Climate Change Community

Community Update
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In this Issue

FROM THE RESOURCE PERSON

Dear Members,

Greetings of the festive season and best wishes for a happy and prosperous, 2015!!

We are delighted to present the 59th Edition of the Community Update, today.

We thank you for your continued cooperation and support to this endeavor of knowledge sharing amongst all of you.

The Action Groups that are presently active are on **Easy (not so easy) Solutions to Address Climate Change and Developing tools and guidelines to assess the Carbon Neutrality and Sustainability of Educational Campuses (CNSEC).** Please send us your comments and suggestions for the above action groups. The work of both the above action groups are expected to conclude by the end of this month and therefore your inputs by 15th December, 2014 would be greatly appreciated. Your support and cooperation so far in ensuring the success of the above activities is gratefully acknowledged.

We look forward to hearing from you at the earliest.

Thanks & best regards,
Ramesh Kumar Jalan
Resource Person & Moderator
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DEVELOPMENT IN THE SECTOR

A village adapts to climate change in myriad ways

The article is available at: http://indiaclimatedialogue.net/2014/10/30/village-adapts-climate-change-myriad-ways/ .

A small village in Rajasthan sets an example by its model of environment governance which combines traditional and religious practices with scientific concepts to tackle problems brought on by climate change

A villager standing next to a board in Lapodiya that requests people not to pester the wild animals and notifies them of the ban on cutting trees and on any encroachment in the pasture

Lapodiya, a village of 200 households in Rajasthan, is a shining example of how environment governance at the grassroots level can save a village from natural disasters. Here, people have adopted innovative water conservation practices and a culture which they have improvised and perfected over three decades.

As a result, residents of this village around 80 km from state capital Jaipur have managed to protect themselves and adapt to drought instead of being forced to migrate like their neighbours.

They call it magic

The villagers rely on the innovative practice of creating 'Chauka Magic'. These are the square dykes that the villagers have dug in the fields that trap just enough water for soil productivity and allow excess water to flow through.

Chaukas form a series of interconnected water dyke with a gap left on one side, so that there is a sustained flow of water from one Chauka to another. Rows of Chaukas have been dug five feet apart. Utilizing each drop of rainwater, Chaukas replenish aquifers and also serve as drinking troughs for the village livestock.

With adequate water, different varieties of grasses have been sown along Chaukas, keeping in mind the different preferences of cows, buffaloes, goats, sheep and camels. Dhaman, Dob, Kanteeli, Roond, Jaaal, Kair, Desi Babool and a score of other varieties are grown.

Sheokaran, a villager, says one can find about 30 types of grass here. "The plants grown through seeds require much less water and protection. The forest department always promotes saplings, but nature has shown them a better way. Villagers have found seeds much more reliable. They don't need fencing either."

The residents have seen for themselves the results of water conservation. Adjoining villages suffered seriously from drought in 2003 and again in 2007. In both years, the 100-odd wells in Lapodiya remained full. There was green fodder too.

Residents of Lapodiya have also got together and cleaned out three ponds that had been dug some two decade ago but had been allowed to fall into disrepair. The cleaning out has helped improve the water table and there are more grasses growing on the banks.

The resurrected ponds have now been reserved for specific purposes. Phool Sagar (flower pond) is used only to water plants. Dev Sagar (pond for the gods) is used only for religious rituals. Anna Sagar (food pond) is used for irrigation. In an annual celebration, residents pay homage to these ponds.

Tracking climate change

For the last four years, the residents have also been tracking climate change. They have obtained a small weather station, and keep regular measurements of rainfall, humidity and wind velocity. They also track the water table, biodiversity and other environmental parameters.

There are clear indications of a changed mindset. Driving into Lapodiya, the first board you notice thanks residents for their voluntary labour that has helped the village common pasture to flourish. The board requests you not to pester the wild animals that share the pasture and notifies you of the ban on cutting trees or bushes or on any encroachment in the pasture. It also tells you that anybody breaking these rules will be punished.

Conservation is a part of religion in the village. At an open temple, there are clear instructions that water bodies belong to Indra Devta (the rain god) – if anyone spoils the ponds or spills garbage, Indra would get angry and the entire village would suffer from famine as a result.

Lakshman Singh – who has been working for the NGO Gram Vikas Navyuvak Mandal (GVNML) for three decades – says villagers have been inspired by slogans like "Shradha Karm" efforts with humility). "This adds a sense of pride to men and women alike to serve their habitats in their own capacities". The NGO works on conservation in Lapodiya and a cluster of 50 villages around it.

"This is active volunteering by the local people. Otherwise people will not understand and feel from their hearts. They spend their time and sweat for the sake of village development work and take collective decisions for all community initiatives," says Singh. Whether it is digging pits for water harvesting, cleaning drinking water bodies routinely, planting trees in appropriate season or toiling for maintenance of protected areas, they participate and care for each work and appreciate ecosystems by sharing views. In return they get regular orientation about right methods and approaches.

The village has started a seed bank and also has some special places – **a Khula Chidiyaghar (open aviary) and even a Chuha Ghar, a home for mice, because residents are aware of the importance of mice in the food web. Mice trapped in village homes are brought to the Chuha Ghar and fed there, so they have no reason to invade homes.**

The Khula Chidiyaghar is actually a barricaded 80-hectare plot within the pasture. Grazing, digging or any other human activity is prohibited within this plot. Over 135 varieties of birds throng the plot. Rainwater harvesting structures built in the pasture help attract fauna.

Scientists have repeatedly said one effect of climate change is an increase in the frequency and severity of droughts, floods and storms. In this drought-prone region, residents of Lapodiya may not use the same terminology as scientists or policymakers, but they clearly understand the nature of the change, its implications. And they are successfully taking steps to adapt.

Report of the 47th Meeting of the GEF Council

The complete summary is available at: http://www.iisd.ca/gef/council47/html/crsvol192num12e.html .

On Tuesday, 28 October 2014, Naoko Ishii, Chief Executive Officer (CEO) and Chair of the Global Environment Facility (GEF), opened the 47th meeting of the GEF Council. She highlighted that, as a result of the GEF's sixth replenishment (GEF-6), the Facility has more resources, a strategy that will lift the GEF's work to new heights, and a strong policy agenda.

She stressed that the coming year is critical for the GEF because it will involve: intensive work to reach a climate agreement by the end of 2015; discussions on the post-2015 development agenda; and the first year of implementing GEF-6. She emphasized the need for GEF-6 to get off to a strong start, and said several Council agenda items will help in this regard, including the discussions on results-based management (RBM), a new project cancellation policy, and the non-grant instrument pilot.

Ishii also emphasized the need for countries to establish their priorities for the new cycle in order to get a strong start on GEF-6, and said this process was already well underway in many countries. Ishii also announced that she has decided to reorganize the GEF Secretariat into two departments: one on programming, and one on policy and operations.

ANNUAL MONITORING REVIEW (AMR) FY14: PART I : Decision: The Council welcomed the overall finding that the GEF portfolio under implementation in FY14 performed satisfactorily across all focal areas, and welcomed the first disbursement analysis in the management effectiveness section.

RESULTS-BASED MANAGEMENT (RBM): ACTION PLAN : Decision: The Council welcomed and approved the Action Plan and requested the Secretariat to report on progress of implementation at the next Council meeting in June 2015.

GEF-6 NON-GRANT INSTRUMENT PILOT AND UPDATED POLICY FOR NON-GRANT INSTRUMENTS: Decision: The Council approved the implementation modalities for the NGI Pilot, and approved the updated NGI Policy with an effectiveness date of 1 November 2014.

IMPROVING THE GEF PROJECT CYCLE : Decision: The Council approved the updated Cancellation Policy as proposed in document GEF/C.47/07 and set out in Annex 2 to that document. It also approved the revised Programmatic Approach modality as proposed in the same document. The Council further requested the Secretariat to provide the next Council meeting with an analysis of the stock of projects approved before the 46th meeting of the Council that are delayed more than 18 months from PIF/Council approval to CEO endorsement, and to provide recommendations on how to address the issue, including possible modalities for inclusion in the updated Cancellation Policy.

THE COUNTRY SUPPORT PROGRAMME (CSP) IMPLEMENTATION : Decision: The Council approved the proposal for the Secretariat to execute the CSP and directed the Trustee to set aside US$23 million in GEF Trust Fund resources for use by the Secretariat to fund the CSP, which it specified would comprise the following elements:

- Support for National Portfolio Formulation Exercises (NPFEs): US$2.4 million;
- Multi-stakeholder dialogues: US$2 million;
- GEF Workshops: US$12 million (ECWs US$10 million; other workshops US$2 million);
- Constituency Meetings: US$5 million;
- GEF Introduction Seminars: US$1.2million; and
- Pre-Council Meeting for Recipient Country Council Members/Alternates: US$0.4 million.

GENDER EQUALITY ACTION PLAN : Decision: The Council adopted the GEAP and approved its implementation, on the understanding that the relevant sections will be updated to clarify that the Secretariat will be creating a gender anchor function with gender-specific expertise. As a matter of high priority the Secretariat will bring in external gender-specific expertise to help develop a long-term solution to establish capacity in the Secretariat, and is to provide an update of progress at the 48th GEF Council Meeting in June 2015. The Council recognized the collaboration among the Secretariat, Agencies, related MEAs, CSOs and other partners in the development of the GEAP and requests that this engagement continue in GEAP's implementation.

CONVERSATION WITH THE EXECUTIVE SECRETARIES OF THE CONVENTIONS – RELATIONS WITH THE CONVENTIONS AND OTHER INTERNATIONAL INSTITUTIONS : Decision: The Council welcomed the report and requested the Secretariat for future Council meetings to provide highlights of the key issues of relevance to the GEF that were discussed at the meetings of the conventions and the decisions taken thereon. The Council further requested the Secretariat to include in future reports the table with responses to the guidance from the COPs of all conventions for which the GEF serves as a financial mechanism. The Council also requested the GEF network to continue to work with recipient countries to reflect the guidance and national priorities in their GEF programming and activities.

PROGRESS REPORT ON THE PILOT ACCREDITATION OF GEF PROJECT AGENCIES AND TIMELINE FOR FURTHER DISCUSSION OF ACCREDITATION : Decision: The Council noted the status of the Stage II reviews conducted by the Accreditation Panel to date and welcomed the decision to approve FUNBIO's progression from Stage II to Stage III. It requested the IEO to initiate an evaluation of the GEF accreditation process, and to present the evaluation findings at the June 2015 Council Meeting. The Council also requests the Secretariat to present a paper for discussion at the October 2015 Council Meeting regarding possible directions on accreditation in the context of the evolving GEF business model.

PROGRESS REPORT OF THE GEF INDEPENDENT EVALUATION OFFICE (IEO) DIRECTOR : Decision: The Council took note of the directions outlined in GEF/ME/C.47/01 and authorized the IEO Director to further develop the work program with guidance from the Council and in consultation with GEF stakeholders, for approval by the Council at its meeting in 2015.

WORK PROGRAM : Decision: The Council approved the Work Program comprising the 15 projects, subject to comments made during the 47th Council Meeting and additional comments that may be submitted in writing to the Secretariat by 6 November 2014. Regarding two projects, one in Tajikistan on conservation and sustainable use of the Pamir Alay and Tian Shan ecosystems for snow leopard protection and sustainable community livelihoods, the other on upgrading small hydropower capacity in China, the Council requested the Secretariat to arrange for Council Members to receive final project documents and to transmit to the CEO within four weeks any concerns they may have prior to the CEO's endorsing the project document for final approval by the GEF Agency.

The Council found that each PIF approved as part of the work program may be endorsed by the CEO for final approval by the GEF Agency, provided that the final project documents fully incorporate and address the Council's and the STAP reviewer's comments on the Work Program, and that the CEO confirms that the project continues to be consistent with the Instrument and GEF policies and procedures. Final project documents are to be posted on the GEF website after CEO endorsement. If there are major changes to the project scope and approach since PIF approval, the final project document shall be posted on the web for Council review for four weeks prior to CEO endorsement.

REPORT OF THE SELECTION AND REVIEW COMMITTEE : Decision: The Council noted the GEF CEO/Chairperson and the IEO Director's goals and objectives for FY15 and requested the SRC to undertake the performance evaluation for the CEO/Chairperson, as well as for the IEO Director, for Council review at its Meeting in October 2015.

OTHER BUSINESS : William Ehlers, GEF Secretariat, noted that the dates for the next two Council meetings are 2-4 June 2015, and 20-22 October 2015. He said the proposed dates for the spring 2016 Council meeting are 7-9 June 2016.

The World Survey on the Role of Women in Development 2014: Gender Equality and Sustainable Development; Produced by: UN Women (2014)

The report is available online at: http://www.eldis.org/cf/rdr/?doc=69577 .

UN Women has launched the report of a five-yearly survey that demonstrates why gender equality must be at the center of sustainable development.

The report is well timed to link in with current global debates around the definition of the

Sustainable Development Goals and the emergence of the post-2015 framework.

The 2014 report focuses on gender equality and sustainable development, with chapters on the green economy and care work, food security, population dynamics, and investments for gender-responsive sustainable development.

It recommends concrete policy actions to move towards an economically, socially and environmentally sustainable future, in which all women and girls, men and boys enjoy their human rights.

It also compliments the World Survey 2014 by providing recommendations for the selected areas of gender equality which it emphasizes.

The World Survey uses three criteria to assess whether policy actions and investments for sustainable development adequately address gender equality. Do they support women's capabilities and their enjoyment of rights?

Do they reduce, rather than increase, women's unpaid care work? And do they embrace women's equal and meaningful participation as actors, leaders and decision-makers?

Overall it offers a comprehensive set of recommendations for gender-responsive policy actions and investments towards sustainable development.

India at risk, can't undermine sustainable development: UN climate change report authors

The report is available online at: http://indiatoday.intoday.in/story/climate-change-report-un-ipcc-india-author/1/398795.html .

A crucial United Nations report on climate change released on Sunday telling governments to cut greenhouse gas emissions to zero by 2100 is "both an opportunity and a challenge for India", said an expert from India involved in preparing the Intergovernmental Panel on Climate Change's Synthesis Report. Another Indian in the report's core writing team said India was assessed as among the top 20 nations most at risk from extreme events.

The report also says cutting emissions by 40-70 per cent by 2050 would likely keep global warming under 2 degrees Celsius relative to pre-industrial levels. Read IPCC Synthesis Report

"The report clearly states there are limits to adaptation. For India the message is that while adaptation is critical, keeping the pressure on for global mitigation is also key. No country, least of all India which is highly vulnerable, can adapt to a 4 or 5 degree warmer world," Dubash said in an email reply.

The 40-page synthesis, summing up 5,000 pages of work by 800 scientists already published since September 2013, says global warming was now causing more heat extremes, downpours, acidifying the oceans and pushing up sea levels, reported Reuters.

Adverse impacts on food production in India attributable to climate change: IPCC Core Writing Team member Purnamita Dasgupta, the other Indian in the report's Core Writing Team, said India was assessed to be among the top 20 countries "most at risk from extreme events."

"There are observed adverse impacts on food production in India that are attributable to climate

change. Among the projected future risks for Asia, are increased flood damage to infrastructure, livelihoods and settlements; heat related human mortality, increased drought related water and food shortage," Dasgupta, who holds the Ford Foundation Chair in Environmental Economics at Institute of Economic Growth, told IndiaToday.in.

"In general, substantial economic impacts arise for regions that have low adaptive capacity, due to geographical location, dependence on natural resource based livelihoods and agriculture. Specific adverse impacts on labour productivity, and the heightened risk of heat strokes in India can be causes for concern," she said in an email response.

"Among Flood Risks and Losses, literature assesses that India is among the top 20 most at risk from extreme events and can experience an 80 per cent increase in population at risk from sea level rise by 2050, including Kolkata and Mumbai for at risk population and assets. Additional health costs from diarrhoeal and malarial illness are also expected by the 2030s. Sustainable development with adaptation helps in managing these impacts," said Dasgupta, who returned from Copenhagen on Sunday.

Harjeet Singh, international manager for climate change and resilience for global rights body ActionAid, in Copenhagen for the report's release, told IndiaToday.in that "rich nations must stop making empty promises and come up with the cash so the poor in countries like India do not have to foot the bill for the lifestyles of the wealthy."

"The Indian economy is hugely dependent on climate sensitive sectors such as agriculture, fisheries, forestry and even electricity generation. But it is the poorest people who suffer most from climate change. For example, 58 percent of our people solely rely on agriculture so these new changes in rain or temperature can affect the whole country's food security and economy. India has already experienced several extreme weather events in the last 2 years. And our long coastline of over 7500 kilometers makes us highly vulnerable to sea level rise and oceans becoming acidic," he said in an email reply.

Singh said IPCC report warned of catastrophic impacts, but also highlighted that adaptation has been treated as "the poor cousin of mitigation", and not paid the same attention for policies and funding.

"Rich nations must stop making empty promises and come up with the cash so the poor in countries like India do not have to foot the bill for the lifestyles of the wealthy. Without adequate money and people-centric development policies, those who are bearing the brunt of climate change and disasters will not be able to adapt and survive," he said.

The new Intergovernmental Panel on Climate Change report will help guide the UN negotiations in Peru from December 1-12 on drafting a new global agreement on climate change to be finalised in 2015.Flood-hit Srinagar residents use a makeshift raft to move to a safer place on September 20, 2014. Reuters/Danish Ismail

Sanjay Vashist, director, Climate Action Network South Asia (CANSA), said India needed "to raise its ambition to follow low carbon pathways."

"The IPCC report emphasis is on equitable sharing on mitigation efforts, we hope that this agreed understanding will raise political support globally to an adequate Paris Deal in 2015. India need to raise its ambition to follow low carbon pathways post 2020 based on successes from ongoing 2020 renewable energy and energy efficiency targets. It is established that energy transition will have minimal impact on country's economy and is possible to increase the share of renewable energy in India," he told IndiaToday.in.

Narendra Modi government reconstitutes climate change panel, no member from industry

The article is available online at: http://economictimes.indiatimes.com/news/economy/policy/narendra-modi-government-reconstitutes-climate-change-panel-no-member-from-industry/articleshow/45052086.cms .

Barely three weeks before crucial negotiations in Lima, the government has reconstituted the Prime Minister's Council on Climate Change, reducing its size and dropping members, including sole industry representative Ratan Tata and Centre for Science and Environment director general Sunita Narain.

The 18-member council headed by Prime Minister Narendra Modi will, like its predecessor panel, focus on national action for assessment, adaptation and mitigation of climate change. ET had first reported about the Prime Minister's plan to reconstitute the panel.

While the council will advise the government on domestic measures on climate change, it is clear from its membership that the deliberations of the panel would feed into India's stance in the global negotiations. The Intergovernmental Panel on Climate Change said in a report on Sunday the window of opportunity for governments to prevent the severe and irreversible impact of climate change was fast closing.

The reconstituted council comprises mostly the ministers for external affairs, finance, environment, water, agriculture, urban development, science and technology, power, coal and renewable energy, as well as the cabinet secretary, foreign secretary and environment secretary. As in the previous council, ministers handling rural development and industry have been left out.

"The preponderance of government members does not mean that the government is not interested in experts and other voices," a senior official said. "The panel has been reconstituted in a manner to ensure wider and diverse participation of experts, without additional demands on their time, as would be the case if they were to be full-time members."

IPCC chief and the Energy & Resources Institute chairperson RK Pachauri, economist Nitin Desai and Chandrashekhar Dasgupta, former diplomat and a member of the Indian climate change negotiating team up until the Copenhagen round of talks in 2009, were retained.

Ajay Mathur, director general of the Bureau of Energy Efficiency, also remains on the panel. Mathur was a member of India's negotiating team in Durban and the key architect of the climate technology arrangements set up under the United Nations Framework Convention on Climate Change (UNFCCC).

The new entrant to the panel is JM Mauskar, former co-chair of the Ad-hoc Working Group on the Durban Platform, under the aegis of the UNFCCC. Mauskar, a long-standing member of the Indian negotiating team, was special secretary in the ministry of environment and forests.

The panel is left with no industry representation after Tata was dropped. Industry is a key stakeholder in addressing climate change, especially since the focus will be on increasing the share of renewable energy and introducing mandatory energy efficiency norm in manufacturing processes, buildings and appliances.

"The government has opted not to name any one member of industry to allow for wider and more focused participation.

This will allow for the government to invite representatives of the different sectors to join the panel's deliberations on a sustained and fruitful basis," official sources told ET.

Countries have agreed to put in place a new global compact to address climate change and limit its impact by December 2015 in Paris. As part of this effort, each country is expected to put forward efforts and actions to tackle climate change.

There is some apprehension that the choice of members may preclude a more pro-active engagement by India at the climate talks.

A "New Normal" for Sustainable Transport in Chinese Cities ; With the right government leadership, the new normal for sustainable transport in Chinese cities will include more transit-oriented development, shared mobility services, and transport innovations from the private sector.

The article is available at: http://sustainablecitiescollective.com/embarq/1010486/new-normal-sustainable-transport-chinese-cities?utm_source=feedburner&utm_medium=email&utm_campaign=Sustainable+Cities+Collective+%28all+posts%29

As cities worldwide innovate to improve mobility, Chinese cities lag behind in adopting emerging sustainable transport solutions. Still, a number of concepts are set to become crucial to the future of urban transport in China. Transit-oriented development (TOD), innovative transit and shared mobility solutions to complement traditional mass transport, and private market innovation through information technologies are all primed to reshape Chinese cities and could create a more sustainable mobility future.

Chinese cities are late adopters of sustainable transport innovations
Globally, cities are avid innovators and adopters of transport breakthroughs. A recent study from EMBARQ – producer of TheCityFix – showed that many sustainable transport concepts like bike-share and bus rapid transit (BRT) are reaching tipping points and becoming more common. Nonetheless, the same study revealed that Chinese cities are not at the forefront of this trend: many sustainable transport solutions, such as congestion pricing, complete streets, and low emission zones have yet to be included in Chinese cities' policy arsenals.

For transport innovation to become a widespread norm, it takes more than replication. Institutional barriers, contextual differences, capacity constraints, and path dependency are common roadblocks that prevent new ideas from being adopted in Chinese cities. Given these roadblocks, what are the sustainable transport pathways that fit the context of Chinese cities, and what emerging trends in sustainable transport can we expect for these cities?

The "new sustainable transport normal" in China
The recent Transit Metropolis Forum – administered by China's Ministry of Transport – shed light on developments in urban transport in China. The Ministry's Transit Metropolis program aims to promote transit-oriented development and high quality transit services in Chinese cities. With over 400 attendees, the Transit Metropolis Forum served as a peer-learning platform to explore state-of-the-art sustainable transport solutions, share emerging opportunities, and shape new trends. Solutions emerging from the forum discussion have the potential to be mainstreamed in Chinese cities in the years to come. In particular, three topics featured prominently in the forum discussions:

Transit-oriented development

Fueled by booming rail transit construction in China, transit-oriented Development – a strategy that promotes dense, mixed-use, and walkable development near transit stations – is gaining momentum. Shenzhen and Shanghai, among others, are spearheading TOD around transit stops.

Despite a small number of ad-hoc projects, multiple barriers exist to translate TOD from rhetoric to reality in China. Forum speakers admitted that many critical elements for successful TOD planning and implementation are missing. For example, rail transit plans are often developed without adjustments to city master/regulatory plans, and regulatory zoning codes around station areas are too rigid to allow for up-zoning or mixed land uses. Moreover, stakeholder engagement that matches projects to dynamic market demand is unfortunately absent in the current planning process.

Forum speakers suggested that future efforts should be geared towards reforming planning systems and working across silos to coordinate among different government departments and work with developers. Recent national policies have signaled positive changes to enable TOD. For instance, the recent issuing of the State Directive 64 opens the door for dense, commercial developments directly above and underneath regional railway stations, and allows for land value capture to support the otherwise costly railway construction.

Innovative transit services and shared mobility

Transit ridership in Chinese cities is expected to grow rapidly. Forum participants noticed that to accommodate this sharp rise in travel demand, the sole emphasis on subway expansion is insufficient; the future of urban mobility should be multimodal, integrated, and cater to varying travel needs.

A few mobility trends are gaining momentum in Chinese cities to complement subway systems. For example, BRT is now operating in 21 Chinese cities. The diversity of BRT system designs – which include systems on elevated highways, boulevards, and minor streets – show that technology and design innovations for BRT are endless. Another complementary transport option to subway systems is high-end commuting shuttle services. These services target high-income families and are also building momentum in China. Invented in Beijing, this flexible-route, subscription-based transit service provides both reliability and comfort that high-income households love, and has great potential to attract existing car drivers. Moreover, shared mobility options such as car-sharing and carpooling that were once restricted in Chinese cities have also recently grown.

Information technologies and the private market

Forum attendees highlighted great opportunities for innovation and entrepreneurship by the private sector to provide "smart" sustainable transport solutions. Indeed, leveraging private sector innovation and investment can not only unlock business opportunities, but can also complement public policies.

Smartphone technology plays an increasingly prominent role in transport in Chinese cities, through smartphone apps to hail a taxi, track arriving buses, or vote for a proposed change in bus routes, and through providing "big data" that informs policy-making. For example, the popular taxi app Didi – developed by a grass-roots start-up in China – has achieved a large market share in only two years, receiving over 5.5 million daily orders, reducing CO_2 emissions by 40 metric meters per day, and unlocking millions in private investments. Forum attendees also suggested that for these innovative services to be mainstreamed, governments must create proper incentives, ensure fair competition, and make data publicly available.

The impact of urban transport systems on economic opportunity, human wellbeing, and climate change are determined by the choices city leaders make today. Although

the forum outlined possible trends in sustainable transport for Chinese cities, these transport solutions will require cities to have visionary leadership, creative thinking, and a vibrant market.

Announcements

Fossil Fuels, Divestment & Reinvestment in the United States.

The article is available online at: http://www.ussif.org/climatereinvestment .

When retail and institutional investors make the decision to divest from fossil fuels---coal, oil and natural gas companies---this decision should not be the end of the portfolio review process, but rather the beginning of a series of reinvestment decisions.

Investors who divest from fossil fuels will likely consider opportunities for investment in renewable energy and energy efficiency. Investors may also choose to reinvest in a range of sectors in the public equities market and in a range of asset classes. The following link : http://www.ussif.org/climatereinvestment is meant to provide a broad framework for thinking through reinvestment options.

The term "retail investors" refers to individual investors who are generally unaccredited and invest relatively small amounts.

"Accredited individual investors" are people who meet certain wealth standards and whom regulators consider financially sophisticated, with less need for the protection provided by certain government filings on the part of their advisors.

The term "institutions" refers to organizations investing large sums and subject to fewer regulatory protections, such as investment companies, insurance companies, mutual funds, religious organizations, pensions and trusts.

Retail investors who wish to put climate change investment strategies into action in a manner that is appropriate for their age, investment objectives, risk tolerance and return expectations may want to enlist the assistance of a financial advisor. A good place to start is the **directory of financial services offered by US SIF members, as they have expertise in sustainable and responsible investing options and strategies**. Under "Directory Categories," select "Financial Advisors and Brokers."

Accredited and institutional investors may also wish to enlist the services of financial advisors or investment consultants with expertise in sustainable and responsible investing strategies. In the directory of financial services offered by US SIF members, under "Directory Categories," select "Investment Consulting Firms" in addition to "Financial Advisors and Brokers."

IPCC dropped key chart 'inconvenient' to developed world: CSE.

The article is available online at: http://timesofindia.indiatimes.com/home/environment/developmental-issues/IPCC-dropped-key-chart-inconvenient-to-developed-world-CSE/articleshow/45064308.cms .

Four days after the UN-backed Intergovernmental Panel on Climate Change (IPCC) brought out

its detailed findings predicting a gloomy future for the world if it fails to cut emissions drastically, the Delhi-based research and advocacy group Centre for Science and Environment (CSE) on Thursday claimed the global body had dropped a key 'graph' from its synthesis report which was "inconvenient" to rich nations.

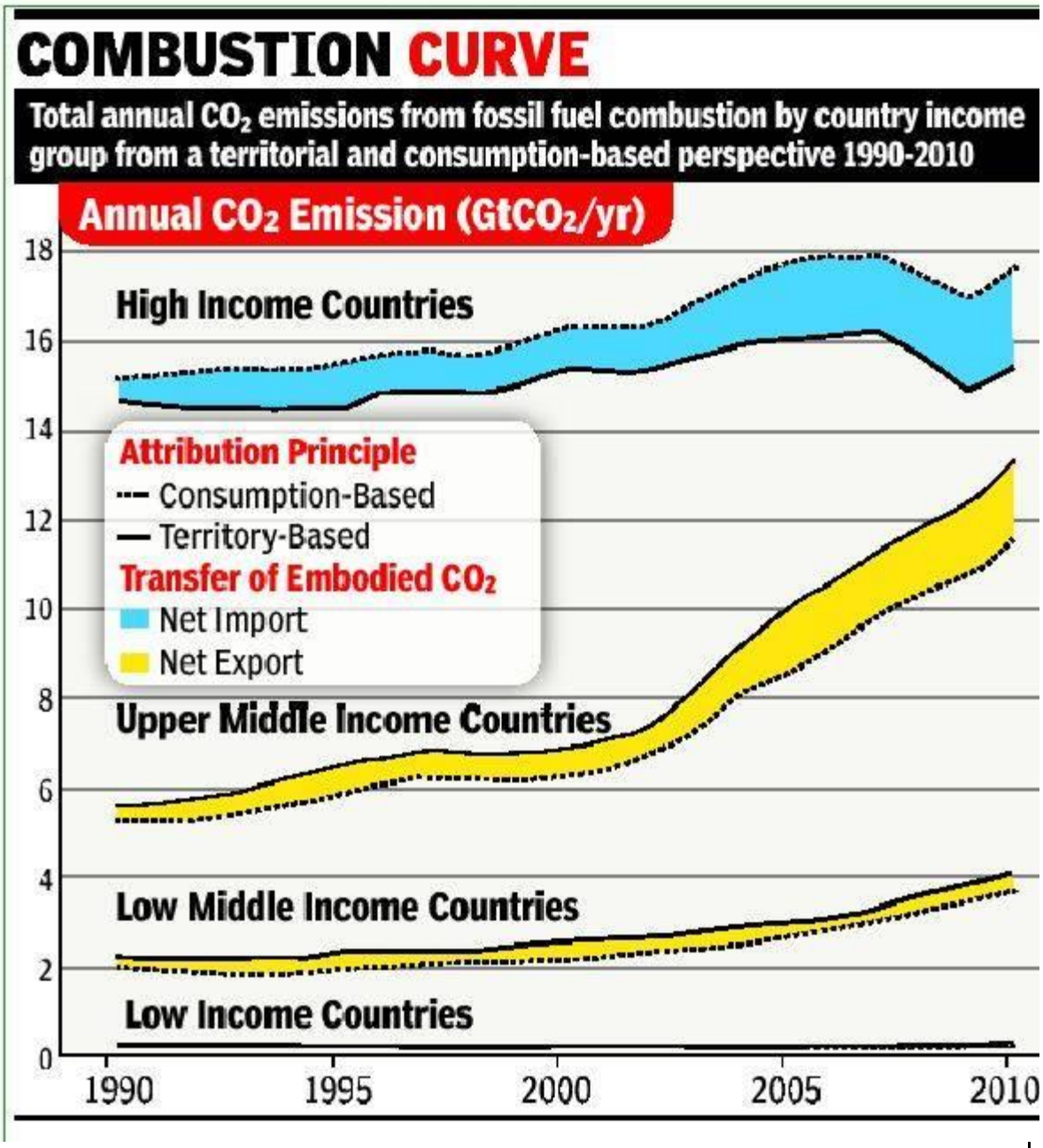
The dropped 'graph' shows how developed countries shy away from focusing on their fast growing consumption-based emissions. They instead, prefer to project their success in reducing production-based emissions over the past few years.

CSE said, the chart indicates that the production-based emissions of these countries have decreased because they shifted the manufacturing base to the developing countries and have been fulfilling their domestic requirements through imports

Although the CSE has consistently been in full agreement with the IPCC over its findings and analysis, in this instance, they believe, the climate panel succumbed to the politics of climate change.

IPCC chairman R K Pachauri, however, rejected the claim, saying "this is completely wrong". In a text message to TOI, he said, "There was not a single figure which was dropped from the synthesis report. Every figure from the draft submitted for approval was retained intact".

The IPCC later tweeted that "the chart CSE refers to is on page 16 of the Working Group III Technical Summary. It was not dropped."



Though the important chart was there in the WGIII summary, it could not find place in the final synthesis report.

Flagging the matter in its annual media briefing on climate change, the CSE's deputy chief and the group's climate expert Chandra Bhushan on Thursday highlighted that the 'graph' was in the draft report of working group-III of the IPCC but it was finally dropped from the synthesis report.

The synthesis report, released in Copenhagen on Sunday, distilled and combined all the three working group reports of the panel which were brought out by it in the past 13 months.

Claiming that he could access the 'graph' from a key member of the IPCC, Bhushan said, "The

chart actually shows how consumption in developed countries is increasing rapidly and that consumption is being supported by developing countries".

He noted that had this 'graph' been part of the report, it would have been a "big embarrassment" for developed nations, which are historically the top emitters.

Bhushan, at the same time, also blamed India and China for letting rich nations drop such an important eye-opener, saying both these countries are supporting the consumption of the developed world by turning themselves to the west's manufacturing base in the name of economic growth.

Elaborating further, CSE chief Sunita Narain said, "They (developed countries) are still consuming. Actually the rich have not reduced (emissions) at all. They exported it (emissions) to developing world including China and India. They pretend to be reducing emissions but are not actually reducing it. This is the dirty politics."

She later also tweeted the 'graph', saying the chart that went missing in the IPCC final report shows how rich countries have not reduced emissions.

Urging developing countries, including India, not to miss these points while negotiating for a global climate deal, Bhushan said rich nations should not escape from their responsibilities of drastic emission cuts by presenting different data to the world.

UNDP MDG-Carbon Actions for Rural Electrification.

The report is available online at:
http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/MDG%20Carbon%20Facility/Guidance%20Paper%20-%20NAMA%20Financing%20for%20Rural%20%20Electrification.pdf

The **UNDP MDG-Carbon** program has started efforts for promoting the use of new climate finance actions to reach those who are often the poorest in developing countries, e.g. the rural poor. MDG-Carbon is encouraging finance through the design of for NAMAs in several African, Asian and Pacific countries. The target is to encourage sources of international climate finance to utilize their funds to leverage efforts for capacity development and physical establishment and operation of rural electrification projects involving electricity generation through renewable energy.

Population Without Electricity	Currently Installed Capacity (MW)
Gambia 65%	65
Ghana 28%	1,985
Kenya 81%	1,698
Namibia 40%	487
Rwanda 84%	57
Vanuatu 72%	28

It has been widely acknowledged by the international community that access to electricity is one of the main drivers in the process of sustainable development. Taking words from Helen Clark, UNDP's Administrator, access to **energy "transforms the lives of people, communities, and nations. No country ever developed without access to energy".**

In this context one of the main issues facing developing countries is the lack of electricity access by their population, and it is often the rural population which is most affected by a lack of affordable and reliable electricity supply. Therefore, the main objective of this Guidance Paper is to facilitate greater access to electricity by rural communities through the provision of climate finance under a National Appropriate Mitigation Action ("NAMA").

Rural electrification is the process of bringing electricity supply to rural and remote areas. The challenge of rural electrification is how to make electricity available to areas and communities which lack access to a grid based power supply.

The primary constraints as to why a large number of people in the world remain unconnected to the grid are typically financial and physical. While the latter deals with the challenges of geography (e.g. hilly areas, large tracts of dense forest land, long distances to reach remote areas) and availability of resources (e.g. oil/gas, water, sunlight, biomass), the former refers to the economic challenges which developing countries face in investment funding, service costs, and revenues & collection. It is noted that it is often financially prohibitive to extend existing power infrastructure into rural areas, via power grid extensions.

Cost effectiveness is particularly a problem in sparsely populated countries where distances may be long and therefore grid extension costs high, with the extension resulting in the provision of grid access to a limited number of remote communities (consumers). Therefore, mini-grids (e.g. grids which power one village) are **often used as a least-cost long term solution for rural electrification and the use of renewable energy to power mini-grids is becoming increasingly popular**. Such mini-grids also encourage further growth in rural economies, especially when efforts target parallel tracks of power and economic development as described in "Integrated Sustainable Rural Development: Renewable Energy Electrification and Rural Productivity Zones".

Such rural electrification projects are not normally "bankable" under fully private sector commercial conditions since the rural poor have limited financial resources. Thus, subsidy programs are required to ensure establishment and, potentially, long term viability of these projects. Although subsidies for rural electrification from many international development partner- and multi-lateral finance organizations are available, each funder has their own targets, criteria, and processes for the allocation and disbursement of funds to developing countries. **Taking this funder diversity into consideration, this Guidance Paper presents a generalized method for the financing structure of a rural electrification NAMA.**

Interest grows in unusual Egyptian method of mosquito control. Somalia and South Sudan are keen on using the technique to cut malaria. It uses chlorophyll powder and sunlight to kill mosquito larvae but there are reservations about large-scale implementation.

The article is available online at: http://www.scidev.net/global/malaria/news/Facing-Malaria-mosquito-spread-chlorophyll-sunlight-1.html .

Plans are progressing to introduce an unusual method of mosquito control which involves sprinkling powdered plant extracts on swampy mosquito nurseries. The Egyptian researchers behind the innovation have set up a company to develop the method and recently signed an agreement with South Sudan's government to implement the technique there.

The researchers, whose firm is called InRaD (Innovative Research and Development), tell SciDev.Net that they have also had requests from Somalia's health ministry to do the same.

Later this month, Mahmoud Abdel-Kader, a photochemist at the German University in Cairo, Egypt, and one of the two scientists behind the technique, is due to fly to Switzerland to present the results of laboratory and field research to the WHO. He says he is planning on discussing the possibility of WHO approval of the method.

"The innovative method utilises the rays of the African sun to contain the disease."

El-Tayeb, Cairo University : The technique involves adding a derivative of the plant pigment chlorophyll to wetlands infested with the aquatic larvae of mosquitoes.

Abdel-Kader's collaborator, Tarek El-Tayeb, a biologist at Cairo University, says: "We extracted the chlorophyll from green plants and transformed it into a powder which was sprinkled in places where the larvae are found.

"The larvae climb to the surface of the water for oxygen. Then they feed on the powder, which has been manufactured to float on the surface."

In plants, El-Tayeb says, chlorophyll absorbs sunlight and passes on its energy so that plants can build their sugary fuels from carbon dioxide. But in its powdered form, the chlorophyll instead transfers the sun's energy to dissolved oxygen inside the larvae. The resulting form of oxygen is unstable and so reacts with the cells' components, damaging them and ultimately killing the larvae.

The research included three years of laboratory work as well as field experiments in the wetlands of Ethiopia, Sudan and Uganda that are full of malaria-transmitting mosquitoes. The technique killed between 85 to 100 per cent of larvae, according to a poster summary published in Malaria Journal in 2012.

As well as the Anopheles mosquitoes that are a vector for malaria, the technique kills the Aedes mosquito, which pass on dengue fever. And it kills the Culex mosquito, which transmits parasitic worms that cause a disease called filariasis.

"The innovative method utilises the rays of the African sun to contain the disease," says El-Tayeb. "It's a natural method that causes no environmental damage."

For instance, the Uganda experiments showed no effect on the natural predators such as dragonfly larvae that feed on mosquito larvae.

Muhammad Rajai, an entomologist at the National Centre for Research in Egypt, tells SciDev.Net that, compared with other biologically safe techniques, this method is "less expensive and more effective at exterminating mosquitoes".

However, there are concerns about its practical application. Abd al-Majid al-Gharib, a physical chemist at Cairo University, tells SciDev.Net: "I am confident the idea is successful on a small scale, but deploying the powder on every canal, drainage ditch and wetland to control malaria [would be] extremely difficult."

Yet El-Tayeb says: "The powder is effective for 21 days and the extraction process itself is not expensive at all. We should consider large-scale implementation."

Navi Mumbai to house largest solar panel installation on dam

The article is available online at: http://solarquarter.com/index.php?option=com_k2&view=item&id=520:navi-mumbai-to-house-largest-solar-panel-installation-on-dam&Itemid=139

The Morbe dam on Dhavari River in Navi Mumbai is going to house something unique: a solar panel installation big enough to generate 20 megawatt of power.

A three-year-old company that is carrying out the Rs 162 crore project claims the installation to be the largest in the world on a dam barrier, and the first in India. India already has several solar power installations on top of canals, the biggest being an underconstruction 10 MW project on a Narmada canal in Gujarat, but none on a sloping wall. To make matters complicated, the Morbe gravity dam has an earthen slope, said Rahul Gupta, an IIT-Roorkee alumnus and founder of Rays Power Experts which got the contract from the Navi Mumbai Municipal Corporation.

The other side of the wall will have a huge amount of water, so the construction has to be done in a way that it doesn't puncture the wall, said the 27-year-old. It also needs to be made sure that future maintenance is easy and the solar panels are not spoilt by salty water. The project is scheduled to be completed by the end of March next year.

The safety of the three-kilometer-long dam is our topmost priority, but as a skilled team of 125 young engineers from IITs and NITs, we are looking for newer technical challenges, Gupta said. Solar panels will cover the entire stretch of the dam barrier. Gupta's first assignment was in 2010, the year he graduated. He helped an investor set up a 1 MW facility in his home state of Rajasthan, in his pursuit to make money to set up his own plant one day.

What Makes a City Smart, Anyway?

The article is available online at: http://sustainablecitiescollective.com/big-city/1011486/what-makes-city-smart-anyway?utm_source=feedburner&utm_medium=email&utm_campaign=Sustainable+Cities+Collective+%28all+posts%29

In recent years, urban planners, cross-sector leaders, and city enthusiasts have trumpeted the rise of "smart cities." As that conversation gets louder, we can't help but ask: What exactly makes a city smart?

There are varied ideas and approaches to developing smart cities, but the broad conversation centers around how information and technology (IT) can be used to plan and manage a city from a centralized hub. Anthony Townsend, a leader in smart city research, conjures up a skeptical image of a "remote-control city" designed by experts to improve efficiency.

When cracking open the smart city idea, one assumes city infrastructure is connected to the Internet, the necessary conduit required for large amounts of data (information in the most essential form) to run through a city's veins. Basic connectivity allows data to be collected and considered before nuanced decisions are implemented across a large and diverse ecosystem. But what does the process of connecting people — residents and visitors of cities — to technology, information, and infrastructure actually look like? And how do these smart scenarios translate in places like Detroit and other legacy cities of the Rust Belt where resources are limited and technology and infrastructure are dated?

Recently, Detroit hosted the 2014 Meeting of the Minds (MotM) conference, somewhat of a roving think tank that addresses questions around the role of technology in cities. Each year, global

leaders from the civil, private, and public sectors gather to amplify thought partnerships around technology and urban sustainability. This year in Detroit, conference delegates networked over spirits, panel discussions, tours, and TED-like stage presentations with gauzy, electric blue back lighting.

In San Jose, Calif. (known as the "Capital of Silicon Valley"), Intel sponsors a city-wide network of sensors that are collecting data on air quality, noise pollution, and traffic flow. If a traffic incident occurs on a specific street, government officials can quickly address the issue and reroute traffic, while residents might decide to use a different mode of transportation (like riding a bike instead of driving) after receiving the information. To the east, New York City touts a massive efficiency initiative for public housing that is using smart technology to save energy, which in turn saves the city large sums of money.

Pittsburgh, Detroit's Rust Belt neighbor, shimmered on the MotM stage. Pittsburgh's Mayor Bill Peduto spoke elegantly about creating a framework for participatory civic engagement. His administration builds smart city capacity by leveraging simple tools like a game that teaches schoolchildren the difference between 311 and 911, and Mindmixer, an online forum where residents and city officials swap city improvement ideas. Pittsburgh recently passed open data legislation for which they are actively seeking input from residents in order to build the most useful open data portal.

Debra Lam, Pittsburgh's new chief of innovation and performance, began her work in the city by organizing diverse roundtable discussions to collaboratively design an "innovation road map — a list of problems, solutions, successes and strategies designed to advance the region's position as a national player." In a recent conversation with The Aspen Institute, Lam noted, "Innovation cannot rest on any one individual or chief. It is about the collective spread of knowledge and information, and the iteration of it so that it becomes better, and eventually mainstream."

Both Peduto and Lam's visions are inclusive and their processes seem authentic and collaborative – whether it's a web platform, process design, or a children's game, each tool strikes at the root to decode complex social systems through the education and participation of residents of all ages.

If participatory education is one tactic to build a "smart bridge" between a city's infrastructure and its residents, what role can building smart bridges play when dreaming up smart city systems?

At MotM, leaders from the city of Eindhoven in the Netherlands shared stories about the processes they use when working towards a smarter city. During a presentation entitled "Turnaround: Remaking Legacy Cities," Eindhoven Mayor Rob Van Gijzel told the audience, "There are no end users, there are only begin(ing) users." He urged leaders to flip traditional planning models horizontally, moving away from the "bottom up" and "top down" conversation.

Mayor Gijzel's appreciation of process, by way of design thinking and human-centered solutions, is undoubtedly woven into Eindhoven's cultural fabric, and the experimental yet simple "Dutch Design" trademark has sustained global value. Is it a coincidence that the city was once named the world's most intelligent community? As the home of Phillips and the Holland's first public light art program (sound familiar, Detroit?), the dreaming is open to creativity and municipal leaders alike, increasing the chance of implementing innovation within the city's infrastructure.

"Transformative innovation doesn't just happen in special zones or in downtowns. True innovation comes from the grassroots and the edges — we call this 'distributed innovation' — the kind that grows organically and infuses a place evenly and equitably," says Greta Byrum, senior field analyst at the New America Foundation's Open Technology Institute, who led a MotM tour around

mesh networks and digital stewardship.

If, as Lam believes, policy is not enough and that our cities need participatory approaches to getting smart, can Detroit find a way to help people innovate and participate fully — both at the core and along the edges — in using technology? When we look into our toolboxes in Detroit, do we view technology as a tool that connects diverse conversations across a 'smart bridge', or as Mayor Gijzel may put it, across a horizontal spectrum?

Whether we talk about the realization of participatory city platforms in Pittsburgh or the leveraging of a longstanding community of designers to nurture sustained "smart" systems in Eindhoven, all smart cities programs rely on a process of exchange. These conversations don't resemble a Newton's Cradle. As evidenced through chatter on Twitter, MotM delegates spoke of the "dance required for innovative collaboration."

Garlin Gilchrist, Detroit's new deputy technology director for civic community engagement, perhaps said it best a few days after MotM when he spoke at the#micities conference at the University of Michigan: "**Innovation cannot be copied and pasted." True innovation is about dynamic relationships between people.**

Towards an urban agenda on climate-related loss and damage.

The Asian Cities Climate Resilience Policy brief is available online at: http://pubs.iied.org/pdfs/10718IIED.pdf

The impacts of climate change in cities are already being felt as loss and damage, due to the lack of capacity of many cities to implement the necessary adaptive and disaster risk reduction (DRR) measures, and the vulnerability of large proportions of urban residents, particularly in developing countries. This paper represents a first attempt to raise some of the issues associated with climate-related loss and damage in urban areas in the global south. It reviews some of the key drivers that will shape the nature and extent of loss and damage in urban areas, explores some of the economic and non-economic approaches to loss and damage that might be taken, discusses some of the key communication challenges around the topic, and identifies some of the information and data gaps and next steps that need to be taken.
Definitions of loss and damage: As the concept of loss and damage continues to evolve, a number of definitions have been developed. A standard definition, adopted here, is that `loss and damage' arises from the residual impacts of climate change, that is, the "negative effects of climate variability and climate change that people have not been able to cope with or adapt to". Other definitions are broader and consider all impacts of climate change, beyond those that cannot be adapted to or mitigated for, as leading to loss and damage. Damage refers to impacts from climate change that can be recovered, whereas loss cannot be recovered. Three categories of loss and damage can be defined: 'avoided' damage, which has been prevented through adaptation or mitigation; 'unavoided', which refers to a failure of preventing avoidable loss and damage due to a lack of necessary adaptation or mitigation measures; and 'unavoidable' damage and loss which measures cannot prevent.

Policy pointers

- Urban areas face increasing climate change risks, vulnerabilities and impacts, but the severity and distribution of these vary across and within urban centres, and are compounded by past failures to effectively reduce risk.
- As many urban centres face development and adaptation deficits, including a lack of risk-reducing measures and infrastructure, the impacts of climate change will lead to loss and

damage, both monetary and non-monetary.

- Current assessments of urban loss and damage focus mainly on insurable losses – which do not account for losses suffered in the informal sector, or non-economic losses which are more difficult to quantify. Other considerations include untangling direct and indirect impacts, and assessing loss and damage from both sudden and slow onset climate effects.
- Assessing urban loss and damage in both the formal and informal sectors, and of economic and non-economic types, can provide a clearer picture of the impacts of climate change and help direct investments in urban risk management and adaptation.

The impacts of climate change in cities are already being felt as loss and damage, due to the lack of capacity of many cities to implement the necessary adaptive and disaster risk reduction (DRR) measures, and the vulnerability of large proportions of urban residents, particularly in developing countries. This paper represents a first attempt to raise some of the issues associated with climate-related loss and damage in urban areas in the global south. It reviews some of the key drivers that will shape the nature and extent of loss and damage in urban areas, explores some of the economic and non-economic approaches to loss and damage that might be taken, discusses some of the key communication challenges around the topic, and identifies some of the information and data gaps and next steps that need to be taken.

Urban climate change risks, vulnerabilities, and impacts are increasing across the world, but the distribution and severity of these vary greatly between and within urban centres. The IPCC Fifth Assessment report identifies a range of climate change impacts that are already being felt - or will be felt - in urban areas, including changes in temperature (means and extremes); drought and water scarcity; sea level rise and coastal flooding; inland flooding and hydrological hazards; and changes in the social and environmental determinants of health.

The IPCC Fifth Assessment also concludes that effective urban adaptation is possible, but that this will require infrastructure, institutions, finance and learning. While some cities are well equipped with these resources, others will experience considerable residual effects of climate change. The concept of 'loss and damage' has been emerging in recent years as a means of understanding these impacts of climate change that will not or cannot be addressed through adaptation or mitigation.

At the 2010 UN Framework Convention on Climate Change (UNFCCC) Conference of Parties in Cancún (COP16), a work programme for the enhanced understanding of loss and damage was launched; while COP19 in 2013 saw the launch of the Warsaw International Mechanism on Loss and Damage.

However, to date there has been little examination of how this concept might be applied in urban centres. While insured losses as a result of past disasters are well documented (at least by the insurance industry), much of the potential loss and damage as a consequence of climate change will fall outside this sector, particularly in cities in low- and middle-income countries.

In addition, the international mechanisms that are evolving under the UNFCCC are tending to concentrate on loss and damage to rural and agricultural livelihoods, at least partially because they lack the complex web of infrastructural, social and political relationships of towns and cities which complicate quantification.

Strengthening knowledge on urban climate resilience – the Asian Cities Climate Change Resilience Network.

The article is available online at : http://www.iied.org/strengthening-knowledge-urban-climate-resilience-asian-cities-climate-change-resilience-network

The Asian Cities Climate Change Resilience Network (ACCCRN) is an eight-year, multi-country initiative, funded by the Rockefeller Foundation, which seeks to build the capacity of stakeholders in cities to plan for and implement actions to increase their resilience to climate change.

The initiative focuses on secondary cities in India, Thailand, Vietnam, Indonesia, Bangladesh and the Philippines – where much of the urban growth over the coming decades will occur.

As such, there remains the opportunity to make investments, both hard and soft, that will contribute to their resilience to future climate impacts. ACCCRN aims to demonstrate actions, approaches and practices which could be replicated and scaled up, that strengthen the resilience of cities and take into consideration the priorities of poor and vulnerable communities.

As a regional partner within ACCCRN, IIED's role is to contribute to and strengthen the body of knowledge that informs urban climate change resilience. IIED is doing this by supporting the local production of knowledge which can contribute to our understanding of what makes cities resilient, including by documenting existing processes and approaches, and filling evidence gaps that could inform policy decisions and actions.

Working with local researchers and practitioners, and the ACCCRN country and regional partners, key research questions of local, national and international relevance are being explored. The findings of these research projects are being published in various forms, including the Asian Cities Climate Resilience working paper and briefing paper series, as well as blogs, conference events, news articles and academic papers. These publications can be downloaded.

In addition, IIED is strengthening the capacity for local knowledge production, by facilitating workshops in research and writing skills, linking researchers to international advisers, and fostering a community of practice on urban climate resilience.

IIED is also working with researchers to address the research-policy link, to ensure that research findings effectively reach those who are placed to act on them through policy decisions and targeted funds for action.

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100 Smart Cities in India: Governing for Human Impact.

The article is available online at : http://sustainablecitiescollective.com/embarq/1012966/100-smart-cities-india-governing-human-impact?utm_source=feedburner&utm_medium=email&utm_campaign=Sustainable+Cities+Collective+%28all+posts%29

This summer, Indian Prime Minister Narendra Modi announced plans to build '100 smart cities' across India in an effort to take advantage of the country's recent urban boom and catalyze investment in Indian cities. His initiative will cost the government 1.15 billion USD for the first year, and will emphasize building new smart cities rather than implementing smart infrastructure in existing cities. While there has been much discussion – positive and negative – in the media and political circles surrounding the initiative, Modi himself is ready to accelerate the project, and has taken steps to reduce delays in decision-making and necessary approval processes.

One consistent piece of the mainstream rhetoric around smart cities in India has been the transformative power of technology. New technologies are already making waves in India's auto-rickshaw sector in cities like Chennai, but are not yet widespread across different sectors or in

cities throughout the country. The ability to monitor traffic behavior, improve energy provision, electronically unify health care information, and more accurately predict transit ridership, for example, is expected to create profound changes in how cities operate.

Despite this overwhelming emphasis on the technological and financial inputs for smart cities, these undertakings – like any urban development project – should also be evaluated based on their outcomes. In economic terms, the difference between outputs and outcomes is subtle but important, creating a dividing line between the end result of a project and the real change it creates in people's lives. Evaluating for outcomes holds city leaders accountable to ensuring that the scale of investment matches the real benefits for citizens.

While shifting investment toward technology-savvy infrastructure in cities can be seen as a positive step, regulating how this technology is leveraged will be key in creating on-the-ground change. New technologies offer the potential for safer, more efficient cities with higher quality of life. This potential can only be realized, however, through effective governance that leverages technology to respond to the needs of citizens.

At the end of the day, smart city development is an opportunity to learn from and improve upon failures in urban governance to enhance quality of life for all Indian citizens. The birth of smart cities creates a chance to catalyze progress in three key areas:

- **Improved governance structures and practices**
- **Equitable economic growth and access to basic services**
- **Human connectivity through mobile and Internet connection**

Improved governance creates the foundation for smarter cities, and is essential for cities' use of technology to improve service provision. Many Indian cities lack adequate cooperation among different sectors of government, and instead focus too often on public-private partnerships without first focusing on coordination across government departments. This can result in ineffective spending that fails to create sustained impact. Prime Minister Modi has emphasized that a key component of smart cities is improving the way city governments function. He has stressed the need to promote coordination across departments and reduce delays in decision-making. For example, the use of data is a key component of technology-enabled smart cities. However, when this data is siloed across a range of government arms, its potential is lost. A more efficient and connected government provides the basis for an investment-friendly environment that generates and sustains economic growth, in addition to better service provision.

Smart cities should also be evaluated based on their ability to provide equitable economic opportunity and access to basic infrastructure for all residents. Like effective governance, widespread access to basic infrastructure is a prerequisite for effective technology-driven urban improvements. When pursuing increased competitiveness and economic growth, smart cities cannot lose sight of the challenges faced by India's urban poor. For example, increasing school graduation rates, or improving public health issues like child mortality and water-borne diseases should be core focuses of smart cities.

With the right priorities and effective governance structures, smart cities can use new technologies to improve service provision and quality of life.

The challenge for smart cities in India will be to evolve from the notion of 'smart' as one rooted in technology to one rooted in governance. Technology is only as useful as those who wield it. Strong governance structures and a focus on equitable quality of life improvements can help smart cities provide the framework for India's future cities, and for future cities worldwide.

Germany to extend Technical Cooperation for urban sanitation programmes : Germany signs Implementation Agreement; to contribute Euros 4 million and experts: Focus on measures against discharge of untreated waste water .

The Federal Republic of Germany has agreed to provide Euros 4 million and services of international experts to help the Ministry of Urban Development in effective implementation of sanitation programmes in urban areas of the country. India and Germany signed to this effect an 'Implementation Agreement on Support to National Urban Sanitation Policy' today. The agreement was signed by Shri Shankar Aggarwal, Secretary (Urban Development) and Shri Stefan Helming, Country Director, GIZ, on behalf of the Government of Germany.

The agreement valid for three years i.e till March, 2017, seeks to promote capacity development in the urban sanitation sector, formulation of state and city sanitation policies and support states for technical innovation. The focus of technical cooperation will be on enabling effective measures against discharge of untreated waste water into surface and ground water.

This technical cooperation agreement assumes significance in the context of the 'Swachh Bharat Mission' launched by the government which is to be implemented in all the 4,041 census towns.

Barack Obama to pledge at least $2.5bn to help poor countries fight climate change.

The article is available online at: http://www.theguardian.com/environment/2014/nov/14/barack-obama-to-pledge-at-least-25bn-to-help-poor-countries-fight-climate-change?CMP=EMCNEWEML6619I2 .

Barack Obama will make a substantial pledge to a fund to help poor countries fight climate change, only days after his historic carbon pollution deal with China.

In a one-two punch, America plans to pledge at least $2.5bn and as much as $3bn over the next four years to help poor countries invest in clean energy and cope with rising seas and extreme weather, according to those briefed by administration officials.

The financial commitment will be unveiled as world leaders gather for the G20 summit in Brisbane, sending a powerful signal of Obama's determination to act on climate change despite the Republican takeover of Congress in mid-term elections.

The pledge to the Green Climate Fund was seen as critical to UN negotiations for a global climate deal. Developing countries have said they cannot sign on to emissions cuts at climate talks in Lima later this month without the funds.

Analysts said the $2.5bn figure under discussion before the Brisbane summit was just about enough to demonstrate that the US was willing to put up the cash.

"I think it's a good signal for unlocking the negotiations for Paris in 2015," said Alex Doukas, an international climate policy analyst at the World Resources Institute. Congress will still have to authorise the funds. But some analysts argue that it will be difficult for Republicans to cut out climate finance entirely.

The pledge from Obama could also help spur Britain and other countries to pay into a fund that so far has raised just under $3bn, well short of its initial $10bn target.

Jake Schmidt, who follows international climate negotiations for the Natural Resources Defence

Council, said: "He is trying to use the G20 as a way to put pressure bilaterally and otherwise for countries to put their targets and their financing on the table."

There were early signs the strategy was paying off. The Japanese prime minister, Shinzo Abe, was expected to announce a pledge of up to $1.5bn to the fund at the Brisbane summit, press reports said.

The financial commitments from the US and Japan are in strong contrast with Canada's and Australia's positions, which have said they will not contribute to the climate fund.

Indeed the announcement could again embarrass the G20 host country, Australia, which has been fiercely resisting climate change discussions distracting from its desired focus on "economic growth and jobs".

The Australian government was caught off guard when Obama and his Chinese counterpart Xi Jinping unveiled climate pledges on the eve of the summit.

As revealed by Guardian Australia, Australia has been arguing against behind-the-scenes diplomatic efforts for G20 leaders to promise to make contributions to the fund.

The prime minister, Tony Abbott, had previously insisted Australia would not make any contributions to it, although it is understood the Department of Foreign Affairs and Trade, which leads Australia's negotiating position in international climate talks, has been considering whether Canberra should make a pledge. Sources said no final decision had been made.

Asked about the fund before last year's UN climate meeting in Warsaw, the prime minister said: "We're not going to be making any contributions to that." It was reported that at one of its first cabinet meetings the Abbott government decided it would make no contributions to the fund that was described as "socialism masquerading as environmentalism".

Abbott disparaged the fund at the time, comparing it to a domestic fund championed by the former Greens leader Bob Brown, which he wants to abolish.

He told the Australian newspaper: "One thing the current government will never do is say one thing at home and a different thing abroad. We are committed to dismantling the Bob Brown bank [the Clean Energy Finance Corporation] at home so it would be impossible for us to support a Bob Brown bank on an international scale."

The government also pointedly dissented from support for the fund in a communique from last November's Commonwealth Heads of Government meeting – a stance backed by Canada.

The Green Climate Fund aims to help poorer countries cut their emissions and prepare for the impact of climate change, and is seen as critical to securing developing-nation support for a successful deal on reducing emissions at the UN meeting in Paris next year.

More than $2.8bn had been pledged before the US commitment – including $1bn by France and almost $1bn by Germany. More pledges are expected at a special "pledging" conference in Berlin on 20 November. Britain has said it will make a "strong" contribution at that meeting.

Federal ministers raised strong objections to Australia's commitment to the Green Climate Fund during the cabinet discussion before Warsaw, a meeting to which Australia controversially declined to send the environment minister, Greg Hunt, or any ministerial representative. (Foreign minister Julie Bishop will be attending this year's meeting in Lima.)

In opposition Bishop raised strong concerns that money from the foreign aid budget was being directed towards the climate change fund. "Climate change funding should not be disguised as foreign aid funding," she said, accusing the former government of introducing the now-repealed carbon tax to pay for contributions to the fund.

"This is a tax to gather revenue to redistribute it around the economy and to buy themselves some brownie points at the United Nations," she said in 2011.

A showdown over the Green Climate Fund had been looming for next week, when a pledging conference was scheduled in Berlin.

However, it appears that Obama wanted to get out ahead of other countries – and focus the attention of G20 countries more firmly on climate change.

"He is seizing the opportunities that come his way to demonstrate to the world that the US is not going to backtrack on the progress he has made for the last five years, and that he is firmly committed to getting a strong deal in Paris," said Pete Ogden, a former White House adviser who is now the international climate and energy director at the Centre for American Progress.

"I think this is certainly about him showing that he is making no apologies for helping to build up an effective domestic climate policy and he is making no apologies for wanting to help lead global efforts to combat climate change. People around the world look at us and see what happened in the mid-terms. If they had any reason for concern that he would be diminished, I think the evidence of the last couple of days is going to put that to rest."

Heather Coleman, a climate analyst at Oxfam, said the US-China deal earlier in the week had helped lay the groundwork for Obama to offer a pledge on climate finance.

"Now that we have demonstrated that China is willing to move forward it does make it more palatable for the US to put more money on the table for international climate finance which everyone knows is the essential key to unlocking negotiations. Without finance you just don't get a global climate deal," she said.

The ballpark figure of $2.5bn to $3bn is not that much higher than the $2bn pledged to climate finance by George Bush in 2008.

"Ultimately this is money that will be appropriate by Congress, but the fact is for decades Congress has been investing in multilateral funds that support the efforts of countries to cut emissions and build cleaner economies," Ogden said.

Saving The Planet, One Meal At A Time : A person who is vegan will save 1,100 gallons of water, 20 pounds CO2 equivalent, 30 square feet of forested land, 45 pounds of grain and one sentient animal's life every day. We do not, given what lies ahead of us, have any other option.

The article is available online at : http://www.countercurrents.org/hedges101114.htm .

With animal agriculture as the leading cause of species extinction, water pollution, ocean dead zones and habitat destruction and with the death spiral of the ecosystem ever more pronounced, becoming vegan is the most important and direct change we can immediately make to save the

planet and its species.

Animal agriculture is responsible for more greenhouse gas emissions than all worldwide transportation combined—cars, trucks, trains, ships and planes. Livestock and their waste and flatulence account for at least 32,000 million tons of carbon dioxide (CO_2) per year, or 51 percent of all worldwide greenhouse gas emissions.
Livestock causes 65 percent of all emissions of nitrous oxide, a greenhouse gas 296 times more destructive than carbon dioxide. Crops grown for livestock feed consume 56 percent of the water used in the United States.

Eighty percent of the world's soy crop is fed to animals, and most of this soy is grown on cleared lands that were once rain forests. All this is taking place as an estimated 6 million children across the planet die each year from starvation and as hunger and malnutrition affect an additional 1 billion people. In the United States 70 percent of the grain we grow goes to feed livestock raised for consumption.

The natural resources used to produce even minimal amounts of animal products are staggering—1,000 gallons of water to produce 1 gallon of milk. Add to this the massive clear cutting and other destruction of forests, especially in the Amazon—where forest destruction has risen to 91 percent—and we find ourselves lethally despoiling the lungs of the earth largely for the benefit of the animal agriculture industry. Our forests, especially our rain forests, absorb carbon dioxide from the atmosphere and exchange it for oxygen: Killing the forests is a death sentence for the planet. Land devoted exclusively to raising livestock now represents 45 percent of the earth's land mass.

And this does not include the assault on the oceans, where three-quarters of the world's primary fisheries have been overexploited and vast parts of the seas are in danger of becoming dead zones. We can, by becoming vegan, refuse to be complicit in the torture of billions of animals for corporate profit and can have the well-documented health benefits associated with a plant-based diet, especially in the areas of heart disease and cancer.

Richard A. Oppenlander in his book, "Comfortably Unaware: What We Choose to Eat Is Killing Us and Our Planet," draws the terrifying scenarios that lie ahead unless we change what we eat. He notes that we can save more water by refusing to eat a pound of beef—which takes more than 5,000 gallons of water to produce—than by not showering for a year and that half the water in the United States is used to sustain livestock.

Your contribution to pollution begins with what you decide to purchase to consume. It's not just with the occasional purchase; it's with every food item you eat, every day. With meat and animal products, the pollution associated with your choice is massive. In order to raise that animal for you to eat, there is baggage that silently comes along with it—silent to you, that is, although it speaks loudly elsewhere. In the United States alone, chickens, turkeys, pigs, and cows in factory farms produce over five million pounds of excrement per minute. These are the animals raised each year so that people can continue eating meat, and they produce 130 times more excrement than the entire human population in our country. This manure sewage is responsible for global warming, water and soil pollution, air pollution, and use of our resources. The waste produced by the animals raised for food includes with it all the antibiotics, pesticides, herbicides, hormones, and other chemicals used during the raising and growing process. Accompanying this is methane released by the animals themselves, as well as the carbon, nitrous oxide, and additional methane emissions produced during the whole raising, feeding, and killing process.

On any given acre of land we can grow twelve to twenty times the amount in pounds of edible vegetables, fruit, and grain as in pounds of edible animal products. We are essentially using

twenty times the amount of land and crops and hundreds of times the water, as well as polluting our waterways and air and destroying rainforests, to produce animals to kill and eat … which is unhealthier than eating the plant products we could have produced.

The refusal by major environmental organizations, including Greenpeace, 350.org and the Sierra Club, to confront the animal agricultural business is a window into how impotent the activist community has become in the face of corporate power. "So many more people have a connection to animal agriculture, both in society and government, than have a direct connection to the oil industry," Kuhn said. "The oil industry employs, relatively speaking, a very small percentage of people and is controlled by a very small percentage of people. The agricultural industry, both animal agriculture and commodity grains fed to those animals, involves a much bigger demographic. Politically it is a lot more challenging. Corporations such as Cargill, one the largest commodity food corporations in the world, is able to create U.S. policy. The government says it needs to have affordable food, which means giving massive subsidies to these corporations. The belief is that we have to eat animal products to survive. It is not something that is even questioned. The fossil fuel industry is more easily challenged with the argument that there are alternatives. People do not feel there is an alternative to eating animals."

"You also have the marketing of grass-fed animals on smaller farms," Andersen said, "and while it initially appears better, it is actually worse. The factory farming is horrific for the animals, but it is better for the environment than pasture-fed beef because of methane emissions, feces excretion and all the horses and wolves that are killed so cattle can graze on public land, which we pay for with our public dollars. We didn't focus in the film on the factory farms. Everyone knows about that. We wanted to look at these so-called sustainable farms, as if this so-called humane farming is the answer. In most situations, these farms are worse for the environment, although it is better for the animals."

"If we had a different timeline, or if we had 1.5 billion people on the planet, then there might be halfway measures we could take," Kuhn said. "The situation we are dealing with ecologically, however, means there is no way left but an immediate shift to a plant-based lifestyle." "How can we best use our resources?" Oppenlander asks in "Comfortably Unaware." "What foods will have the very least effect on our planet? Which foods best promote our own human health and wellness, and which are the most compassionate? Do we really need to slaughter another living thing in order for us to eat? Or, sadly, is it because we want to?"

Commentary by Mathis Wackernagel, President and Co-Founder, Global Footprint Network on the US-China Agreement on Climate.

The landmark U.S.-China climate change agreement announced this week is a game changer for our energy future. It is resounding recognition of the need to wind down fossil fuel use. What had been a physical necessity but a political taboo is now being acknowledged by the two countries with the largest CO2 emissions.

Other countries have been waiting on the sidelines for the United States and China to act on climate change. So President Barack Obama and President Xi Jinping's commitment to reduce greenhouse gas emissions and boost renewable energy adoption by 2025 and 2030 respectively—just 10 and 15 years away—sends a promising signal to the world community on the path to the Paris climate summit at the end of next year.

The new goals would keep the United States on the trajectory to achieve deep economy-wide carbon emission reductions on the order of 80 percent by 2050, according to the White House. China, meanwhile, has targeted total energy consumption coming from zero-emission sources to

around 20 percent by 2030. Both actions will happen well within the lifetimes of many people today.

These targets represent a significant shift in political momentum and suggest that moving out of fossil fuels finally may have won mainstream acceptance.

Of course, it will take substantial investment for nations to transform their economies, and those costs are only likely to increase the longer nations delay action. Consequently, it's in the self-interest of every nation to act now to shift toward low-carbon economies.

Our analysis shows that countries are unequally exposed in terms of the scale and impact of reforms required to thrive in a low-carbon future. The longer countries wait, the more likely their carbon-intensive assets will lose value. This inaction may lead to a loss of competitiveness and potentially higher credit default risk. We are working with the U.N. Environment Programme Finance Initiative (UNEP FI) and leading finance institutions to develop tools for the finance industry to better measure these economic risks when evaluating sovereign bonds.

To succeed in a carbon-constrained world, government leaders at all levels need better tools to make economically effective long-term decisions on everything from infrastructure to energy to buildings. Consequently, we have worked with state leaders in the U.S. to enhance traditional net present value (NPV) tools to recognize the economic and resource contexts in which the investments will operate. Such assessments provide more realistic estimates of the future costs and benefits associated with particular investments and show that in many cases, the low-carbon options are already the economically superior choice today.

Indeed, the U.S.-China agreement announced Wednesday suggests we need an entirely new way to determine the value of fossil fuels and assets that could become stranded because of their over-dependence on those fuels.

The details of how U.S. and China will achieve their ambitious goals remain to be seen, and the agreement may prove to be largely symbolic. But symbols can be powerful, and we believe the agreement portends a brighter outlook for action on climate change in 2015.

Equity, Health and Climate Themes at the Forefront of Green Building Movement.

The article is available at: http://sustainablecitiescollective.com/evolveea/1013406/equity-health-and-climate-themes-forefront-green-building-movement?utm_source=feedburner&utm_medium=email&utm_campaign=Sustainable+Cities+Collective+%28all+posts%29

Each session of Greenbuild (http://greenbuildexpo.com/) drove home similar concepts of designing for our changing climate, driving social equity improvements, and creating a healthier built environment. Here are some highlights from the important sessions:

Measuring Sustainability's Impact on Workplace Productivity
We need evidence and metrics demonstrating more than just how building green will save money over the life of the building. We need to prove how it saves employers money with their biggest assets, their employees. Bob Best and Simone Skopek from Jones Lang Lasalle along with Patrick Clover of Autodesk provided insight into how to measure both energy reduction and productivity gains through a program Autodesk used for their own offices. The gist of the talk was that it's not always simple to optimize energy savings and occupant comfort, which directly relates to worker

productivity. The team came up with a scoring method to figure out what made workers most happy and most productive and used surveys to redesign the Autodesk offices. The improvements can then be monetized and analyzed alongside salary data to come up with some staggering ROI numbers from increasing worker productivity. One important point to note was that energy savings due to decreased heating and cooling loads can be overturned if employees are uncomfortable and their productivity declines. Similarly, if employees are too distracted in a smaller open office, their outputs may falter.

Master Speaker Katharine Hayhoe
The Master Speakers at Greenbuild are carefully chosen, and when you need a pick-me-up during the conference this is usually the place to find it. Katharine Hayhoe is a climate scientist at Texas Tech**. Her talk was mostly about the climate change facts that we already know—we *should* be in a cooling cycle and yet we are in a warming cycle, leading us to the fact that over 100% of our warming is human created.** One fascinating line was that she didn't know her husband was a climate skeptic until after she married him! Actually the most interesting thing she said was that she has read the work of climate skeptics and identified a trend. When asked to debunk the science, the deniers are very quick, within the same sentence or even same chapter of a book, to oppose and attack the solutions posed to fix the situation rather than opposing the actual science.

Inspiring Sustainable Communities and Change Through Storytelling
The stories were passionate and heartwarming, truthful and relatable. There were stories of realizing when we are not treating our own selves "sustainably", of speaking up for what you believe in, of how one little moment of each day can add up to create greater change, of overcoming self doubt, and the feelings we have about being at home. Stories were conveyed of changing your initial perception to get to the crux of a what a community really wants and needs, and an awesome story of walking into a room to see Brad Pitt sitting there telling you "he's listening" to what has to happen to build up the Lower 9th Ward after Katrina. The power of these stories was invigorating.

Opening Plenary: Paul Hawken
Paul Hawken publicly unveiled his new project "Drawdown" aimed at reducing greenhouse gas concentrations in the atmosphere. The project will produce a book in 2016 detailing the costs and benefits of various climate solutions. Paul and his team will seek out the truth on what will work to actually reduce greenhouse gases, not just stop them from increasing. It is a necessary and profound project.

5 Ways Data Health Analysis Can Add Value to Green Design
First, our speaker Adele Houghton of Biositu, debunked some popular myths about how health relates to building design. The data that has been recently collected has gotten much better and we are really seeing connections between human health and buildings. We know that healthy buildings mean healthy and non-toxic building products, but there are other aspects as well like designing to showcase the stairs, location nearest farmers markets, fitness centers, bike options, access to healthy food, and removing access to UNhealthy food (soda!). We broke into groups at our tables and did an exercise to come up with how we would design a school in an inner city neighborhood if we were optimizing to reduce heart disease. Our group decided that using the space as a means to educate the community on how to live a healthier lifestyle and including those programs in the curriculum were key. Staring with those at the vulnerable age of school students, is imperative to create the change needed to reduce health issues in these neighborhoods.

Designing Biophilic Cities for Public Health
Biophilia is a huge buzz word these days, and for good reason – my session about biophilia was

fascinating! Biophilia put very simply is the idea that humans are drawn towards things in nature, and designing buildings that incorporate nature can have a great affect on occupant happiness, comfort, and productivity. One example mentioned was of a park in New York which is always filled with people even in the depths of winter EXCEPT when the running water feature is shut down. People find solace in running water because at our most human core we need running water for survival. It's not about just seeing greenery out your window, it's actually about *how* biodiverse the world outside your window is – how many different species you can see. One of our speakers, Bill Browning, went over his 14 Patterns of Biophilic Design with examples, and making the case that this concept should be consistently integrated into building design.

Closing Plenary: David Brooks
The closing plenary was provided by David Brooks, who gave a thought provoking talk about our nation's shifting values and how our "eulogy virtues" differ from our "resume virtues" – which virtues matter more? We know "eulogy virtues" are more important but we spend our lives focusing on the "resume virtues". The talk was based around the values proposed in his latest book, *The Social Animal*. What a wonderful way to end this conference with humor and insight on the human mind.

Plan to clean up the Ganga flawed, say experts : The Ganga needs more flow which has been currently lost to agriculture and not more sewerage plants, argue environmentalists.

The Ganga is India's holiest but dirtiest river; government efforts to clean it up have so far failed to deliver.

The article is available at: http://www.thethirdpole.net/indias-plan-to-clean-up-the-ganga-flawed-say-experts/?utm_source=third+pole+newsletter&utm_campaign=9fe8bf389c-Tibetan+plateau+faces+%E2%80%9Cecosystem+shift%E2%80%9D&utm_medium=email&utm_term=0_43686cf8d5-9fe8bf389c-46416721

The government has submitted a blueprint to India's Supreme Court outlining its plan to clean up the river within 18 years. "Short, medium and long term measures are being taken to clean the Ganga. Within three years, we will put in place a proper mechanism in place for the river," Uma Bharti, Minister for Water Resources, River Development and Ganga Rejuvenation, told the media.

This announcement comes shortly after the Supreme Court criticized the government for not being proactive on the issue, saying it would take 200 years to clean up the river at the current pace.

But the outline of the strategy has left environmentalists unimpressed. While Modi has consistently pledged to rejuvenate 'mother' Ganga, his government's plans for the river lack any new or innovative ideas. The plan fails to list concrete steps to restore the flow of the river – essential for washing away pollutants. Instead, it relies on spending more money on new sewage treatment plants, the backbone of the earlier Ganga Action Plan, which ended in complete failure.

The plan's short term measures include: upgrading existing sewage treatment plants; improving sanitation in towns along the Ganga; conservation of dolphins, turtles and gharials (though it doesn't specify how); and afforestation along certain sections of the Ganga.

Under the medium-term plan, Rs 51,000 crores (US$ 8.3 billion) will be invested in sewerage infrastructure in 118 towns and open defecation will be banned in villages and small towns along the river banks. The Central Pollution Control Board (CPCB) will also enforce a zero liquid

discharge policy for heavily polluting industries located in the Ganga Basin.

In its affidavit, the government has also promised to tackle pollution in Kanpur, a city in Uttar Pradesh infamous for its polluting leather industry, which discharges toxic waste straight into the river. But again, it fails to mention how this will be done.

Rakesh Jaiswal, who heads the Kanpur-based NGO Eco Friends and has been crusading for the Ganga for decades, is not impressed: "I think they are asking for the moon. Achieving zero discharge from the polluting industries will be next to impossible. They can still manage to do it for the big and medium industries but what about thousands of small-scale industries in the informal sector that are operating on the banks?"

The Ganga, which originates from the Gomukh glacier in the Himalayas, is the second most polluted river in the world after Indonesia's Citarum river. Nearly 85% of the pollution in the river comes from sewage, while nearly 500 million litres of untreated industrial waste is dumped into the river every day. In the 1980s the government launched the first Ganga Action Plan (GAP) – the most ambitious initiative ever taken to clean up a river in the world – but this failed miserably to check sewage pollution.

"Despite the Ganga Action Plan, the situation has in fact worsened," Jaiswal added. "It has been a total failure. In 1986, there were 170 tanneries on the banks of Ganga but now there are 400 and they discharge toxic wastewater directly in the river. What little gets treated doesn't even conform to the standards set by the CPCB."

The problem is that most of the sewage treatment plants installed along the river under the GAP are not linked to the drainage system and as a result the wastewater gets dumped into the river unchecked.

In 2013 the Central Pollution Control Board inspected 51 of the 64 existing sewage treatment plants along the Ganga and found that less than 60% of the installed capacity was being used and 30% of the plants were not even functioning.

Resorting river flow

In the light of this, environmentalists say that the Modi government's new plan is unlikely to rejuvenate the Ganga "It is old wine in a new bottle with the same focus on sewerage treatment plants," said Manoj Mishra, an environmentalist and convener of Delhi's Yamuna JiyeAbhiyaan, an NGO working to restore the Yamuna. "My point is that sewage treatment is part of urban management. How can they mix it with river conservation?" he added. "There is no space for restoring catchment areas of the river. No one is talking about the tributaries, no one is talking about the biodiversity or the aquatic systems," added Mishra.

Bharat Jhunjhunwala, a water activist based in Uttarakhand agreed. "They are still talking about funding for more sewage treatment plants. It is a disastrous policy" he said. "The government should put a system in place to involve private players to treat the sewage and the government should purchase that treated water which can be used for irrigation."

If recycled water is used for agriculture, he explained, it will reduce the amount of water being diverted from the river. At least 30-35% of the total volume of the waters of the Ganga is needed to maintain a minimum flow, according to the interim report of the consortium of Indian Institutes of Technology responsible for drawing up the new action plan.

"But today the Ganga hardly has any water in it," said Jaiswal. "Over 90% of water is diverted for agriculture before the river reaches Kanpur. The plan merely plays lip service to maintaining

water flow but no one is talking about how they are going to do it. Unless the river has adequate water, it can't be cleaned,"

The long-term plan for the rejuvenation of the Ganga will be based on the Ganga River Basin Management Plan (GRBMP), currently being prepared by a consortium of seven Indian Institutes of Technology (IITs). The final report is expected to come out in December 2014.

Himanshu Thakkar, coordinator of South Asia Network on Dams, Rivers and People (SANDRP) doesn't think the consortium will deliver a holistic report. "IITs are good with technology, but they don't have any expertise in governance. The river needs good governance. Setting up more sewerage treatment plants is not going to help. They need to go back and see why the existing plants have failed in the first place. Who is responsible for that?"

The Modi-led government – which has already set aside over Rs 2,037 crores (US$338 million) to restore the Ganga – has now opened the Clean Ganga Fund for voluntary contributions from Indian citizens and Indians living abroad.

But at the same time, the government has announced an inland waterway project called "Jal Marg Vikas", which will allow 1,500 ton vessels to navigate a 1,620-kilometre stretch of the Ganga. Environmentalists have raised their concerns, arguing the project will require massive amounts of dredging, which will threaten fish and other aquatic biodiversity.

How technology can weave the golden thread of development.

The article is available at: http://www.scidev.net/global/technology/scidev-net-at-large/technology-development-golden-thread.html .

The first nod to technology came in the keynote address from Jay Naidoo, who led South Africa's reconstruction and development programme under Nelson Mandela between 1994 and 1999.

Alluding to the trend within development for NGOs to quantify their projects' impact, Naidoo emphasized that real development means giving people "opportunities and hope", which he said are "intangibles – not deliverables that can be captured in logframes". He spoke of how development has been effective at delivering quantifiable gains, such as extending the average lifespans of people. But he said it is still struggling to offer these more intangible — and crucial — benefits to marginalized people.

How to remedy this? Naidoo's suggestion was to equip people with the means to hold their own governments to account. And he said this would likely involve technology. He suggested it could start at the hyper-local level, with mobile phone apps, say, giving people the chance to scrutinize their local school's budget. The transition from living in a corrupt state to under an accountable government would be an effective way to introduce hope to people's lives, Naidoo said.

Nate Whitestone of Aptivate, an NGO provides IT support to groups trying to link in unconnected communities to the wider world. He spoke about an organization called SEND Ghana. Among other things, it uses text messages and a phone-in radio programme to inform ordinary Ghanaians about promises their politicians have made, collect people's feedback, and then send syntheses of it to the politicians.

This sounds like a fabulous model . And what's interesting is that the organization has been operating for years; it doesn't use apps or other high tech systems to gather the data.

That's not to say those things are never useful. Rather, the lesson — as it so often is — **is that any tech solution to a development challenge has to work for the local people it is supposed to help.**

In the final talk of the day, Justine Greening made reference to the "golden thread of development": the institutions – courts, land registries and so on – that a functioning nation hangs from. It was a nice note of circularity, harking back to Naidoo's singling out of good governance as a really vital pre-requisite to giving people hope and opportunity – real development.

BRIDGE TO INDIA presents the first ever India Solar Rooftop Map" . If you want a crisp overview of the current scenario (http://www.bridgetoindia.com/our-reports/indian-solar-map/ **) of the Indian rooftop solar market, the map available at the above link will be of interest to you.**

India will likely see a record growth of new solar installations in the next year, particularly in the rooftop solar segment. The key market drivers are: net metering policies, mandatory rooftop solar policies at the state level and the rising power tariffs. The rooftop solar market is still at an early stage with a very diverse set of participants and exciting dynamics.

The need of the hour is to map it. We at BRIDGE TO INDIA have done that and present the first ever India Rooftop Solar Map.

Highlights of the 'India Solar Rooftop Map 2015' are:

- **Over 285 MW of rooftop solar projects have been commissioned as of 31st October 2014**
- **Tamil Nadu is the leading state with rooftop installations of over 50 MW**
- **Eight states have net metering policies (draft or finalized) and nine states have rooftop solar policies/schemes**
- **Across India, only 12.6% of solar rooftop projects have received MNRE subsidy**
- **Su-Kam and Tata Power Solar are the only national players in the residential installer market and command over 33% market share**
- **Total installed capacity in the residential segment is 112 MW or 40% of the total market. The rest is commercial and industrial rooftop solar.**
- **Most residential systems are installed by local companies. Most players have a market share of less than 1%**

If you want a crisp overview of the current scenario (http://www.bridgetoindia.com/our-reports/indian-solar-map/) of the Indian rooftop solar market, the map available at the above link will be of interest to you.

UN: World not close to avoiding dangerous warming

The article is available at: http://news.yahoo.com/un-world-not-close-avoiding-dangerous-warming-151627596.html

The world still isn't close to preventing what leaders call a dangerous level of man-made warming, a new United Nations report says. That's despite some nations' recent pledges to cut back on carbon dioxide emissions.

The report looks at the gap between what countries promise to do about carbon pollution and

what scientists say needs to be done to prevent temperatures rising another two degrees. The two-degree level is a goal that world leaders set in 2009.

"The time window (for reaching that goal) is closing, closing," said United Nations undersecretary for environment Achim Steiner. And the cost of getting to that goal "is increasing, increasing."

To meet that goal, the world has to hit a peak of carbon dioxide, methane and other greenhouse gases before 2030, said the report's chief scientific editor, Joseph Alcamo. But the study says carbon emissions will continue to soar until 2050 and by then it will be too late.

Using basic math and science, researchers figured out how much greenhouse gas the world can emit by 2030 and keep below that two degree mark: about 46 billion tons. Without factoring in this month's promises by the U.S. and China to reduce emissions, the world will be spewing between 15 and 19 billion tons more than that, said Alcamo, chief scientist for the United Nations' environmental arm.

If the U.S. and China follow through with their promises, they may shave a few billions of tons off the total, said former U.S. Sen. Tim Wirth, vice chairman of the United Nations Foundation. Those pledges and an earlier one by Europe, while narrowing the gap, aren't large enough to close it, Alcamo said.

In his forward to the report, Steiner wrote that the "analysis reveals a worrisome worsening trend. Continued emissions of greenhouse gases will lead to an even warmer climate and exacerbate the devastating effect of climate change."

Outside scientists praised the numbers in the study, but Granger Morgan at Carnegie Mellon University raised a question that scientists have been debating more frequently: Is it time to abandon the two-degree goal as unrealistic?

"Today a two-degree target is akin to a 60-year-old man who resolves to be 25 years old next year," Morgan said in an email. "It ain't gonna happen, but it's time to get really serious about achieving what we can."

Steiner said because of the dangers of a warmer world, it is unthinkable to abandon the two-degree goal.

After the report was released at a Washington news conference, Tommy Remengesau — president of the small island nation of Palau, which is threatened by sea level rise — told The Associated Press that this really isn't about numbers: "**For some of us, it's a matter of survival: life and death**."

US: New climate resilience toolkit unveiled to help plan for changing climate

The article is available at:
http://www.preventionweb.net/english/professional/news/v.php?id=40472&a=email&utm_source=pw_email .

As part of the Administration's overall effort to combat climate change, President Obama is committed to ensuring that U.S. communities thrive in the face of a changing climate. The Administration has made significant investments in resilient disaster recovery in the wake of devastating storms like Hurricane Sandy, ensuring that rebuilding and infrastructure projects factor in climate impacts such as sea-level rise and investing in making transit systems more resilient to flooding and extreme weather.

Last year, as part of his Climate Action Plan, the President established the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, which recognizes that even as we act to curb the carbon pollution that drives climate change, we must also improve our ability to prepare for the climate impacts we are already seeing across the country. The Task Force comprises Governors, Mayors, county executives and Tribal leaders from across the country who are experiencing climate change impacts ranging from more severe droughts and wildfires to record heat waves and damaging storms. Task Force leaders have taken bold action to protect their communities by investing in more resilient infrastructure, updating building codes, adjusting the way they manage natural resources, and planning for rapid recovery from extreme weather events.

Recommendations of the Task Force on Climate Preparedness and Resilience
The Task Force's recommendations are the culmination of a year of work to solicit input from across State, local, Tribal, and territorial governments, trade associations, academic organizations, civil society, and various other stakeholders and translate their first-hand experiences into action items for the Federal Government to support climate-ready communities. The recommendations offer guidance on how the Federal Government should modernize programs and policies to incorporate climate change, incentivize and remove barriers to community resilience, and provide useful, actionable information and tools. The Task Force organized its report across seven cross-cutting themes: building resilient communities; improving resilience in the Nation's infrastructure; ensuring resilience of natural resources; preserving human health and supporting resilient populations; supporting climate-smart hazard mitigation and disaster preparedness and recovery; understanding and acting on the economics of resilience; and building capacity.

This approach ensures that the recommendations reflect the diversity of needs across the country and within each community, ranging from health to natural resources management to infrastructure and building design. For example, the recommendations address how the Federal Government can limit disease spread that is caused or exacerbated by climate change through the development and enhancement of climate-sensitive health tracking and surveillance tools, and call on the Federal Government to integrate climate resilience planning and preparedness criteria throughout existing Federal programs, such as those that provide transportation funding, to ensure these projects will last as long as intended.

Some features of the Toolkit include:
- The Climate Explorer: A visualization tool that offers maps of climate stressors and impacts, as well as interactive graphs showing daily observations and long-term averages from thousands of weather stations across the Nation.
- Steps to Resilience: A five-step process that users can follow to initiate, plan, and implement projects to help make their homes, communities, and infrastructure more resilient to climate-related hazards.
- "Taking Action" Stories: More than 20 real-world case studies describing climate-related risks and opportunities that communities and businesses face, steps they're taking to plan and respond, and tools and techniques they're using to improve resilience.
- Federal Resource Database: The Toolkit provides centralized access to federal sites for future climate projections, as well as freely available tools for accessing and analyzing climate data, generating visualizations, exploring climate projections, estimating hazards, and engaging stakeholders in resilience-building efforts.

In addition to the Toolkit, the Administration announced several other initiatives to support State, local, and Tribal climate resilience needs, including:
- Developing Online Resilience Training for Local Officials: The U.S. Environmental Protection

Agency (EPA) is developing an online climate adaptation training module for local government officials with locally tailored information that can help officials answer questions about climate impacts and resilience opportunities specific to their community. The virtual training module, which is being developed with advice from members of EPA's Local Government Advisory Committee, and will be accessible through the new Climate Resilience Toolkit, will also include examples of effective resilience strategies that have been successfully implemented in representative types of cities and towns across the nation.

- Announcing a Hampton Roads Preparedness and Resilience Exercise: Led by the National Security Council and supported by the National Exercise Division, the Administration will conduct a climate preparedness exercise in partnership with State and local leaders, as well as private-sector, academic and non-governmental partners in the Hampton Roads, VA region on December 2, 2014. Similar to successful workshops in Houston, Texas; Fort Collins, Colorado; and Anchorage Alaska, this one-day exercise provides partners with the best-available science on climate effects and consequences and a tailored scenario designed to enhance regional climate adaptation and hazard mitigation planning. This workshop will reinforce work currently underway in the Hampton Roads and Norfolk areas to address climate impacts, especially sea level rise, extreme storm surge, and recurrent flooding.
- Creating a Disaster Recovery App: The Department of Energy is launching Lantern Live, a mobile application that will provide real-time information in the wake of severe weather events on which gas stations have fuel and which neighborhoods have electricity. The app was developed in response to lessons learned in the aftermath Hurricane Sandy, and will allow users to report and view availability of fuel at nearby gas stations and access power company outage maps.
- Launching a Climate Education and Literacy Initiative: The White House Office of Science and Technology Policy (OSTP) is launching a Climate Education and Literacy Initiative, which has been developed in collaboration with Federal partners and shaped by input from communities and organizations across the country. OSTP will convene leaders in education and climate science from the public, private, nongovernmental, and philanthropic sectors at the White House to discuss new commitments and steps to connect our students and citizens with the skills they will need to succeed as tomorrow's community leaders, city planners, and entrepreneurs, in the context of a changing climate. This effort is a key step in growing a next-generation American workforce that is equipped with scientific information and tools, grasps the climate-change challenge, and is empowered to develop and implement solutions.

The Administration has previously taken additional actions to build National resilience based on input from Task Force members. This includes launching Federal competitions – like the $1 billion National Disaster Resilience Competition – that spur innovation and encourage investments in community resilience, new funding to support tribes prepare for climate impacts, and making vast Federal data resources on climate change impacts more accessible to decision-makers, innovators, and the public through the Climate Data Initiative. The Administration is also taking steps to ensure that public investments – whether in transportation systems, infrastructure, or natural resources – are made with future conditions in mind, and has ensured Federal agencies ranging from the Department of Health and Human Services to the Department of Homeland Security are actively incorporating climate resilience into their missions and operations. Going forward, the Administration will continue to collaborate with Task Force members and other community leaders from across the country to build a healthier and more resilient Nation.

Strategy to keep developing country delegates engaged in COP negotiations of UNFCCC

It is available at: www.solutionexchange-un.net/repository/pc/ccd/cr41-eng-21112014.pdf .

Engaging effectively in the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties and other international negotiations is something the developing countries struggle with but are vital as we can have as much as a voice as the bigger states.

The major reasons for the struggle are:

- ***Lack of resources :*** The number of country delegates are mostly limited to funding and with a few who do attend, have to carry out multiple tasks making it difficult to fully engage in the negotiations. However, with careful planning and goodwill, civil society organisations (CSO) can help boost funding for governments and for their delegates.
- ***Lack of objectives :*** Countries often do not have a clear goal when attending. Decisions at the international level do have important implications on climate change work at national level and this link needs to be understood. The strongest delegations are those that are there with a clear purpose.
- ***Lack of consistency*** in representation which is important especially when building the confidence of delegates and their ability to follow complex issues. Countries who have been consistent are more vocal and effectively engaged because they have had time to build up their knowledge on the issues. Also, a well-rounded delegation with equal members of women state and CSO representatives can bring a level of diversity, strength and purpose that reinvigorates a national delegation.
- ***Preparation,*** those who do not are not confident to speak or take a position even to the media. This is another setback because if a country wishes to engage in a stronger way, it would be good for their national delegates to attend prepared with a mandate to achieve this. This requires forward planning, and the stronger a mandate a person has, the stronger their negotiating position can be.
- ***Lack of time***. Countries are challenged to set aside sufficient time to prepare through their relevant consultation processes at national level. In some cases delegates are selected on an ad hoc basis or on the basis of who is available despite the fact the UNFCCC COP schedule is known for the most part of the 12 months in advance, with subsidiary bodies meetings in the middle of the year when a lot of preparatory work is done. It would appear some countries wait until they get an official invite from the UNFCCC before they select representatives, and they may find their best representatives engaged in other commitments.

Solutions:

- ***Capacity building*** through training and tertiary courses. Governments need a strategy to maintain their selection of country delegates and at the same time provide proper coaching and training. A media training that is already happening every year which is good however countries **need a media strategy** to voice their stories and concerns and not get buried under the voices of the negotiating blocks.

- ***Time required for national planning***. At the beginning of the year, governments are to decide the Ministry to lead the negotiations, the focal point, and a small but strong national task team to support key events. With good planning, even a small group of country delegates can rotate/take turns in participating in the conference to reduce exhaustion. Also, research the country hosting the COP that year particularly on the weather and food. Further, The negotiating environment is constantly shifting, discussions have gone from climate change being a distant issue to now one of urgency and grave concern and deadlines to change course through mitigation, adaptation and loss and damage. Developing countries need a strategy to keep up with the shift in discussion and at the same time deal with the major emitters' resistance to take action and accept responsibility in assisting vulnerable countries, like India.

- ***A clear national mandate*** in place prior to the COP negotiations. Country delegates are

to attend with a clear idea of what is essential for them to follow and the language they want reflected in the text of the agenda items.

- ***Mentoring*.** Ideally, there would be at least one senior experience delegate and one new or less experience delegate on each conference at regional and international level. The senior delegate can introduce key people who help new negotiators get engaged and a history behind decisions on important agenda items, and gradually the new delegate takes on an agenda item or sub item on their own.

From experience, a wonderfully laid text is sometimes lost in the last hours because:

- The delegates assigned have left due to other engagements
- They were exhausted and missed some sessions
- Lost motivation and momentum
- Could not stay awake anymore from sheer fatigue.

In conclusion, **experience and knowledge are indispensable** as UNFCCC meetings are not an opportunity for junkets for officials, especially if they have no technical background or negotiating skills. No matter how under-resourced any developing country government departments may be, nothing is more important than thoroughly preparing for, attending and contributing constructively at UNFCCC meetings **as the future of the developing countries and the planet's biodiversity is on the line at these meetings.**

The presence of senior figures from developing countries who are well versed in climate change issues is urgently needed at these critical meetings, not the least as a magnet for the international media and thus putting pressure on industrialized countries from outside the conference hall.

Recycling Computers, Phones, and Televisions: You're Probably Not Doing It.

The article is available at: http://sustainablecitiescollective.com/jeffmcintirestrasbu/1017131/recycling-computers-phones-and-televisions-you-re-probably-not-doing-it?utm_source=feedburner&utm_medium=email&utm_campaign=Sustainable+Cities+Collective+%28all+posts%29 .

Got old electronics sitting in the basement, a closet, or even a room you use? According to a new study from Staples, probably: while many of us sell them on eBay, donate or re-gift them, or even throw them away, most of us are hoarding those old electronics. **Only 8% of** Americans are recycling computers and televisions taking up space in our homes.

Ironically, even while we're allowing old devices to clutter up our living space, we want more gadgets: a majority of us will be telling our loved ones that we want a new phone, a new tablet, etc. Furthermore, many of us will just assume someone on our list wants something electronic, even thought s/he really doesn't… but we'll buy it anyway.

So, Why Aren't We Recycling those Gadgets?

If you're reading this, your likely the kind of person who's aware of options for recycling electronic waste; it turns out, though, that you're in the minority. The Staples study done in the US shows that many people still don't know that they can recycle those televisions and phones. Others claim that opportunities to recycle e-waste aren't available in their area.

In many cases, people just aren't getting the right information.

So, given below are some resources used in the **United States** for Recycling Computers, Phones, and Televisions:

- Online services like Earth911 and 1-800-Recycling.com provide directories for recycling services in your area – just put in your location, and choose the kind of material you want to recycle.
- If you'd like to make a little money off of that old computer, avoid just selling it on Craigslist, and find a service that will purchase it to recapture valuable materials or refurbish it for further use. Staples has a service like this.
- Subscribe to your neighborhood/town online community (like Nextdoor), as information about e-recycling drives sponsored by community organizations will often get announced there. That's how many people got rid of old computers collecting dust in homers / offices.
- Finally, if you buy new at chain retailers, or even local ones, ask about their options for recycling the gadget you're replacing – they may be able to take it off of your hands right there.

WEBINAR TRAINING: 9 DECEMBER 2014 : Micro-grids: Best Practices around Technology Challenges on 9 December 2014; 10:00 a.m. EST; 4:00 p.m. CET.

For more information, please visit: https://cleanenergysolutions.org/training/micro-grids-best-practices .

The United Nations Foundation's Energy Access Practitioner Network, in partnership with the Clean Energy Solutions Center, is hosting a no-cost, webinar-based training on the current challenges and solutions around micro-grid technologies that members of the Practitioner Network's Micro-grids Working Group are employing and scaling.

This webinar is part of the broader work that the UN Foundation is undertaking on energy access and as part of the Clean Energy Mini-grids High Impact Opportunity (HIO) area within the UN and the World Bank's Sustainable Energy for All initiative.

The speakers in this session will showcase their respective organizations' experience around various technology challenges and solutions pertaining to micro-grids, discuss and contrast specific geographic contexts, and provide collective best practices.

The following Practitioner Network Micro-grids Working Group members will be presenting on their organizations' work in this area:

- **Matt Orosz, Massachusetts Institute of Technology and STG International**
- **Tristan Kochoyan, Power:ON**
- **Michelle Klassen, ZeroBase Energy**
- **Matt Basinger, Advancing Engineering Consultants**

The brief presentations will be followed by a discussion among the panelists, moderated by Daniel Schnitzer, founder of EarthSpark International and SparkMeter, and co-chair of the Practitioner Network's Micro-grids Working Group. The webinar will conclude with an interactive question-and-answer session with the audience.

To register, please visit:
https://attendee.gotowebinar.com/register/2000000000029027834;jsessionid=abcWoPcjHKgvVepW_wLNu

About the Clean Energy Solutions Center : It is an initiative of the Clean Energy Ministerial, helps governments and policy experts design and implement clean energy policies by providing no-cost expert assistance, training, policy reports, data, and tools.

To learn more about the Solutions Center and how it can assist in meeting countries' clean energy policy objectives, please visit www.cleanenergysolutions.org

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Study of melting glaciers worries meteorologists

The article is available at : http://www.dawn.com/news/1146523/study-of-melting-glaciers-worries-meteorologists .

Meteorologists worried at the depletion of glaciers in Pakistan studied six glaciers in the Karakorum Range recently, and the results have made them worry even more.

"All of them were found melting at a faster rate. The changing climate is taking a heavy toll on our glaciers," Chief Meteorologist of Pakistan Met Department (PMD) Dr Ghulam Rasul told Dawn.

And the disaster awaiting the nation can be imagined as depletion of glaciers in northern Pakistan during the last decade had been consistent with the rising temperature.

Experts say the study showed that the Hinarchi glacier, which had retreated 800 metres in the 32 years between 1977 and 2009, retreated another 300 metres during the next five years. Similarly, the Baulter glacier which had retreated 1,500 metres, shrank another 400 metres by 2014. The future of the Barpu glacier looks gloomy as it has shrunk 640 metres since 1977.

Dr Rasul explained that due to rising temperature the glaciers had been losing their ice mass at a faster rate than ever before.

"The last 15 years witnessed a big escalation in the thermal regime of glaciated and snow covered region of Pakistan. We recorded more than one degree Centigrade increase in temperature which triggered the formation of glacial lakes and the phenomenon of GLOF - glacial lakes outburst floods - occasionally high river flows, land slips and slides," he said.

The Met Department study suggests that accelerated melting of glaciers, together with intense monsoon rains, brought river flooding downstream.

It notes that formation of glacial lakes inside the glaciers is now "fairly frequent." High temperatures, glacier movement or weakening ice walls can cause them to burst open suddenly, flooding areas downstream.

Sometimes, glacial lakes mysteriously appear and disappear suddenly.

A massive lake on the Hinarchi glacier, which PMD team started studying in 2012, disappeared suddenly in August 2014. Similarly, a massive lake was discovered at the mouth of Liligo glacier in the summer of 2013 that did not exist in 2010 when it started receding.

"Since 2010, Pakistan has regularly suffered floods caused by intense monsoon rainfall, which weathermen had been predicting will further intensify. The floods in 2010 and 2014 inflicted historic losses," he recalled.

The 2010 floods left no region of the country untouched. It devastated Punjab, Azad Kashmir, Gilgit-Baltistan, Khyber Pakhtunkhwa, Balochistan and Sindh to various degrees.

Floods visited Balochistan and Sindh in 2011, Punjab and Sindh 2012, Azad Kashmir, Khyber Pakhtunkhwa, Punjab and Sindh in 2013 and Azad Kashmir, Punjab and Sindh in 2014.

Pakistan has been holding the top position among the 10 highly vulnerable nations to climate-induced disasters, according to the organisation, German Watch.

The development policies of most of the countries are streamlined with the global warming and climate change projections but Pakistan has failed to head in that direction.

Guidelines for Considering Traditional Knowledges in Climate Change Initiatives; By: Climate and Traditional Knowledges Workgroup

The article is available at:
http://cakex.org/virtual-library/guidelines-considering-traditional-knowledges-climate-change-initiatives?utm_source=November+2014+Slice+of+CAKE&utm_campaign=November+2014+Slice&utm_medium=email .

There is increasing recognition of the significance of traditional knowledges (TKs) in relation to climate change. And yet there are potential risks to indigenous peoples in sharing TKs in federal and other non-indigenous climate change initiatives.

These guidelines are intended to examine the significance of TKs in relation to climate change and the potential risks to indigenous peoples in the U.S. for sharing TKs in federal and other non-indigenous climate change initiatives.

Although it is common to refer to "traditional knowledge(s)" as individual pieces of information, this term also refers to traditional "knowledge systems" that are deeply embedded in indigenous ways of life.

These guidelines use the phrase "traditional knowledges" deliberately in plural form because knowledges are emergent from the symbiotic relationship of indigenous peoples and places – a nature-culture nexus.

Tribes and indigenous peoples use "knowledges" to emphasize that there are diverse forms of traditional knowledge and knowledge systems that must be recognized as unique to each tribe and knowledge holder. These guidelines should be used to inform the development of specific protocols in direct and close consultation with indigenous peoples.

These guidelines are intended to meet multiple goals. First and foremost, these guidelines are intended to be provisional.

They are intended to increase understanding of the role of and protections for TKs in climate initiatives, provide provisional guidance to those engaging in efforts that encompass TKs and increase mutually beneficial and ethical interactions between tribes and non-tribal partners.

Climate change is not just about science – it's about the future we want to create

The article is available at : http://www.theguardian.com/science/2014/nov/22/-sp-climate-change-special-report .

The cut-off date for published material considered by **IPCC working group I was July 2013**. But there have been some important results since. Evidence from the Argo floats, a system of 3,500 buoys deployed throughout the world's oceans, shows that despite an 18-year pause in the rate of surface and atmospheric temperature rise, energy has continued to accumulate in the oceans unabated, with the prospect that some of it will be released to the atmosphere in the

future.

New data from the CryoSat satellite show the recent rate of ice loss from Greenland and Antarctica has doubled in three years. Some experts have concluded that the loss of ice from the West Antarctic ice sheet is now irreversible and that this will raise sea level by 1 to 2 metres in as little as a few hundred years.

Based on a combination of scientific analysis, assessments of the impacts and related value judgments, the nations negotiating under the terms of the UN framework convention have set a limit beyond which climate change will be "dangerous". That limit is 2C above the pre-industrial average. We are currently at 0.8C. Two-thirds of that increase has occurred since 1980. In order to stay below the 2C "guardrail", human carbon emissions have to drop to 50% of the present level by 2050 and thereafter drop to zero. This would mean leaving 75% of known fossil fuel reserves in the ground. They would become economically worthless.

The temperature at which the system will stabilise is determined by the total quantity of carbon we emit to the atmosphere, not the rate at which it's emitted. So reducing carbon emissions to zero will not lower temperature; it will just prevent the temperature rising beyond the 2C level. Temperature will then remain at that level for a very long time because CO2 remains in the atmosphere for hundreds to thousands of years.

This sets a limit on the total carbon that we can burn. **The IPCC calculates this to be about 800 gigatons of carbon. They estimate that we have already burned 530 gigatons. This leaves 270 gigatons for us to use. At our current rate, which is 10 gigatons of carbon a year, we have 27 years left, after which time carbon emissions would need to cease.**

Suppose we begin reducing our emissions next year and don't exceed the overall 800 gigaton limit; then CO2 concentration will stabilise at 450 parts per million. Temperature will take longer to stabilise because it responds to CO2 concentration – but it will eventually stabilise at 2C. The oceans will continue to warm and the ice will continue to melt – so the sea level will continue to rise. It will take hundreds of years but will eventually stabilise at a level, based on evidence from past warmings, about 2 to 3 metres higher than today.

If we leave it longer to start reducing emissions, we will have to reduce them more rapidly to avoid exceeding the overall 800 gigaton limit. Calculations show that if we leave it until 2020 – only five years away – the subsequent reductions would be of the order of 6% per year to stay within the 2C limit. 6% may not sound much, but annual reductions of carbon emissions greater than 1% have happened only during economic recession or upheaval. The UK conversion from coal to gas and the French conversion to nuclear in the 1970s and 80s achieved reductions of 1% per year. A temporary 5% reduction was achieved in the Soviet Union when it collapsed. Japan recently achieved a 15% reduction when its nuclear power stations were shut down, and demand fell as a result of a national appeal, after the Fukushima disaster.

The 6% annual rate of reduction required is global. We in the developed world have to reduce emissions even more rapidly to accommodate growth in the developing world. To achieve the necessary reduction will require a collaborative effort on a global scale.

Time is running out : The aim of next December's meeting in Paris is to forge a deal to put the world onto a path to a 2C maximum rise. The new agreement aims to obtain credible and fair emission reductions and legally binding commitments from all countries – with the most advanced economies making the most ambitious commitments.

In the lead-up to Paris 2015, Barack Obama and Chinese President Xi Jinping have announced joint measures to fight climate change. The US aims to reduce its carbon emissions to 26%-28% below 2005 levels by 2025 – nearly doubling its previous commitments. Despite not having signed up to Kyoto or Copenhagen, the US is already on track to cut its emissions by 17% between 2005 and 2020. China, partly driven by serious air pollution problems, has committed to cutting the proportion of energy it generates from coal and has set up pilot carbon markets and low carbon zones. It has set a date of 2030 for "peak" emissions and has pledged to increase the share of non-fossil fuels in its energy mix to around 20% by 2030, from less than 10% today.

India's prime minister, Narendra Modi, has committed to expand solar energy to provide electricity to 300 million people who have no access to power at present. The EU has agreed a package to achieve a 40% reduction in domestic emissions. It aims to boost the use of renewable energy to 27% and to increase energy efficiency by at least 27%. The UK Climate Change Act, passed in 2008 with cross-party support, is the world's first long-term, legally binding, national framework for reducing emissions – setting five-year carbon budgets to cut UK emissions by 80% by 2050.

Around the world, in recent years, almost 500 climate-related laws have been passed in 66 of the world's largest emitting countries. In 2005 the mayors of the worlds 40 largest "megacities" – including London – met and formed the C40 Cities Climate Leadership Group. They have taken 4,734 actions to tackle climate change, over three-quarters of which have been implemented.

Many individuals have taken measures to reduce their own climate-related impacts by making changes in their personal, professional and public lives – installing solar panels, increasing the energy efficiency of their homes, vehicles and appliances, using public transport and avoiding unnecessary travel, changing diet and by choosing to forgo activities that generate emissions. They have encouraged changes to be made in their workplaces and written to their MPs. They have sought to educate themselves about the issue and to talk about it to their friends, families and communities.

Around the world, renewable power capacity grew at its strongest ever pace in 2013 and now produces 22% of world energy. More than $250bn was invested in "green" generating systems in 2013, although the growth is expected to slacken, partly because western politicians are seeking to reduce financial incentives.

The growth rate of windfarms and solar plants in China, India and an array of smaller developing nations is starting to outpace that in the richest ones. This explains why investors are increasingly confident and keen to put their money on alternative energy. But despite all these measures, global carbon emissions continue to rise.

To achieve the necessary reduction in carbon emissions will require the invention and mass roll-out of new technologies that do not exist yet. However, my experiences as director of the Science Museum from 2007-10, exploring the legacy of technical innovation on public display and held in its reserve collection, and of working with engineers on space projects during the exhilarating era of the 70s and 80s, convinces me that human ingenuity is unbounded and that technological advances can be very rapid.

My hope lies with the engineers. But the right conditions need to be in place for innovation to occur. Progress is hard when other economic drivers inhibit the transformation. Fossil fuels are estimated by the International Energy Agency to receive subsidies of $500bn per year, six times the incentives to develop renewables.

Suppose we fail to take the action needed to stay below the 2C guardrail. The IPCC working

group I predicts that by the end of the century, if measures to mitigate emissions are weak, we could have committed to more than a 4C rise.

No nation would be immune to the impacts of that level of climate change. Our infrastructure was built for the climate system we inherited and is not designed to cope with the climate system we are provoking.

Our food and water supplies, housing, industry – our entire wellbeing and prosperity – depend on access to energy. And our primary source, at present, is fossil fuel. So we are confronted with a need to totally transform the world's energy system. At the same time we need to ensure energy security, equity, sustainability and growth.

So what does the future hold? I look at my eldest grandchild who will reach the age I am now in 2071. I encourage her to be an engineer. We are all dependent on energy. Almost everything we do depends on it. There will be carbon atoms that we each generate today that will still be in the air in 2071, in the air that my granddaughter will breathe.

Science can inform, but it cannot arbitrate, it cannot decide. Science can say that if we burn another half-trillion tons of carbon the atmospheric content of carbon dioxide will go up by another 100 ppm and that will almost certainly lead to a warming of the planet greater than 2C, with major disruption of the climate system and huge risks for the natural world and human wellbeing. But it can't answer moral questions.

The whole point about climate change is that, despite having been revealed by science, it is not really about science. It is about what sort of world we want to live in and what kind of future we want to create.

WRI Working Paper on adaptation and loss and damage

The paper is available at : http://act2015.org/ACT_2015_Options_for_Adaptation_and_Loss_&_Damage.pdf

We would like to bring your attention to a recent WRI Working Paper on adaptation and loss and damage published as part of the ACT 2015 project.

The paper explores some of the most crucial key issues relating to adaptation and L&D in run up to the 2015 climate agreement and outlines options for addressing them.

These include:

- **whether adaptation should be a central element of the new agreement or a part of a larger package of decisions;**
- **the desirability or otherwise of a global adaptation goal and whether/how such a goal should be linked to different levels of mitigation ambition/temperature rides;**
- **the scope of adaptation activities and the role of the UNFCCC in relation to such activities;**
- **whether or not adaptation and loss and damage should be rolled up under one governance arrangement.**

Furthermore, the paper discuses a number of crosscutting issues which have serious implications for adaptation and loss and damage.

These include:

- **finance,**
- **equity,**
- **capacity building,**
- **technology transfer,**
- **MRV.**

Other related ACT 2015 papers can be accessed through the link below: http://www.wri.org/our-work/project/act-2015/publications .

Government Announces Swachh Bharat Kosh Operational Guidelines; To Come into Force with Immediate Effect

Individuals and philanthropists have expressed interest in contributing to efforts to achieve the objective of Clean India (Swachh Bharat) by the year 2019. The Swachh Bharat Kosh has been set up to facilitate channelization of philanthropic contributions and Corporate Social Responsibility (CSR) funds towards this cause.

Governing Council:
The Swachh Bharat Kosh (henceforth called Kosh) would be administered by a Governing Council chaired by Secretary, Department of Expenditure. Other Permanent members will be Secretary (Planning), Secretary (Drinking Water and Sanitation), Secretary (Urban Development), Secretary (Housing and Urban Poverty Alleviation), Secretary (Rural Development), Secretary (Panchayati Raj) and Secretary (School Education and Literacy). Departmental Secretaries from Tourism, Culture or any other department would be invited as and when their proposals are being deliberated.

While efforts would be made to optimally apply the funds in the Kosh to its objectives, any temporarily idle balance may be invested in fixed deposits with the State Bank of India, with the approval of the Governing Council. Any interest thus earned would be ploughed back into the Kosh, and used for furthering its objectives.

Admissible Activities:
The Kosh will be used to achieve the objective of improving cleanliness levels in rural and urban areas, including in schools. It may also be enabled to bring out innovative / unique projects and girl toilets will be the priority area to start with. The following broad activities will be financed from the Kosh:

- Construction of community/individual toilets in rural areas, urban areas, in elementary, secondary and senior secondary government schools, aanganwaadis (Centres that provide support to children below 6 years and their mothers under the Integrated Child Development Scheme, Ministry of Women and Child Development);
- Renovation and repair of dysfunctional community/individual toilets in elementary, secondary and senior secondary government schools and aanganwadis;
- Construction activity for water supply to the constructed toilets;
- Training and skill development to facilitate maintenance of constructed toilets and to ensure its inter-linkages with education on hygiene;
- Other initiatives of improving sanitation and cleanliness in rural and urban areas including solid and liquid waste management;
- Any other activity to improve sanitation in the country as decided by the Governing Council.

Proposing of Projects

The line Ministries will propose projects to the Governing Council pertaining to the above activities. The states can also apply for the funds of the Kosh through the respective line Ministries. The allocation from the Kosh will be used to supplement departmental resources for the above-mentioned activities. However, specific suggestions regarding creation of assets, coming from donors making contributions of more than Rs. 10 crores, may be considered by the line Ministries, if otherwise not in conflict with these guidelines.

Approval and Release of funds:

The Governing Council will meet at least once every quarter, or sooner, if required, to assess the feasibility of funding the projects/activities proposed by the line Ministries. The Governing Council will prioritize the projects proposed by the line ministries, on the basis of criteria to be laid down by itself.

Implementation:

- The implementation of the projects/activities would be carried out by the existing institutions already in place at the State, District, and Sub District level to execute the projects/activities. No new institutions will be created.
- The costing of projects will be guided by the prevalent cost norms of Centrally Sponsored Schemes (CSS) of similar nature. These will be used in deciding the cost estimates of the projects to be financed from the Kosh.

Monitoring:

- The line Ministries administratively concerned with the projects will closely monitor the utilization of the funds received from the Kosh and would provide a quarterly progress report to the Governing Council and the Finance Minister.
- The progress of activities undertaken from the Kosh will be reviewed by the Finance Minister on a quarterly basis and by the Prime Minister from time to time.
- The Ministries would ensure that the projects/activities undertaken from the Kosh are not duplicated.

Accounting and Audit:

To ensure financial accountability, internal audit shall be carried out by the Chief Controller of Accounts, Ministry of Finance, once every quarter. In addition, statutory audit shall be carried out annually by an independent auditor from a board of auditors appointed by the CAG. The reports and observations will be brought to the notice of the Central Government.

The CCA (Finance) will maintain accounts, including Receipts and Payments Accounts.

Information and web portal:

Information relating to all activities of the fund along with relevant FAQs will be uploaded on the website of the Finance Ministry. The administrative ministry will answer RTI or other queries related to implementation and utilization of funds made available to them for activities under this fund.

Amendment of Guidelines:

After assessing the experience of administering the Kosh, the Governing Council may recommend amendment of the guidelines, as and when required, to better achieve its stated objectives, for the approval of the Finance Minister.

The aforesaid guidelines are also available on the website of the Ministry of Finance : www.finmin.nic.in .

3rd Inclusive, Integrated Solid Waste Management Exhibition : 26 to 28 February, 2015; Pragati Maidan, New Delhi, India

Greetings from CII!

It gives us immense pleasure to inform you that Confederation of India Industry (CII) is organizing the 3rd edition of IISWM 2015 scheduled from 26-28 February, 2015 at Pragati Maidan, New Delhi with the support of Ministry of Urban Development, Government of India along with the support of relevant bodies like Andhra Pradesh Technology Development & Promotion Center (APTDC), National Solid Waste Association of India (NSWAI) & Indian Biogas Association (IBA)

Waste management in India is in the state of development taking into consideration both urban and industrial waste, which in the next years is positioned to develop significantly, 3rd IISWM 2015 shall focus on varied aspects related to solid waste management with a special focus on Municipal Waste, Industrial Waste, Bio-Medical Waste, Electronic Waste, Water Waste, Hazardous Waste, Composting, Material recycling, Innovative Products & Technologies, Effective waste management strategies for Allied Industries, Public & Private Partnerships, Government Policies, Financing, Planning & Regulation.

OBJECTIVE:
The objective of CII along with the Government of India and our supporters is to enhance the quality of life and protect the public interest by establishing sound environmental policies; enforcing codes; and constructing, operating, and maintaining the countries infrastructure

Government Initiative "Swachh Bharat"
Urban India generates about 47 million tons of solid waste (garbage) every year or about 1.3 lakh tons every day, according to a study by the Central Pollution Control Board (CPCB). But this is only in cities and towns with a municipal body reporting. Another 30% of urban India lives outside these cities. If you add their garbage, the total would amount to about 68 million tons. (Source: TOI)

Key features of 3rd IISWM 2015:
3 Day Exhibition | B2B Meetings | Buyers Sellers Meet | Conference & Seminars | More exhibitors | More education | More solutions | More connections

CII has taken the initiative to organize the 3rd IISWM 2015 and provide a platform to Decision Makers, Government, Manufacturers of Technology, Municipalities, NGOs, Consultants, Industry etc to meet, interact and exchange ideas to implement policies, joint ventures and partnerships to provide effective solutions

Here is an opportunity for your esteemed organization / company to be a part of the largest exhibition 3rd IISWM 2015. We will be delighted to assist you in finalizing your participation in this event - in consultation either with you/or your nominations.

CLIMATE SOLVER AWARDS 2014

Call for nominations

Last date for submission: 21 December 2014

For further details, please visit: http://goo.gl/LjcrIN

Hon'ble Minister of State for Environment, Forests & Climate Change (MoEFCC) Shri Prakash Javadekar presenting the last year's Climate Solver Awards.

Climate Solver is a climate innovations platform developed by WWF to strengthen the development and widespread use of low carbon technologies, which radically or transformatively reduce carbon dioxide emissions or provide energy access. The platform stimulates the diffusion of innovative low carbon technologies and also generates awareness about them along with the overall value of innovation as an immediate and practical solution to climate change.

Climate Solver is one of the most important projects of WWF in the field of low carbon innovation for small and medium enterprises (SMEs). It was launched in WWF- Sweden in 2008 and globally in 2011. In India Climate Solver was launched in 2012, and is now in its third year Till now, WWF- India in consultation with a distinguished expert panel, has awarded 5 companies in the GHG reduction category and 4 companies in the Energy Access category. These award winning companies are listed on the International Climate Solver platform as well (**www.climatesolver.org**).

Please find the Climate Solver 2014 Brochure at **http://goo.gl/xHGt4K**. We encourage you to send in relevant case studies on the above mentioned themes (energy access and GHG reduction).

Looking forward to receiving nomination(s) from your organization for the Climate Solver 2014 award process.

For any further queries or details, please contact Ms. Jincy Joy, Senior Programme Officer, Climate Change & Energy Division, WWF-India at **jjoy@wwfindia.net**

Many thanks to all who contributed to this issue of Update!

If you have items to feature in the Updates, please send it to Solution Exchange for the Climate Change Community at : se-clmt@solutionexchange-un.net.in

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