inevitable. There is still everything to play for.

Bonn 2 - Negotiating Text Appears

(continued from Page 1)

There was much apprehension over the stances and developments in two countries: the USA and Japan. The US delegation held their briefing for international NGOs. The reception accorded to the delegation was less enthusiastic than at Bonn-1 when they had freshly arrived. In the interim, the Waxman-Markey Bill had been discussed at considerable length in public and the version that emerged disappointed the advocates including India - of deeper cuts from the US. It did not help advance the Bonn-2 process. This may have contributed to the more muted response to the US from the NGO community and many developing countries.

It's about the numbers

Japan's announcement of its emissions-reduction commitment created much apprehensive waiting. When it came, it disappointed but did not surprise; but protest was at the derisory figure suggested (see table below) was immediately and vociferously expressed. Russia's equally paltry target when it was announced met with similar howls of protest.

The Indian delegation, rightly, expressed its disappointment at both announcements. Much of the focus of Bonn2 was on interim targets by Annex 1 (industrialized countries) these targets, and the different baseline year suggested by some Annex 1 countries became the main news item of the sessions. We finally have figures for how countries are lining up on stated emissions reduction targets by 2020. The tally so far of proposed reductions looks like the following (analysis by Climate Action Network CAN):

Country/Group	Announced Target	Baseline	What it means over 1990
EU	20%	1990	20%
Scotland	43%	1990	43%
Russia	10%	not mentioned	?
U.S.	20%	2005	~4%
Japan	15%	2005	~8%
Australia	25%	2005	14%
CA		2006	

The overall average by Annex1 countries comes to 5-10% over 1990 levels by 2020.

Bonn2 showed what a long way we are on agreement on many points in the negotiations. Anxiety and urgency are mounting and new tactics will have to be tried if we are not to drown in the despondency that was apparent at Bonn.



The GoI Delegation - In Their Own Words

In previous issues of ICW we have pointed to the need for greater transparency and engagement from Government of India (GoI) officials at the climate negotiations. Someone appears to be listening because at Bonn3 there was greater engagement from the GoI delegation. A meeting with Indian NGOs was even organized thanks to the intervention of networks such as CANSA (Climate Action Network-South Asia). An Oxfam-initiated 'Adopt a Negotiator' programme also saw Indian youth leaders IYCN follow and report on the proceedings. We welcome these and related moves and look forward to seeing more of them in the coming weeks and months. With greater give-and-take between the GoI delegation and external voices we are more likely to see ideas emerge that can break the mold and help break the climate impasse.

Here we present the views of three of the key figures in the GoI delegation in their own words compiled from a range of meetings over the two weeks at Bonn2. They are illuminating and go beyond the often grand-standing speeches and interventions made at the formal negotiations:



Shyam Saran, Prime Minister's Special Envoy on Climate Change.

On LCA text: Document is ready for 3rd phase. For forward movement adherence to UNFCCC and BAP is necessary. The objective is not a new climate treaty but to enhance Kyoto Protocol. We are not negotiating a new protocol. Kyoto Protocol will continue post-2012 also; current negotiations aim at emission targets for 2nd commitment period. But 1st commitment period's commitments and targets have not been met yet. Thus, key objectives of 2nd commitment period have not been met. 1990 as a baseline is non-negotiable. By August 2009 this must be properly recognized and adhered to. Action on

climate change is key priority for Government of India. The Mission documents will be considered by PM's Climate Change Council. The aim is to significantly enhance sustainable development.

On how much India insists on from developed countries: 40% is the number one priority based on IPCC report, and a 'reasonable target' by 2020. In 2nd commitment period, there must be compensation for shortfall of 1st commitment phase. [Reiterated National Action Plan on Climate Change (NAPCC) and commitment to significant deviation from BAU if finances are available.]

On (a) elaboration of NAPCC put up for public debate; (b) integration of NAPCC and 8-missions into COP process; (c) outside verification of NAPCC: National missions are under scrutiny of PM's Council on Climate Change. Public input has been obtained from scientists, academics, and NGOs. These are national actions, not international obligations. All actions will be in the public domain. National Communications will also be used. However, there will be no verification by extra-sovereign authority.

On impact of the 8 missions on emissions: Target is not uniform across missions. Sustainability is not about emissions alone. The approach is broader than emission control.

On (a) how much India needs, (b) whether India will go beyond NAPCC, and (c) when India's emissions will peak: (a) We cannot give an exact figure, but estimates vary between 0.5 -1% of developed country GDPs. (b) NAPCC does not posit auditing, support, etc. We do it in national interest. We will do more if support is available. (c) Who knows?

On what India wants changed in the IPR regime: The context is extraordinary. Rapid and extensive diffusion of technology is needed. Capacity building is also needed on a large scale. Apply these to those technologies. Alternative global mechanisms can be devised by which innovators are paid. International R&D effort will be needed. None of these can be left solely to the competitive markets.

On (a) 15-30% deviation from Business as Usual (BAU), and (b) 30GW of solar by 2020: (a) Who determines the baseline as BAU. Will deviation be supported by technology and finance? We are committed to NAMAs. (b) We are exploring many alternatives.

On whether targets and deviation from BAU be quantified if there is agreement at COP15: This will be developed based on the funds available. Specifics need to be worked out.



On how India can push the process forward with leadership considering that it has considerable ability to do so: Collaborative platforms will contribute over and beyond UNFCCC. No one country can alone make things happen. It has to be a collaborative effort. Finger-pointing is no longer viable. The blame game is not going to take us forward. We are striving to create such collaborative platforms.

On REDD, India supported afforestation @ Bali but deforestation rates are higher than plantation rates: There is no problem of tropical deforestation in India. We have plans to extend our 23% forest cover to 32%.

On India's position on China's and Brazil's opposition to REDD financing, reduction of C price by up to 75%: India is not fixated on CDM. On forestry use, we will examine proposals based on merit. Not everything is linked to CDM. CDM credit is welcome but not obsessed with it.

On (a) what India's back-up plan is if COP15 does not meet India's standards on technology transfer and financing, (b) India's views on the registry, and (c) legal form of LCA outcomes that India desires: (a) We are not involved in making a new treaty. Kyoto Protocol is not ending. Every country has signed on to UNFCCC and current negotiation is for enhancement because climate change is more severe than what we had originally thought. We focus on succeeding. A lot of effort is underway towards that. We are optimistic. (b) Developing countries are already committed to sustainable development path. Mitigation action needs technology and finance. The Registry works well for this. MRV mechanism provides accountability. The problem is some countries went to go beyond that and want to scrutinize entire economic policy and strategy. This violates sovereignty. We are putting information out voluntarily and answerable to Parliament. National Communications are an agreed-upon UNFCCC instrument. (c) Discussion is ongoing and it all depends on the outcome of the current process.

On similarities between WTO & CC negotiations... divide and rule... India's role in UNFCCC process compared to role in WTO; the measure of success; and whether India walk out if there is failure: We are collaborating with developing countries in several leadership roles where called upon. We are also bridging gaps with others. At Copenhagen, an outcome that is comprehensive (covering all four pillars), equitable (manner in which the burden of meeting targets), and balanced (no one pillar is more important than any others) is what we seek.

On India's strategy on deletion parts from LCA text: We don't reject World Bank, market, bilateral etc. financing. We want financing for CC to be under UNFCCC oversight and not as donor-driven funds. They must be driven by developing countries' needs. Bilateral aid is separate from UNFCCC funding. UNFCCC funding should be predictable, stable, and sufficient. Countries cannot work with fluctuating C markets.

On India's insistence on including nuclear power under CDM: We have produced safe, economic nuclear power for some time now. The infrastructure, HR base, and technologies exist. Yes, nuclear power is part of this strategy.

On (external) recognition of India's domestic leadership and whether India will play similar leadership role in building consensus for COP15: We are already playing a role. We are doing a lot of work. NAPCC is a result of long-time sustainable action. This also aims at upgrading and intensifying existing sustainable practices. India is the first country to have a Ministry of Environment.

On what India can do to build confidence: We all need to work to influence political leadership's opinions and perceptions. India's NGOs have done a commendable job on this front. Civil society should speak out for equity.

On whether India would be open to decarbonization under Zero Carbon Action Plan (ZCAP): Decarbonization is only one thing. There are wider problems. We need to devise support mechanisms for actions far beyond the NAPCC.

On opinion on MEF en route to CoP15 and ability of India to assure reduction of targets: MEF is not a negotiating forum. It is only to build trust, confidence, and to create a platform for collaboration. These can be brought to the CoP process if there is interest and support.

On why India is looking at 8-year commitment period: We have not committed to this 8-year period. It is still under discussion and will have to be negotiated. Nor have fixed time periods been discussed for financials.



Dr Prodipto Ghosh, TERI, Member of PM's Council on Climate Change

On Financing: We are looking at financing mechanisms not as aid but as financing. Aid has donors and recipients, and it is donor-driven. The donors decide how much money is given and the terms and conditions under which it is given. They also pick the recipients and administer the money. The donors have expectations but not responsibilities. We want to have responsibilities [for all parties] under § 4.3 and §4.7 (on agreed full incremental costs) of the Convention.

Financing involves discharge of responsibility it must be responsibility-based and not on noblesse oblige. This also implies that these have to be assessed based on common but differentiated responsibilities. The level of funding must be based on developing countries agreeing on what needs to be done and the cost. We will work on the operationalization of the financing.

The adaptation fund still has to evolve into a robust and equitable structure. In any case, domestic fund-raising is a sovereign issue, and has to be without prejudice to international treaty obligations. We are apprehensive that [developed countries] may pledge but not follow through. Compliance arrangements need to be made, for situations where financing does not come through.

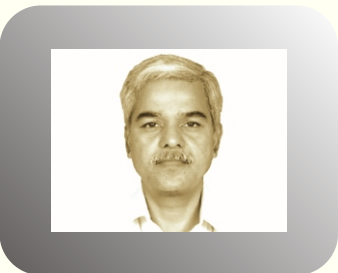
On India's stance on the Norwegian proposal: We would not like to get involved in Annex I countries' internal issues. It is a question of their sovereignty. We believe likewise that assessment of NAMAs of developing countries is also a sovereignty issue.

On the scale and sources of finances needed to reach required level for a treaty [at COP15]: We adhere to the concept of common but differentiated responsibilities and capabilities. We will come up with operationalizations. E.g.: aggregate reductions must be based on differentiated and (emphasis original) historical responsibilities. 79% reduction is required of developed countries, but 40% may be possible. Thus, 39% responsibility has to be discharged as historical responsibility.

On India's views on the Norwegian and Mexican proposals: There must be assessed contributions to facilitate NAMAs. How do we do these? There are issues of sovereignty involved. Aggregate must be consistent with historical responsibility within and outside country borders.

On compliance and adaptation: Adaptation must have higher priority for funding. If not, the whole regime collapses. If any countries renege, the regime will become adversarial. This is not a good situation.

"India's position seems to be resembling the American position on some issues"... Comment: Any resemblance of India's position with that of the U.S.A. is purely coincidental.



R.R. Rashmi, Joint Secretary, Ministry of Environment & Forests

On the general feeling about AWG-LCA's direction: I cannot predict how the text will emerge. It will expand. No one is clear on outcomes. The question is, will there be movement on Annex I countries' commitments? Unless they are keen and serious about Kyoto Protocol, and action on this happens, we cannot say. It is difficult to see how conclusion can occur. Annex I countries need to put down some numbers. There is no clarity on (a) Annex I countries' commitment to reduction, and (b) technological and financial support. There are ideas [circulating] but agreement is needed.

On discussions on adaptation resources etc. with differentiation within G77+China: There is no differentiation within the Convention. Same vulnerable areas identified and agreed position. Annex I countries must agree, via the Convention, to fund adaptation.

Views on Mexican (strong government role) and Norwegian (money-centric) finance proposals; Indian submission on this? We have outlined our position to G77+China. No party has agreed to finance. No one has talked about raising it. Who will set up the fund? Who will contribute to it? Who will administer or manage it? These are all questions yet to be answered.



On India's stand on NAMA's introduced in LCA text (unilateral, credited, etc.): We don't distinguish among NAMA's. No NAMA occurs without technology. All are reportable.

On whether the structure of the adaptation fund is favored: Yes. It is agreeable, though not ideal.

On progress on climate change action by India: We are doing fairly well on volume of emission reduction. A \$ 16b development process is on. More technology is needed for adaptation and mitigation in power and water. CDM is a vehicle for technology transfer. Much work is underway; we can do a lot more with greater technology transfer. Technology and finance are critical for all countries. These can flow bilaterally and through the market. Super-critical technology will have to come from bilateral cooperation because there is the question of who pays for incremental costs.

On whether India can show domestic mitigation and adaptation actions and seek financing for more: Have Annex I countries done this? NACP's of all countries have given sustainable plans. Energy efficiency has to improve.

On LDCs not being comfortable with MEF being able to help, what India will do at MEF, and how India will be a leader within South Asia: This is a USA-led process. Participation is by invitation only. I don't know what it can achieve; it is too early to tell. It's a process for collaboration on achievement, not a negotiation. Therefore, it should not be worrisome for G77+China. India is willing to work with partners. MEA will have to address those issues. But we are holding a workshop on CDM for SAARC in October. Also, SAARC has evolved a regional action plan last June [2008].

Home Front - Recent Developments

Solar Mission Details Emerge

More details emerged about the ambitious solar mission, which was leaked to the media last month and briefly analysed in our previous issue. The mission plan envisions a 4000 times growth in solar power over the next 11 years or a 39,990% increase over the current installed capacity.

The plan assumes this growth will largely come from mandating solar PV installations in all government buildings, mandating 5% capacity of new coal-fired power plants to come from solar PV, mandated use of vacant land in existing plants, establishing utility-scale solar thermal plants and establishing feed-in tariffs.

While the ambition of the plan is to be welcomed, the plan is silent on how such a big switch from consumers will happen over such a short period. It is silent on key issues such as India's lack of expertise in solar thermal, on the subsidies given to fossil fuels, and on carbon tax - the most effective and simple mechanism to put a price on carbon and thereby encourage people to switch to renewable energy.

The solar mission plan makes assumptions about reduced cost of solar power generation and grid-power parity in the short-term that are not founded on key factors such as historical price reduction, future projections or advances in silicon-based photovoltaics. It is also silent on concentrated photovoltaics - the one solar technology where one could see cost reductions in the short-term. CSM will be presenting an in-depth analysis of the mission document in the coming days.

MoEF and MNRE Get New Heads

As the new Congress government was sworn in this month, both Ministry of Environment and Forests (MoEF) and Ministry of New and Renewable Energy (MNRE) saw changes at the helm.

Congress stalwart, Jairam Ramesh, was appointed the new head of the Ministry of Environment and Forests and Farooq Abdullah, former Chief Minister of Jammu & Kashmir was given charge of the Ministry of New and Renewable Energy.

Abdullah is a newcomer to the cabinet post but the appointment of Jairam Ramesh has raised some eyebrows. Ramesh previously held the post of Minister of State for Commerce & Industry where he was responsible for making a big push for expansion of the nation's power infrastructure to meet its five year-plan commitments.

His term saw removal of bottlenecks and red tape leading to large scale clearances of several big power projects including the UMPPs - Ultra Mega Power Plants - coal-fired behemoths of power production with capacities in the range of 4000 MW. Now in his new guise as the chief environmental administrator in the country it will be interesting to watch which way he moves.



Glacial Melting in Himalayas Began Around Industrial Revolution

A new study by researchers from the Wadia Institute of Himalayan Geology in Dehradun has put a date to the retreat of India's glaciers to around the 1750s. This roughly equates with the emergence of the industrial revolution in Europe and presents a challenge existing opinion.

The new research contradicts a previous estimate by the Geological Survey of India which claimed that the Himalayan glaciers had shown stages of advance and retreat for the past 20,000 years and hence their melting could not be attributed to contemporary climate change.

According to Down To Earth magazine, researchers of the Wadia Institute study traced the advance and recession of the Chorabari glacier in Uttarakhand with the help of the yellow lichens that develop on the surface of exposed boulders after glaciers retreat. Studying their growth rate, the date of recession of the glacier from that site can be found by measuring diameter of the largest lichen, said the study published in Current Science, India's leading peer-reviewed scientific journal.

Report Calls for Action to Reduce Climate Change Impacts

A new report by the World Bank entitled *Climate Change Impacts in Drought-and Flood-Affected Areas: Case Studies in India* warned the nation to prepare for a substantial shift in the pattern of rainfall towards the flood-prone coastal regions. The report suggested that India can further its climate resilience through a combination of measures and right incentives aimed at multiple levels of government.

The first of its kind in South Asia, the report looks at options to tackle the problem of adaptation to climate change in selected climate hotspots. Focusing on two drought-prone regions of Andhra Pradesh and Maharashtra and a flood prone region in Orissa, the study develops a new integrated modeling approach to assessing current and future climate risks.

Almost twenty percent of India's GDP is attributable to agriculture and about 57% of its population employed in agriculture. Climate change, which will result in increasing severity and frequency of extreme events, such as droughts, floods and cyclones, which affect the poor most, and jeopardize agricultural production and livelihoods of rural communities, will therefore have grave food security and other social implications.

It is to be noted that India does not have a formal policy on adaptation for climate change. The Nation Action Plan on Climate Change (NAPCC) focuses largely on mitigation and research. In ongoing international negotiations under UNFCCC, India is pursuing finance for mitigation and technology transfer but not for adaptation. The government argues that it is already doing enough on adaptation and has sufficient funds – a position often contradicted by its persistent calls for increased finance and attention to adaptation at other climate fora.

While a focus on mitigation is essential for the country as its emissions trajectory rises, adaptation is critical to enable the country and its people to adjust to climate change. Perhaps the devastation wrought by the recent cyclone Aila, which arrived within two days of the World Bank report's release, will act a wake-up call on India's policymakers.

Latest in Climate Science

Global Warming Doubles in Advanced Modeling

MIT has developed what's being labeled as the most advanced and comprehensive climate modeling system yet. For the first time detailed computer simulation of global economic activity and climate processes have been combined in single model.

The new projections published in a peer-reviewed journal *Climate* indicate a median probability of surface warming of 5.2 C by 2100, with a 90% probability range of 3.5 to 7.4 degrees. This is more than double the median projected increase in a 2003 study of just 2.4 degrees.

Several factors led to this drastic difference such as improved economic modeling that reveals less chance of future low emissions than had been projected in the earlier scenarios. This and a variety of other changes led to a doubling of warming in the BAU scenario. It is interesting to note however that there is less change from previous work in the projected outcomes if strong policies are put in place now to drastically curb greenhouse gas emissions.



Without action the consequences are grim. Study co-author Ronald Prinn says, "there is significantly more risk than we previously estimated. This increases the urgency for significant policy action. [...] There's no way the world can or should take these risks."

Antarctic Ice Shelf Collapses

An Antarctic ice shelf about the size of New York City that had been hanging by a thin ice-bridge for some time finally broke into icebergs after the collapse of the bridge in late-April. This was revealed by glaciologists at the University of Muenster in Germany after studying European Space Agency satellite images of the shelf.

Only nine other ice shelves have collapsed in the last 50 years, sometimes abruptly like the Larsen A shelf in 1995 and the Larsen B shelf in 2002. The latter, a 3250 km² shelf of 220m thick ice disintegrated and disappeared dramatically entirely in a single season. Scientists often cite this as a classic example of abrupt climate change.

The US National Research Council defines abrupt climate change as occurring when a climate system is forced to transition to a new state at a rate which is more rapid than the natural rate.

It should be noted that all IPCC projections currently guiding climate change negotiations, are based on a linear rate of change in the climate system. The IPCC does, however, acknowledge and warns (in its synthesis report) of the possibility of abrupt climate change that may render most of its projections exceedingly conservative and outdated.

Storms Have Greater Impact Than Previously Thought

New understanding has emerged on the affects of tropical storms on the carbon sinking properties of forests. A study covering one hundred and fifty years of tropical storm landfalls in the United States, reports that hurricanes and tropical storms kill or damage millions of trees and as vegetation decomposes, it returns more than 90 million metric tons of CO₂ to the atmosphere annually.

A number of earlier studies have shown that global warming will create more frequent and intense tropical storms. The researchers, of the report published by University of Windsor in Canada, conclude that their study is an important baseline for evaluating how potential future changes in hurricane frequency and intensity will impact forest tree mortality and carbon balance.

Sea to Rise More in Northeast U.S and Canada

Research led by the US National Center for Atmospheric Research (NCAR), shows that melting of the Greenland ice sheet may drive more water than previously thought towards the already threatened coastlines of New York, Boston, Halifax, and other cities in the northeastern United States and Canada.

The study finds that the melting of Greenland's ice at moderate to high rates would cause sea levels off the northeast coast of North America to rise by up to 50 centimeters more than in other coastal regions. The research builds on recent reports that have found that sea level rise associated with global warming could adversely affect North America, and its findings suggest that the situation is more threatening than previously believed.

Arctic Thaw Poses Huge Threat

A billion tonnes of greenhouse gases per annum will eventually be released accelerating climate change if melting permafrost in the Arctic is not curbed. This is the conclusion of a University of Florida-led team that measured how much carbon was escaping from the soil in the Arctic and how much was being absorbed by vegetation. The study revealed a net loss of CO₂.

The fear is that as the land thaws, organic matter will be converted into the potent greenhouse gas, methane, which will seep into the atmosphere, accelerating the greenhouse effect. This in turn will stoke warming and cause more permafrost to thaw, which in turn will push up temperatures, and so on.

Once permafrost begins to thaw on such a large scale, scientists say, it would be self-reinforcing and could be almost impossible to brake. It is important to note here that the IPCC data does not consider these emissions in its projections of global warming.



What's at Stake

Tales of Fear and Destruction

Cyclone Aila that battered India and Bangladesh this month left tens of thousands of people homeless with only a fraction of them having access to food and drinking water. Scores of others were killed.

Nearly 300 people ended up losing their lives and there was huge damage to embankments, roads and houses. A massive relief effort has been launched for the four million people affected by the cyclone. An estimated 125,000 affected people are still living in the open, as large areas remain flooded with sea water.

We bring you three stories of fear and destruction caused by the cyclone, a grim reminder of what lies ahead for millions of Indians, and our neighbours in South Asia, who are vulnerable to climate change.

Rushing to Flee Landslides

The Telegraph reports that although the monsoon has not yet set in, every time the skies darken, Puran Rai rushes with his family to a rented house 3 km away. The 39-year-old Puran is not alone. After Cyclone Aila struck last month, at least 40 families have refused to take any chances.

Fear of killer landslides has already forced eight families to rent apartments at Alubari and Jorebunglow, considered a safe zone. The story is the same at Sunar Busty across the hill. Nine of the 34 families have already shifted base since May 26, the day the cyclone triggered 40 landslides in the hills, killing 20 people.

No one was killed in our village and only one house was damaged. That was perhaps the reason why little

attention has been given to our village. However, the entire village can be wiped off any day if there is a torrential rain. The area is sinking and landslides have been an annual feature since 2000, said Puran.

The villagers come back every morning and on the dry days to look after their fields. Rai Busty and Sunar Busty are located on slopes, as a result of which there are no protection walls around the villages. Besides, the soil is also loose. An inspection of the villages revealed that some of the areas had sunk below the normal level of land and houses have developed cracks.

Students With No School to Go

Cyclone Aila left more than 700 students of Pankhabari High School without a school to go to. They do not know when their classes will resume, reported The Telegraph, India. Classes had to be suspended when the roof of the two-storied building was swept away in the cyclone taking with it all documents and destroying twelve computers.

Repair of the building has already started but we do not know when it will finish. We are expecting the work to finish soon so that we can start classes at the earliest, said H.D. Chettri, the teacher in-charge of the school.

The school authorities have, however, started classes for the 150 students of Classes X and XII. Since they will sit for the board exams and we have to finish their syllabus in time, we have started their classes in the three rooms of our administrative building, said Chettri.

Other students have to wait till the repair is done. He also could not specify how long the repair would take. We cannot at this time say how much time the work will take. In the hills, the final exams are held in November and the winter vacation starts from December for at least two months.

Chimney: A Village Torn Apart

Never before had the residents of Chimney ever witnessed what Mother Nature had to present its inhabitants when cyclone Aila hit the place. A historical village in Kurseong district of Darjeeling, Chimney, once considered by the British as the perfect resting place, is today in a state of anguish and disrepair. People who had been primarily surviving on farming and cattle are now left with just hope and prayer.





What's at Stake

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Ram Syangden, a farmer who had been sustaining his family of five lamented: I had been looking after my family by means of dairy production but now with the death of five cows among seven, now I am not able to see what lies ahead.

Chimney, a place mainly comprising old wooden houses and few concrete buildings, was badly hit by the strong winds and rain. Rudhra Tamang, an ex-army person had a typical story to share: I was in my house praying hard for the intense rain to stop when I heard a deafening sound outside. I rushed towards the window to see the tin roof of the neighbor's house being blown away and it flew towards the wooden electric post cutting down the wires. I tried to call for help in order to get the people of that house to safety but could not be heard due to the noise of the storm.

Many people who met a similar fate are now climate refugees in Chimney Primary School. The Block Development Office has issued plastic sheets to them to cover areas where there is high possibility of landslide but the people seem discontented and helpless as this alone will not help. Binita, said this aid provided to us is not enough as you can see. Our entire roof has been blown off which makes the situation much more vulnerable if it rains again."

Source: Posted with permission from Save the Hills blog and its people who have been courageously bringing attention to landslides in the sub-Himalayan region largely resulting from unplanned urban development.

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

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