

# India Climate Watch

Spotlight on India and the climate negotiations



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## From the Editor's desk

We are now well into negotiation mode on climate change with governments releasing their public positions at the UN Climate Talks - but keeping details close to their chest. This much was evident from the Government of India's position. In March, the Prime Minister's Special Envoy on Climate Change released a lengthy Q&A document (included in full in ICW Issue 1) setting out India's views on the climate negotiations. With the public position aired, lips on the GoI delegation and Indian ministries are now sealed. This is not just diplomatic discretion, it is government policy. The Cabinet Secretary has issued a letter to all senior Indian officials across the country forbidding them from making any pronouncements on climate change. What now amounts to a gag-rule on climate change for Indian government officials is now in place.

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## Bonn 1 - The First Round Begins...

There are now five negotiating rounds until governments come together at COP15 in Copenhagen in December 2009 to agree a global way forward on climate change. Round 1 began in Bonn on 29th March and lasted till 8 April. Held under the aegis of the UN Framework Convention on Climate Change (UNFCCC), the Bonn Climate Change Talks consisted formally of discussion on the seventh session of the AWG-KP and fifth session of the AWG-LCA. In plain English, the first refers to the Ad Hoc Working Group on the Kyoto Protocol, and the second to the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention. The first deals with the mandatory commitments of industrialized nations (Annex I Parties) to reduce their greenhouse gas emissions. The second deals with the different components of the so-called Bali Action Plan agreed at COP13 (Bali) engaging all parties. The UN Secretariat Chief, Yvo de Boer, said that 'solid progress' had been made on key issues such as technology transfer and agreement to fund adaptation in poor countries, however, the numbers for developed country emissions reductions were far from what was needed. NGOs were far more critical of what they saw as a lackluster session with little progress. CSM's Chandra Shekhar Balachandran was at Bonn observing the delegations – here is his report:

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## From the Editor's desk

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Perhaps this accounts for the reticence our inquiries have received from members of the Gol delegation in Bonn and officials in Delhi. Any deviation from the official line must be avoided. But a gag-rule on the most important issue facing the nation is not only undemocratic, it is wrong. For a country that calls itself the largest democracy in the world, there must be free expression for all. If we are to get this huge challenge right, we must have free, fearless and well-informed public debate on climate change in India. Both on our domestic response as well as our role as a global player. Only then will we get the buy-in and public engagement needed to make the changes we need to. Public officials – paid for by the public purse – must be free to engage in this debate. Perhaps then we will have a policy that looks forward not backwards. A policy that actually meets the challenges that we can no longer avoid and shows the world that India can lead.

## Bonn 1 - The First Round Begins...

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### The climate is changing

I attended the Bonn meetings of the UNFCCC as an observer from CSM Bangalore. I was particularly interested in observing the inputs of the Indian delegation.

The stance of the G77 and China group of countries, together and separately, was pretty much what had been stated many times before. A good part of the reiteration of their positions had to do, inter alia, with the position of the United States. The G77/China view was that the North/South impasse continues. Among CSM's concerns is how to break the impasse by showing bold leadership on both sides. Of particular interest to us is the Indo-US dynamic. I attended the interactive session that the US delegation (led by Jonathan Pershing) had with international NGOs to share the US government's position and to hear what NGOs had to say.

Pershing opened by declaring that the US is back at the table and wants to come on board for COP15. He was candid enough to say that they are scrambling to get to speed and clarify their position since the new Administration took over in January. He noted that the domestic political situation for the new President is not favorable to push for what he (the President) wants. The gist of the position was that they are trying to make up for eight long years of obstructionism and inaction on the part of the US. They will certainly be party to the COP15 agreement, but ... Yes, there is a but ... They are concerned about the process underway. They did acknowledge that this is a tricky situation considering the US has been absent for eight years. They also acknowledged that their position is still evolving and their interactions at the Bonn meetings were to aid that evolution.

The US President has repeatedly stated that his administration is very willing to work with the global community. There is some evidence of this. During the talks, the Guardian newspaper reported that Secretary of State Hillary Rodham Clinton had officially issued a mea culpa on behalf of her country. For the first time in eight years, we have the US administration acknowledging the high degree of the country's responsibility for historic and present greenhouse emissions.

An interesting recent development has been the US EPA (Environmental Protection Agency) characterizing climate change as a public health issue. This could mobilize greater domestic support and provides an opening for discussions that hitherto have been virtually no-go areas in political Washington DC.



In other developments, Arlen Specter has switched sides to the Democratic party and it looks almost certain that Al Franken might well be seated in the Senate to represent Minnesota. Thus, it is almost certain that the Democrats will have the magic number of 60 in Senate to shield them from any filibusters. However, the political reality is that – and Jonathan Pershing said as much in the briefing – not all of the Democrats are with the President on the climate change platform. The EPA report might help mobilize some more support however.

Internationally, the sticking points remain the modalities, the finance and the kind of international cooperation that ‘developing’ countries are expecting the ‘developed’ countries to provide. For their part, the latter will expect greater commitments towards emissions reductions from the two giants – India and China. What I saw at Bonn is now rapidly changing with each day as the Obama Administration starts to engage with the process. The challenge now is for the developing states – individually and in groupings such as G77 and China, AOSIS, etc. – to seize this new climate and rapidly explore common ground. In so doing we must break the North/South impasse that has plagued climate politics and discourse for so long.

The reality is that India and the United States are much more in sync on the opportunities than they seem to realize. It may well be difficult to accept the rhetoric coming from the US at face value, however. At least two members of the Indian delegation at Bonn said to me, “Yes, [the Americans] are making all the right noises, but we need to see it matched by actions!”

Realpolitik will no doubt play a role. At an international meeting in Cancun, some decades ago, Indira Gandhi had said, “We are all, each, pro- his or her own country.” Each state must (and probably realizes) that it has to look out for its own interest. This will inevitably lead to accommodations and compromises. One does not need to be a Chanakya to know this. But I am hopeful that Copenhagen will produce a reasonable move forward with which we can all live. As someone once said, “Yes, we can!”

## More transparency from the GOI needed ...

In tracking the negotiations, one of our objectives is to get the Indian delegation to engage more with civil society. This remains a challenge. At Bonn, our reporter attempted to speak with members of the delegation several times and raise questions pertinent to the negotiations. Most simply refused. One person referred him to yet another member of the delegation who eventually obliged him by giving him some time. This is very much appreciated. It would be nice if the Indian delegation were to engage with observers from Indian and other NGOs more. Here is hoping that this will happen at Bonn 2.



## G20: No-show for climate

The G20 Summit, which saw the participation of Indian premier, Manmohan Singh, concluded in London in early-April. The Summit began with a threat from the French president that he would walk out if there were no concrete actions addressing the financial crisis. As in years past, the Summit attracted protests from an assortment of activists ranging from anti-capitalists to those concerned with the banking system, economic policy, war on terror and climate change. The London Summit saw heavy-handed policing which resulted in the death of a man causing widespread protests and calls for a public inquiry into crowd control methods used.

The Summit outcome, the Communiqué consisted of two primary outcomes – a \$1.1 trillion financial package for a range of programmes, and an agreement to better regulate global financial markets. Climate change was discussed in the side-lines but not as a headline issue. There was no agreement on this, no deal, no allotment in the trillion dollar stimulus package to fight climate change or resource depletion. The G20 deferred the issue to COP15. On climate change, the Communiqué merely said: “We reaffirm our commitment to address the threat of irreversible climate change, based on the principle of common but differentiated responsibilities, and to reach agreement at the UN Climate Change conference in Copenhagen in December 2009.”

The Guardian columnist, George Monbiot, wrote wryly "... the G20 leaders appear to have decided to deal with [environmental] problems only when they have to - in other words, when it's too late. They persuade themselves that getting the economy back to where it was - infinite growth on a finite planet - can somehow be reconciled with the pledge 'to address the threat of irreversible climate change.' Next time this magical thinking fails, there'll be no chance of a bail-out."

## Major Economies Forum, Washington DC

The Major Economies Forum (MEF) is a continuation by the Obama Administration of the Major Economies Meetings initiated by the previous Administration. It is a parallel and informal track to the formal climate negotiations taking place under the UNFCCC, and brings together 17 of the world's nations accounting for more than 2/3 of global greenhouse gas emissions (GHG). The MEF is supposed to provide space for more informal discussions away from the negotiating strictures of the UNFCCC COP15 process. India as a major GHG emitter (the world's fourth largest), is included in the MEF and was represented at the two-day meeting in Washington DC in May by Ajay Mathur, head of the Bureau of Energy Efficiency. In her opening speech, secretary of state Hillary Clinton said the United States "is ready to lead" and make up for lost time in the fight against climate change. A positive indicator – one of many - that have emerged from the new Administration – but one that was not accompanied by any specifics on either mid-term targets for the US or commitments to financing adaptation to climate change by poorer nations.



At Bonn 1 (as noted above), little progress was made on these two key issues: the carbon emissions mitigation targets to be adopted by Annex 1 (developed) countries, and how to raise finance to help poor countries adapt to climate change. The MEF failed to break that stalemate. Additional MEF meetings are expected leading up to a meeting of Heads of State at the G8 meeting on July 7 - 9th in L'Aquila, Italy. President Obama has also indicated that a preparatory meeting may be held at La Maddalena, Italy in September and perhaps in Mexico City at a time to be determined.

## Latest Climate Science

### Arctic Ecosystem Threatened

A new study suggests that extensive climate change is now affecting every form of life in the Arctic. The concentration of carbon dioxide in the atmosphere has reached a record high according to data released by the Norwegian Polar Institute. CO<sub>2</sub> concentration is now peaking at 397 ppm (parts per million) in the Arctic. "These are the highest figures collected in 50 million years," said Johan Strom, professor of atmospheric physics at the NPI.

In the past four years, air temperatures have increased, sea ice has declined sharply, surface waters in the Arctic Ocean have warmed and permafrost in some areas is rapidly thawing. In addition, new factors such as "Black Carbon" (soot), ozone and methane may now be contributing to global and arctic warming as much as carbon dioxide. "Black carbon and ozone in particular have a strong seasonal pattern that makes their impacts particularly important in the Arctic," says the report.

It also highlights reduction in summer sea ice two years ago as the most striking change in the Arctic in recent years. In 2007, 8 million sq.km of sea ice completely melted away in the Arctic – an event that shocked scientists worldwide. Some estimates have suggested that Arctic will be completely ice-free in less than five years. Climate scientist, Jim Hansen has said that survival of Arctic summer ice is essential as its absence is expected to trigger the melting of Greenland. In the absence of ice to reflect sunlight back in the atmosphere, the Arctic sea would absorb much more sunlight putting more pressure on neighboring Greenland. If Greenland completely melted away, scientific consensus is that sea level worldwide would rise 7m. According to the report, Greenland has continued to melt unabated. In 2007, the area experiencing melt was 60% greater than in 1998. Melting lasted 20 days longer than usual at sea level and 53 days longer at 2-3,000m heights.



## Studies on Regional Impacts

### IRELAND

'Climate Change in Ireland' - a new report by scientists at EPA and NUI Maynooth argue that extreme floods and heavy rain coupled with heat waves and droughts will be the norm by the middle of the century in Ireland. The summer months will experience longer heat waves mixed with downpours and flash floods, with the south and east drying out the fastest and at severe risk of drought. "By 2050, reductions in summer rainfall of between 20 and 28 per cent are projected for the southern and eastern coasts, increasing to between 30 and 40 per cent by 2080," the report says.

### TIBET

Research by a Chinese meteorologist, based on data from 38 weather stations at Tibet indicated that temperatures in Tibet have risen continuously over the past 48 years at a rate much higher than the national level. Tibet is one of the most sensitive areas to climate change, according to Du Jun, an expert with the Tibet Autonomous Regional Meteorological Bureau. The temperature change was a direct effect of global warming, he said, which triggered snow melting, glacial shrinking and rising water levels. Other phenomena included grassland degradation, more plant diseases and insect pests, a reduction in bio-diversity and higher risks of disasters. This is consistent with another study by the Institute of Atmospheric Environment of the Tibetan Plateau, which asserted that grassland in the cold highland region shrank by about 40 percent from 1988 to 2005 due to greenhouse effects, excessive grazing and human activities.

### SCOTLAND

A report released by the Scottish Government says Scotland must make plans to adapt to catastrophic impacts of future global warming. The report details the likely impact of climate change – including a temperature rise of up to 3.5 degrees in the summer, drier summers, almost 90% less snowfall, and sea level rise of almost two feet.

The country's climate change minister warned that Scotland must take innovative action to face the challenges ahead arguing that this was not simply a "green issue", but one that would have a real impact on the economy and on everyday lives.

The likely effects of climate change could range from blocked sewerage systems due to flooding, the need to reroute roads and move other infrastructure and the loss of mountain habitats. Average snowfall may decrease, perhaps by up to 90% depending on the location, and snowless winters may become normal in some parts 70 years from now.

## EPA Labels GHG Emissions Evil, Rapidly Reverses Bush's Policies

The US Environmental Protection Agency recently proposed an "endangerment finding" that carbon dioxide and five other greenhouse gases "threaten the public health and welfare of current and future generations." This is seen as a watershed in the long struggle to combat climate change. The EPA now calls climate change an enormous problem "in both magnitude and probability."



The Agency made the proposal under the United States' Clean Air Act, legislation originally enacted by the US Congress to control air pollution in 1970.

At present, the EPA's 'finding' does not include regulation but has the potential to affect the daily life of every American as it allows the Agency to regulate every "building, structure, facility or installation" in every sector - industry, transport, building or agriculture - that is responsible for carbon dioxide emissions.

Critics argue that the proposal will open up a Pandora's box of regulations and lead to litigation. The US is now, however, irrevocably committed to controlling its emission of greenhouse gases. The move has come about as a result of a change in the EPA's leadership. Earlier this year, President Obama put Lisa Jackson - veteran regulator with a history of climate activism - in charge of the Agency. As New Jersey's chief environmental regulator, Jackson is credited with helping lead the state on the issue of climate change and encouraging it to adopt a moratorium on building new coal plants. During her tenure she successfully fought to triple New Jersey's wind power capacity goal, as well as to double its goal for solar power. Over the last few months as head of the EPA, the Agency has been rapidly reversing the Bush Administration's anti-environment policies.

## Economic Models can Mislead

Former chief scientific advisor to the UK, Sir David King told BBC News that the government is being misled by economic assessments of the impact of climate change. He believes that such models are underestimating the true cost of tackling the problem and leading to poor investments by businesses and governments.

"Economic models such as those produced by Nick Stern are often based on steady growth," he said. "But they are not very good at predicting the impact of catastrophic events," he added. "It's likely that because of sea level rise and changes in rainfall patterns people will have to migrate ... That has the potential for massive conflict and massive geopolitical destabilisation and that can lead to a sudden downturn in the global economy".

Professor King argues that economic models are not fully able to account for such upheaval. This raises questions about how economists can put an accurate price on producing a tonne of carbon dioxide. He also said that these models do not properly cost the environmental impact of large infrastructure projects such as new coal-fired power plants and airports.



## What's at Stake - Human Impact

Climate change is expected to affect the poor the worst, according to the IPCC's Fourth Assessment Report. The economic impact of climate change on four south-east Asian nations will be 2.5 times more severe than the global average by 2100, if carbon emissions continue at their current level, according to a new Asian Development Bank study covering Indonesia, Philippines, Thailand and Vietnam.

In India, the poor are primarily engaged in agriculture. Changing monsoon patterns will likely wreck havoc with agricultural productivity. A reminder of what confronts us came through reports of farmers' suicides in India in news media internationally. According to the BBC, a report commissioned by the state government of Punjab estimated that there had been "close to 3000 suicides" among farmers and farm labourers in just two of Punjab's 20 districts in recent years. Farmer suicide is a contentious issue in India with numerous instances reported from various states. No reliable figures exist but official statistics say close to 200,000 farmers have committed suicide in India since 1997.

One of the reasons, among several others, is crop failure. Climate change will affect agriculture in several ways - by changing rainfall patterns, by increasing water scarcity and directly affecting crop growth with rising temperature. Each of these may lead to failure of crops. The UK's Independent newspaper recently reported that over 1500 farmers in the state of Chattisgarh had committed suicide after being driven to debt by crop failure. "The crop is so bad this year that we will not even be able to save any seeds. There were no rains at all," a farmer is quoted as saying.

Low food production also has implications for migration with people moving away from places where they don't have food to places where they do. Half of India's children are malnourished and this figure is expected to get worse.

In neighboring China, the Guardian reports on 150 million eco-refugees who will have to be moved due to displacement caused largely by water shortages exacerbated by over-irrigation and climate change. Huang Cuikun is a relocatee whose village ran out of water and was swallowed by desert.

Since 1950, the oasis where Huang lived, has shrunk by 288 sq km, while there has been a four-fold increase in the number of annual superdust storms. In Liangzhou district, 240 of the 291 springs have dried up. The Chinese government pays farmers to stop production and has relocated thousands of others, like Huang, out of the worst affected areas.

He was given a new home and land, but the desert winds still howl outside the door and his fields are bordered by sand dunes. Workers in the fields wear masks to protect their faces from the dust storms that whip in from the dunes. Huang likes his new home but it's just 2km or 3km from here to the desert, so he has taken every measure one can think of to prepare for the desert moving closer.

## Indian Parliamentary Survey on Climate Change

Early in May, CSM sent out a climate change survey to all election candidates from national and state level parties except independents. Over 3000 election contestants were asked to fill and mail back a questionnaire that aimed to assess their knowledge on the issue and how important it is to them.



When the responses arrived, most candidates fared poorly on the knowledge part but paradoxically, did well on the importance part. Unfortunately, CSM received only 18 responses and we decided not to release the results. The low response rate could be attributed partly to apathy towards the issue of climate change and in part to the fact that election results were out soon after the candidates received the survey leaving the losing candidates with no interest in responding.

That said, we can still draw a few conclusions from the responses we did receive.

The short questionnaire was composed of seven questions. Of this, four were based on facts - which either had a wrong answer and a right one while three others were on the importance allotted to this issue; their perception regarding the level of threat and on India's international stand.

Of the four factual questions, none of the respondents got all of them right. Most worryingly, 61% of respondents could not answer the simplest question on the cause of global warming with 22% saying it's due to an increase in solar output. One individual entered a comment that "pole shifting is the main cause." However, 44% did know that IPCC 4th Assessment was the landmark scientific report on climate change released globally in 2007.

The factual question that received the least number of correct responses was which Hollywood film with Al Gore raised awareness about climate change worldwide and won an Oscar. About half the respondents voted in favor of imaginary names like "A Lost Continent" and "Earth in Jeopardy."

On the positive side, 100% respondents consider the issue to be either their top priority or a very important issue. This is somewhat paradoxical because other responses clearly show that they do not grasp even the basic science of global warming.

When asked "climate change threatens people of your constituency in which way," the responses were mixed. Fall in agricultural productivity was the main concern of 50% of people. Extreme climatic events like floods and cyclones came at number two with 22% voting in its favour, just behind the 17% that voted for the concern of large inflow of migrants from neighboring states or countries. Sea level rise did not constitute a major threat surprisingly, revealing perhaps that most considered it unlikely.

On what should be India's position in international talks on climate change -- 61% responded that we should do everything possible to prevent runaway climate change regardless of action by others. 22% chose the second option -- take some action if developed countries take the lead. Only 2% chose the option: we have no responsibility, the developed countries must do all the reductions.

As stated earlier, the low rate of response means the results cannot be taken as representative of all election candidates. Therefore, CSM is now planning another survey with a new set of questions for all elected parliamentarians. The results should be interesting. Watch this space.



## Home Front - Elections & National Action Plan

The Indian elections were held in April/May with the surprising news of a large victory for the Congress Party becoming evident shortly after 17 May 2009. With the Congress re-elected, the results is being seen as a vote for continuity and stability. In the climate change sphere, this means that the new government will continue with the National Action Plan on Climate Change (NAPCC) released by PM Manmohan Singh in June 2007.

The NAPCC lists eight national missions running up until 2017 (see box). However, one year on we are yet to see any of promised detail on the majority of these eight missions, with the exception of the draft Solar Mission (see analysis below) which appears to have been judiciously leaked to the press and others. There also appears to be a release of the Sustainable Habitat mission in the making and moves appear afoot on the Energy Efficiency mission. On the former, according to the Times of India, the Sustainable Habitat mission of the NAPCC is reportedly out. The mission report, finalized by the urban development ministry and cleared by the GOI is said to have been presented at the Prime Minister's climate change council in May. This mission plans to standardize the norms for water harvesting and energy efficiency across the country, under a national standard. However, recognizing that national policies of this nature have little effect on state policy and implementation, the mission aims to leverage grants under the JNURM to get states on board this programme. While actual implementation of this mission may remain questionable, government sources inform the Times of India that they are looking at less coercive and inspection-based. The legal and regulatory measures will be consolidated under the National Sustainable Habitat Parameters, and the government plans to carry out a whole host of climate-friendly activities and programmes through the urban development ministry under the 11th five-year plan.

### NAPCC – Eight Missions

- Solar Mission
- Enhanced Energy Efficiency
- Sustainable Habitat
- Water Mission
- Sustaining the Himalayan ecosystem
- Green India
- Sustainable agriculture
- Strategic knowledge for climate change

It also seems that the government is planning move on its second mission: Enhanced Energy Efficiency through the reforms initiated in the power sector and various policy initiatives over the past few years, including the Energy Conservation Act (2001), the Electricity Act (2003), National Electricity Policy (2005), and the Integrated Energy Policy. This is in addition to the formation of the Ministry of New and Renewable Energy (MNRE), the Bureau of Energy Efficiency (BEE) and the Indian Renewable Energy Department Agency (IREDA).

As for the other missions, no details, leaked or actual are out as yet. But the new UPA-led coalition is expected to move on these issues this year given upcoming climate change talks in Copenhagen in December.

In the run-up to the Copenhagen negotiations, India submitted documents on adaptation, financial resources, REDD and development and transfer of technologies in late April and early May. These along with submissions from other countries will be discussed in Bonn and pre-Copenhagen meetings. Of particular note is the financial resources submission, which states that developed countries should contribute 0.5% of GDP to a UNFCCC support action fund to support mitigation, adaptation and technology transfer.



## India's Solar Energy Mission Analysed

### Claims and counter-claims

On 27 April 2009, a reputed national newspaper, The Hindu, released details of the Government's as yet unannounced National Solar Mission. CSM investigated claims made in the article as the targets mentioned would form a dramatic departure from the Govt. of India's stand on the issue including that in the NAPCC (National Action Plan on Climate Change).

### What's claimed

Solar generation capacity (in MW) to be  
20,000 by 2020  
100,000 by 2030  
200,000 by 2050

To put this perspective, the 2020 solar capacity projection exceeds even Greenpeace's Energy [R]evolution scenario for that year.

### Current capacities (MW)

The section above looks like science fiction when compared with India's current total installed capacity -- 5 MW.

Here is the breakdown (as of Jan 2009):

Total grid-tied SPV\* capacity = 2.12  
Capacity addition in 2008 = 0  
Total off-grid SPV capacity = 3  
Capacity addition in 2008 = 0.07  
Total CSP capacity = 0  
Capacity addition in 2008 = 0

So, the government is hoping to go from 5 MW in 2009 to 20,000 MW in a span of eleven years.

\* SPV: Silicon Photovoltaic

\*\* CSP: Concentrated Solar PowerSource: MNRE

### NAPCC Projection

How does this look compared with what the National Action Plan on Climate Change (2008) said on capacities under its Solar Mission ►

The NAPCC said its Solar Mission would aim for the following by 2017:

1000 MW of CSP 1000 MW annual \_production\_ capacity of SPV

The latter is a crucial. Production capacity does not equal generation capacity. About 95% of India's production of SPV is currently exported. It is incorrect to take credit for exports.

The mission draft is different in this respect as it refers to generation capacity.



## Ministry refutes figure

A high ranking official in the Ministry for New and Renewable Energy (MNRE), who declined to be named, said the draft has not been released and he has no knowledge of these targets. The news reporter from Hindu said her information comes from a very reliable source in the Prime Minister's Office. The impression given was that the PMO might be independently setting the targets.

## Is it possible?

It is certainly possible to achieve these targets. Many would like to see the government adopt a path to generate 100% of the nation's electricity from non-fossil fuel based sources by 2030. However, the size of the challenge must be understood and our actions must reflect that understanding. That does not seem to be the case here.

Large capacity additions in centralised solar power worldwide come mainly from concentrated solar power or solar thermal. India does not have expertise in CSP at all without a single plant in operation right now. Thankfully, this is changing with a couple of universities leading the charge.

However, with the first pilot plant two years away, it will take us decades to catch up with Europe and the US that have been researching and deploying these technologies since the early 1980s. What we probably need is create attractive incentives for companies abroad to set up plants in India.

As an aside, in an NGO email chain, someone suggested, quoting McKinsey, that "100 GW solar capacity by 2030 equate to about 80% of existing power capacity in 2005."

This is incorrect. 1 GW of a solar power plant is not equivalent to 1 GW of coal based thermal plant. This is due to the different capacity factors of these plants. While coal-based power plants work at around 90% capacity year round (75% in India), solar plants work at only 20-25% capacity.

So, 1 GW of solar is only equivalent to about 0.30 GW of a thermal power plant. In other words it would take over 3 GW of solar capacity to equate with 1 GW of coal.

## The key: how this could happen

What would make this ambitious plan turn to reality is the strategy that accompanies it. Few details about how the targets will be met are revealed in the article.

Solar power is extremely expensive right now and much outside the scope of even the city dweller. Unless the targets are accompanied by specific plans -- such as, long-term low-interest financing, and / or increase in fossil fuel prices through mechanisms like carbon tax or removal of subsidies -- it's hard to see where such growth will come from.

If not, the government seems to be resting its projection upon new technology that will dramatically lower the cost of solar power generation over the next two years, and be ready to be deployed on a massive scale soon thereafter. For the real facts, we will need to wait for the draft document expected to be released after the new government takes oath over next few months.



## 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.

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