

Centre for Business Sustainability,
IIM Lucknow, Prabandh Nagar, Off. Sitapur Road, Lucknow – 226 013
E-mail: cbs@iiml.ac.in Phone: +91 522 2736987, +91 522 2736989

Business Sustainability News

International

2012 expected to be ninth warmest year on record

By **Fiona Harvey**, for *guardian.co.uk*

This year is likely to be the ninth warmest on record, with global temperatures in 2012 cooler than the average for the past decade owing to the effects of La Niña weather patterns early in the year.



Dying corn after a summer of extreme temperatures in Illinois, US.
Photograph: Robert Ray/AP

The estimates come as governments countries wrangle over the form of a proposed new global agreement on climate change that could eventually replace the Kyoto protocol. Nearly 200 countries are meeting in Doha, Qatar, but as yet there are few signs of unity.

So far this year, the current world average global temperature is 14.45C, which is between one-tenth and a 0.5C higher than the 1961 to 1990 average.

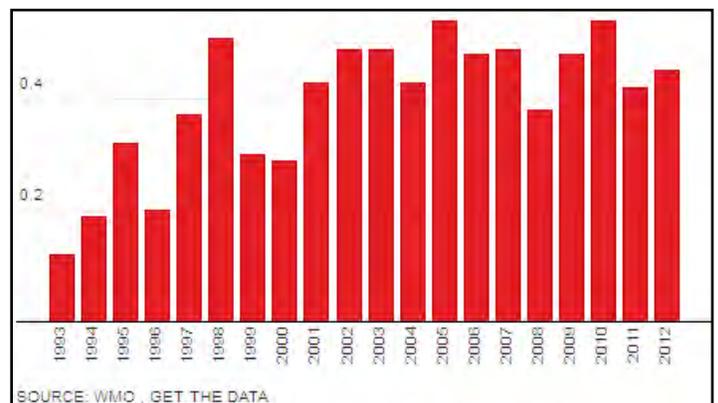
The World Meteorological Organisation (WMO) used information from three global temperature sets, running from January to October, to make its estimate. But the ranking could change under further analysis, and final data will not be ready until next March.

Above average global temperature years

Degrees Celsius above the 1961-1990 average, taken from the WMO average of HADCRUT, NASA and NOAA temperature datasets. 2012 is on course to the ninth warmest year on record

Peter Stott, head of climate monitoring and attribution at the UK's Met Office, whose data contributed to the WHO estimate, said: "Although the first decade of the 21st century was the warmest on record, warming has not been as rapid since 2000 as over the longer period since the 1970s. This variability in global temperatures is not unusual, with several periods lasting a decade or more with little or no warming since the instrumental record began."

Although climate change sceptics may seize on the data, it does not change the long-term warming trend. Nine of the 10 hottest years on record have occurred since 2001, according to the Met Office. As well as the La Niña variation, there may have been other weather effects at work.



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Alien invaders threaten Europe's native plants

By John Vidal, for *The Guardian*



An ash sapling in Warwickshire. Ash dieback has surprised some of Britain's most experienced tree experts. Photograph: David Jones/PA

More than 30 alien insects and mites, fungi, bacteria, viruses, diseases, pathogens and invasive plants, many with the potential to devastate native populations, are expected to reach Britain and other European countries in the next few years, according to the European plant protection organisation's alert list.

Some could arrive on imported trees and shrubs from Brazil or in soil from China or Africa, others via wooden ornaments and even packaging crates. But plant scientists say no one can predict exactly what ecological impact they will have because they are likely to behave differently in new environments than they do in the places where they have evolved over millennia.

When and if they come, they will join at least 10 new organisms that have arrived in the last few years and now threaten swaths of forest and woodland. Some could die out in months and do no damage but others could spread rapidly, as Dutch elm disease did in the 1960s or as ash dieback may do in the next decade, said Joan Webber, principal pathologist and head of the tree health research group at the Forestry Commission. "There's been a massive jump in the number of pathogens in the last 10 years. It's a combination of climate change, trade and other factors."

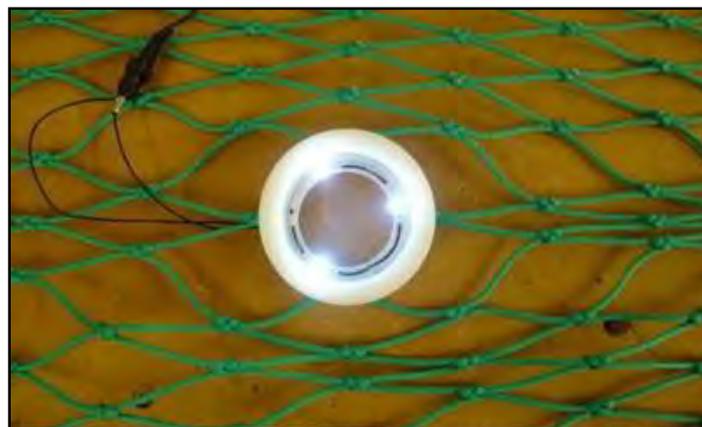
Webber said the fashion for "instant landscapes" and the planting of very large trees increased the risks of pathogens and diseases spreading. "There is a greater appetite for more exotic and bigger plants. Some plants are shipped in from China or elsewhere with 1,000 litres of soil around them. That soil is a black box full of billions of bacteria. It's very difficult to inspect and intercept harmful organisms in large plants."

It was also increasingly difficult to identify and control new organisms, she said. "They can reinvent themselves when they move into an unknown habitat. Faced with plants which may have little or no resistance to them, they can change quickly."

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'Humane' fishing net wins Dyson award

By Rebecca Smithers, for *guardian.co.uk*



The advance escape ring, part of SafetyNet's new trawling system that could help cut down on the catch and subsequent discarding of juvenile and endangered fish. Photograph: SafetyNet

A young British designer has won a prestigious international award for creating a "humane" net to make fishing more sustainable by preventing small fish from being trapped.

Dan Watson devised a system based on a series of escape rings for fish – which can be fitted to a fisherman's trawler net – in response to the problem of overfishing and the controversial and wasteful practice of throwing away healthy and edible fish or other creatures as so-called by catch.

Watson, a graduate of The Royal College of Art, will on Thursday be named as the winner of the annual international James Dyson award which recognises and rewards imaginative design solutions to global problems.

The SafetyNet rings have been designed to exploit the escape behaviour and physiology of different fish. Small and medium fish swim up when stressed, whereas larger fish swim down. By exploiting this, the net only catches mature, non-endangered species and provides an illuminated "emergency exit" for the rest.

Sir James Dyson, the billionaire founder of the bagless vacuum cleaner and founder of the awards – run by the James Dyson Foundation – said: "This tangible technology approaches a serious environmental problem and we should celebrate it. SafetyNet shows how young graduates like Dan can tackle global issues ignored by established industries in new and inventive ways."

Since graduating, Watson has started a company, SafetyNet Technologies, to try to commercialise his technology.

Watson said he will be using his £10,000 prize money to further develop a broad range of prototypes and finalise government testing.

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Huge scale of UK's 'dash for gas' revealed

By **Damian Carrington** and **Jamie Doward**, for *The Observer*

The amount of power expected to be generated from gas by 2030 has quadrupled in the last year, according to official projections that will infuriate green campaigners who are demanding greater use of renewable energy sources.

They claim that the statistics, buried in recently published government documents, will leave the country unable to meet its carbon emission targets. The figures will reinforce the sense that chancellor George Osborne is winning his battle to downgrade the role of green energy in favour of a dash for gas.

The coalition is divided over energy policy, with Osborne favouring



George Osborne strongly supports gas power. Photograph: Owen Humphreys/PA

a major increase in gas use, promising generous tax subsidies to the shale gas industry at last month's Tory party conference. The Liberal Democrats want greater emphasis on renewable energy. The chasm was laid bare last week when Tory energy minister John Hayes declared "enough is enough" over onshore wind farms, only to be slapped down within hours by Lib Dem energy secretary Ed Davey.

Data from the department of energy and climate change show the amount of power being generated from gas by 2030 leapt from 8GW in its 2011 projections to 31GW in the same projections 12 months later. The data also show that, as it stands, the carbon targets for the 2020s – called the fourth carbon budget – will be broken. Less than a tenth of the gas power is projected to have carbon capture and storage technology fitted to trap and bury carbon dioxide emissions.

The revelations come as the coalition's all-powerful "quad" – David Cameron, George Osborne, Nick Clegg and Danny Alexander – prepare to meet again this week to hammer out a deal on the government's delayed energy bill, which will set out the UK's energy sources for decades. The last meeting failed to agree after discussion was dominated by an impromptu pledge from Cameron to legislate to force energy companies to give customers the lowest tariffs.

The continuing uncertainty has led the energy industry to warn that billions of pounds of investment in the economy may be lost.

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Tips:

- Use public transport more frequently in place of using private vehicles. This will lead to reduction in green house gas emission as well as reduction in traffic congestion.
- Unless it's unavoidable prefer use of e-mail to sending letter or courier.
- Where ever possible store information, photographs, reading material etc in soft copies in computers or removable drives like CDs, DVDs, Pen drives, hard disc. Thus you may conserve resources and also save space for storage.
- While opting for CDs or DVDs for temporary storage of data etc use rewritable CDs and DVDs, so that as soon as there is no need of keeping the data any more the same can be re-used.
- For heating water install solar water heaters in homes, hotels, swimming pools, restaurants etc to conserve electricity.
- Present lifestyle has reduced physical labor to a great extent and in most of cases this lifestyle is gifting us several problems like obesity, diabetes, joint-pains etc. It would be beneficial to use bicycle for traveling short distances in place of car, scooter or motorcycle.
- In India we experience extreme cold in winters and scorching hot summers. To keep home comfortable it is good to put thick curtains on doors and windows, which in summers block sunlight from making rooms hot, and in winters during evenings and nights it helps keeping room warm, as Curtains with pelmets are better at storing heat than Venetian blinds.

Straw poll finds in favour of western Kenya's water and carbon solution

By **Clar Ni Chonghaile**, for *guardian.co.uk*

Judy Sitati is going to a funeral. She is dressed in her best clothes and in her black handbag she carries a bottle of water. It is clear and safe – the product of a unique project financed by carbon credits.



Mary Nakhumicha stands in front of her house in Bungoma East district in Western Province, Kenya, holding a LifeStraw filter. Photograph: Clar Ni Chonghaile

"I used to buy firewood to boil water. I would spend 150 shillings [about £1] a week. Now, I use the money to buy books, or sugar for tea, or soap," says Sitati, who stops to chat to volunteers from the carbon for water project on a rutted road in Kenya's Western Province.

In April and May last year, Swiss-based disease control company Vestergaard Frandsen distributed more than 877,000 LifeStraw Family filters to households in this land of sugar cane plantations and mist-capped hills where piped water is rare and unsafe for drinking. The microbiological filter is composed of a plastic container and a long hose leading to a tube equipped with a hollow fibre filter, which catches bacteria, parasites and viruses.

The company estimates that approximately 90% of Western Province's population – about 4.5 million people – now benefit from clean water. People save money on both firewood, because they no longer have to boil water to make it safe – which in turn reduces emissions, and medicines. A recent report (pdf) estimated the cost to Kenya of deforestation at about 6bn shillings (£44m) a year.

But what makes this \$30m project unique, apart from the scale, is the financing. The programme is the first safe water project to generate gold standard voluntary emissions reductions carbon credits, and has earned 1.4m credits so far.

The gold standard was established by the NGO community to enhance governance in carbon markets and drive best practice. Every six months, an independent auditor verifies the emissions reductions from the carbon for water project. Edward Hanrahan, director of ClimateCare, an independent profit-for-purpose firm that trades the credits on behalf of Vestergaard Frandsen, said the scheme was a "blueprint for a multiple outcomes project ... you achieve your development objectives and environmental objectives".

The credits are purchased by large corporations, including beverage firms, healthcare companies and carmakers, to offset their emissions. The proceeds will be reinvested to make the project sustainable over 10 years. "[The financing model] pays for how much you achieve in terms of behaviour change rather than paying for implementation,"

says Alison Hill, managing director for climate at Vestergaard Frandsen.

This model, she says, harnesses the strengths of the private sector, where payment is tied to performance and cost efficiencies are the norm. It also offers a degree of certainty and sustainability. But there is a burden of proof. Every six months, hundreds of local LifeStraw employees, often on *boda bodas* (motorbike taxis), visit 15,000 to 20,000 households to evaluate use, educate, and carry out maintenance.

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Chocolate giant sweetens supply chain with \$400M investment

By **BusinessGreen Staff**

The world's largest chocolate company, Mondelez International, yesterday announced plans to invest \$400 million over the next 10 years to help suppliers enhance productivity and improve sustainability efforts.

Dubbed "Cocoa Life," the program is modeled on subsidiary Cadbury's successful Cocoa Partnership initiatives in Ghana, India and the Dominican Republic, which have already helped thousands of farmers boost productivity while reducing environmental impacts and accelerating development efforts.

Cadbury's had already committed to invest \$70 million in its sustainable supply chain programs between 2008 and 2018, and has already seen significant successes in Ghana where the company reports cocoa yields for farmers taking part in the program have increased 20 percent.

Now Mondelez International has said it will increase investment in similar programs to \$400 million by 2022, including \$100 million that has been earmarked to support 75,000 farmers in Côte d'Ivoire, the world's largest cocoa-producing country.

The company said the program would help boost the livelihoods and living conditions of 200,000 cocoa farmers globally, while also accelerating the adoption of sustainability best practices that serve to reduce biodiversity loss and soil erosion at the same time as enhancing water efficiency and yields.

"I'm proud of Mondelez International's \$400m investment in Cocoa Life – a distinctive, holistic approach to cocoa sustainability that will create a cycle of growth from bean to bar," said Tim Cofer, executive vice president and president for Mondelez Europe at the World Cocoa Conference in Abidjan, Cote d'Ivoire. "Our mission is to create thriving cocoa communities and help secure the future of the cocoa industry."

The company said the program would target six regions – Côte d'Ivoire, Indonesia, Brazil, Ghana, India and Dominican Republic – and work in partnership with a range of different NGOs, including United Nations Development Program, the WWF and Anti-Slavery International to develop "a robust set of principles for success and ways to measure progress."

It added that in addition to education and financing-based efforts to promote more environmentally sustainable farming practices, the program would also seek to tackle child labor and promote community development.

Photo of cacao beans provided by Joanna Wnuk/Shutterstock

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Aftermath of hurricane Sandy leaves Haiti facing new disaster

By Jonathan Watts, for *The Guardian*

When hurricane Sandy struck, Fifi Bouille was giving birth in a refugee camp. There were no medics around, only her sisters. Throughout the three-hour labour, rain beat down on the tent and fierce winds tugged at the canvas.

Not long after the umbilical cord was cut, the gusts were so great that the sisters feared the covering would be ripped from above them, so the first-time mother had to carry her newborn son through muddy paths in the middle of the storm to find new shelter. "I was terrified my baby might die," says Bouille, who is now sharing a tent with six others. The danger of the storm has passed, but she is now faced by a new concern: how to feed her child and herself.

The hurricane did not just take their tent, but their cooking utensils, bedding and meagre supplies of food. On Wednesday, she had one meal of corn. On Thursday, nothing.



Two women in the flooded streets of Port-au-Prince, Haiti. Up to 54 people have died, 20 are still missing, and thousands have lost temporary shelters set up after the 2010 earthquake. Photograph: Jean Jacques Augustin/EFE/Photoshot

"I need food, but I don't have enough money to buy it," she says. "Tell people we need nappies, cooking utensils, protein."

Bouille is not alone in fearing that Sandy's aftermath may be more terrible than the storm itself for Haiti. Although the world's attention has mostly focused on the hurricane's impact on the United States, the short-term suffering and long-term consequences for this Caribbean nation – the poorest country in the western hemisphere – are far greater because so many people already live permanently on the edge of catastrophe.

Bouille moved to the Marassa refugee camp after her home and family were destroyed by a devastating earthquake in January 2010. As with the storms before and after, the impact of that disaster was worsened by high levels of poverty, dire infrastructure and weak governance.

Almost three years after the earthquake, 350,000 people in the capital of Port-au-Prince are still living in camps for displaced refugees.

Over the past three years, hundreds who now live in the Marassa camp have been forced to flee twice: from homes destroyed in the quake, to tents which were ripped and flooded in the storm, and to a temporary shelter in a fire station. Since Sandy struck, the camp's inhabitants have rebuilt their simple church made of sheets of corrugated iron, but are still waiting for new tents and food supplies.

Community leaders say cholera and hunger stalk the 3,500 camp residents, and starvation had claimed one life shortly before Sandy struck. Aid groups such as Oxfam have helped, but humanitarian support has ebbed in the past two years.

"We need food," said Mogaline Richard. "There have been promises, but nothing has come yet."

Haitians are proud of their country's origins. Later this month, people will celebrate the great battle fought by sugarcane slaves against their French overlords that led to the establishment of the world's first black-led republic in 1804.

But Johan Peleman, head of the United Nations Office for the Co-ordination of Humanitarian Affairs, warns: "This country is very vulnerable. It has the world's worst cholera epidemic and 3.5% of people in the capital are still living in tents."

Haiti was only hit by Sandy's tail, but 54 people died and 20 are still missing. Prime minister Laurent Lamothe described it as a "disaster of major proportions". There is little resentment that the US gets far more attention. Instead, the mood is more one of resignation that a catastrophe in a poor country is less of a story.

"This is not the first nor the last disaster we will have. We have seen so much worse that we are relieved there is only this," noted Emmelie Prophete-Milcé, a writer based in Port-au-Prince. "In New York disasters do not happen every day so the media have a good catch. In Haiti the disasters come every day. Well, almost."

Even before Sandy, Haiti had more cholera cases than the rest of the world put together. Almost 6% of the population have been affected and 7,500 people have died.

To respond to the rush of cases this month, Médecins Sans Frontières have opened an extra cholera treatment centre in Carrefour, where the tents are now almost filled with 158 patients, including many young children.

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US military warned to prepare for consequences of climate change

By Suzanne Goldenberg, for *guardian.co.uk*

The Pentagon was warned on Friday to stand guard against "climate surprises" which could throw off its efforts to secure America's future.

An expert report, prepared for the intelligence community by the National Academy of Sciences, warns that the security establishment is going to have start planning for natural disasters, sea-level rise, drought, epidemics and the other consequences of climate change.

The Pentagon already ranks climate change as a national security threat, putting US troops in danger around the world and adding fuel to existing conflicts. More than 30 US bases are threatened by sea level rise.

It has also identified potential new danger zones, such as sub-Saharan Africa.

The military is also working to cut back on its fuel costs in an age of budget austerity, by installing solar arrays and wind turbines, and monitoring electricity use.

But Friday's report suggests strategic planners are going to have make sweeping adjustments to their planning to take account of climate change over the next decade and beyond.

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UK 'likely to face winter floods'

By **Fiona Harvey**, for *The Guardian*

The UK must brace itself for a high likelihood of winter floods, the Met Office and the government's flooding watchdog have warned.

Saturated ground around the country, and high river and groundwater

levels from the wet summer, will mean that much less rainfall than usual is needed to top up water levels and cause severe flooding, according to the Environment Agency.

There is now a significantly higher risk of flooding this autumn and winter, even with small amounts of rain, so households have been advised to check warnings for their area. One in six homes is at some risk of flooding.

Sarah Jackson, of the Met Office, said: "We are heading into the winter period which is traditionally the wetter period of the year in the UK. Because the ground is so wet, if we do have any prolonged heavy rainfall in any part of the country, there is going to be heightened risk of flooding."

Any severe flooding this winter will also raise questions over the government's cuts to some proposed new flood defences, some of which are now being abandoned or scaled back. Insurers have warned that they may end their long-standing agreement to provide all UK homes with flood cover. If they do so, some people will find themselves in uninsurable homes.

Experts singled out Devon, Dorset and Hampshire in the south as being particularly at risk, because of high groundwater levels, while in the north of England and Wales the risk has been



Flooding in Tewkesbury in 2008. Experts said the south-west could be at risk from high rivers this month and next. Photograph: David Levene

heightened from recent heavy rainfall. In the south-west, the main threat will be from rivers, especially this month and next.

Coastal areas are braced for high spring tides occurring in the middle of this month and from 12 to 18 December.

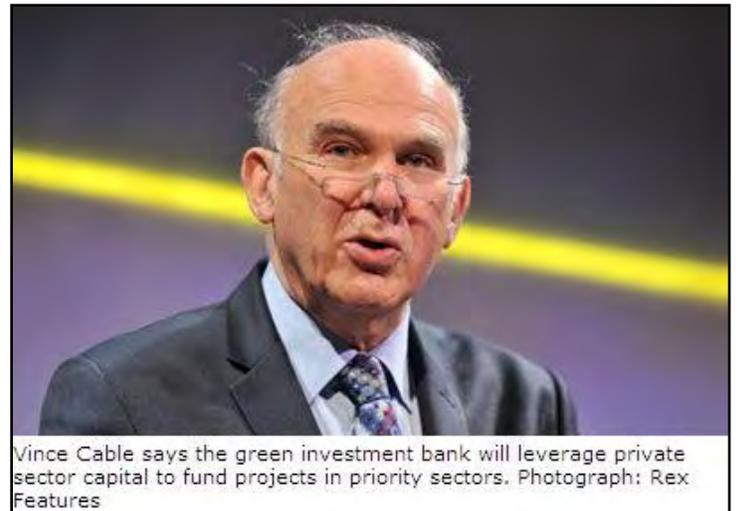
Paul Mustow, head of flood incident management at the Environment Agency, urged people to take action against "the UK's number one natural hazard". He advised: "The most important step people can take in protecting themselves from the worst impacts is to find out if they are at risk, and sign up to our free flood warnings service." More than a million people are currently signed up.

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Green investment bank to set itself emissions targets

By **Severin Carrell** and **Fiona Harvey**, for *guardian.co.uk*

The coalition's green investment bank is to set itself targets for cutting carbon emissions as it attempts to raise tens of billions of extra investment in renewable power and energy efficiency.



Vince Cable says the green investment bank will leverage private sector capital to fund projects in priority sectors. Photograph: Rex Features

The chief executive of the new bank, Shaun Kingsbury, told the *Guardian* the bank's board was to set "transparent" new measures for the CO2 emissions which will be prevented as a direct result of its £3bn in government funding, and the extra spending it hopes to raise from investors.

The bank is hoping to attract a further £15bn of new private investment in green energy plants, energy efficiency and carbon capture by 2015.

Vince Cable, the business secretary, officially launched the bank on Wednesday in Edinburgh, the site of its official headquarters, though much of the operation will be run through a large investors team in London. Cable unveiled the first two modest investments: £8m for helping to build a new anaerobic digestion plant in Teeside, turning waste into power; and £5m for retrofitting a panel-making factory in north Wales with energy efficiency technology. Cable said he was optimistic about the bank's prospects for success but warned that it was facing significant problems raising long-term finance because of "turmoil" in the financial markets following the 2008 global banking crisis. That had led to a "market failure", with investors failing to offer proper support to green energy projects because they were long-term, and appeared risky.

Green campaigners were critical of the government's refusal to allow the bank to borrow money to invest. Joss Garman, policy director at Greenpeace, said: "What we've ended up with is a poor cousin. The bank should be able to borrow now, rather than waiting until after the next election. Given full borrowing powers, the bank could be a key vehicle to help tackle climate change and get us out of these tough economic times. Such procrastination is hurting investment, jeopardising jobs and stymieing growth."

However, businesses broadly welcomed the bank. Niall Stuart, chief executive of Scottish Renewables, said: "This kind of support can be a vital catalyst in attracting even greater levels of private investment on the scale required [to build new infrastructure]."

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At Hilton, U.S. Navy, recycling goes to the mattresses

By Bruce Kennedy

What do the U.S. Navy and a major hotel chain have in common? Both are huge consumers of mattresses -- and both are involved in



pioneering mattress recycling campaigns.

Mattresses are hard to get rid of, once they've reached the end of their usefulness. Their size and unwillingness to be compressed or crushed means they can take up a lot of landfill space. And they also are hard to incinerate. Discarded mattresses can easily become infested with bedbugs and other parasites, which makes donating them a non-option.

"There's no reason a mattress should go to a landfill," Ralph Bogan, owner of Nine Lives Mattress Recycling, told the Huffington Post. "They're not really giving out permits for new landfills that easily, so it seems like everybody would see the importance of removing anything from a landfill that can be reused."

The Navy has begun a pilot program with South Carolina-based Nine Lives Mattress Recycling to break down about 13,000 well-used mattresses -- the equivalent of 100,000 cubic feet of space -- from several Navy ships. The program reportedly costs \$12,000 less than simply having the discarded mattresses end up in a landfill.

The Nine Lives web site says the company currently charges a \$5 recycling fee for each mattress and box spring it takes, and recycles up to 90 percent of those mattresses.

For its part, the Navy sounds very gung-ho about the mattress recycling -- and is looking to expand the program to other naval ships, hotels and facilities. "This is one of the greatest projects that will affect our solid waste program and recycling program -- ever," says Gregory Jeanguenat with Naval Station Norfolk. "And the largest mass amount of stuff to be moved in one fell swoop rather than worrying about white paper or plastic or something individual. This is a huge amount of product."

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LG, Samsung see energy efficiency marketing pay off

By Amy Westervelt

When EnergyStar began pilot testing its "Most Efficient" label in 2011, some companies and trade associations were concerned that having an additional top tier designation would take away from the existing Energy Star Gold label. Initially, only a few companies were onboard with the program, and only a handful of products met the criteria for the label.

Meant to provide some incentive for manufacturers to continuously improve efficiency, the Most Efficient label sets a high bar and so far only applies to televisions, refrigerators, washers, and heating and cooling equipment. The Most Efficient standards for refrigerator/freezers require them to be about 30 percent more efficient than standard models. TV requirements call for 80 percent more efficiency than common products on the market.



As it closes its second pilot year, all concerns have been erased and the program's success is solid. According to the EPA, the washer and TV categories have exploded in 2012: At the beginning of the year, there were 24 clothes washers and 63 televisions that were eligible for Most Efficient status. Currently, there are 66 Most Efficient clothes washers and 455 Most Efficient televisions.

For companies, of course, it's not just about getting a gold star for energy efficiency but about how energy efficient products sell, and so far that's a success story as well. LG announced last week a 75 percent increase in sales of Energy Star Most Efficient products. Part of that increase is due to an increase in the number of Most Efficient-designated products in the company's line: LG had only eight televisions and five washing machines eligible for the label when the program launched in 2011. Now, it has more than 60 Most Efficient products available, across all four product categories (refrigerators, televisions, washers, and heating and cooling).

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Can biofuel power your car for \$1.50 a gallon?

By *SustainableBusiness.com News*



Cool Planet Energy Systems believes it can sell biomass-based gasoline for about \$1.50 per gallon because of its unique distributed energy approach which brings production right to the fuel source.

And it doesn't expect to need subsidies to get to that price.

The high-octane gasoline produced is fully compatible with standard automobiles and existing conventional fuel distribution systems.

While big plants take years to finance and build, Cool Planet will instead rely on small, modular ones that are quickly assembled using components the size of shipping containers. These small refineries can generate 10 million gallons of biofuels a year from local biomass materials, such as corncobs, grasses and other non-food crops.

"By mass producing mobile, pre-fabricated micro-refineries that are easily transportable to the biomass source, we significantly reduce costs of feedstock transportation, which maximizes our overall capital efficiency," says Howard Janzen, CEO. "Each micro-refinery is one hundred times smaller than a typical oil refinery and can produce 10 million gallons of fuel per year; this puts us in the running to compete with oil at \$50 a barrel without any government mandates or subsidies."

Cool Planet plans to build 30 small production facilities in the next three years and 400 of them over the next 7 to 8 years. It has orders for \$500 million worth of the gasoline, they say.

According to the company, its patented mechanical process for converting agricultural waste or energy crops into fuel "actually removes carbon from the atmosphere during the course of production."

It does so by capturing the carbon released by the plants and converting it to biochar, which, when returned to the soil, enhances fertility and its ability absorb carbon from the atmosphere.

"This carbon negative process results in up to a 150 percent carbon footprint reduction, far more than any other biomass-to-fuel method," the company says.

Google, General Electric, BP, ConocoPhillips, NRG and the Constellation Energy division of Exelon are investors.

Image of gas pump provided by Niels Quist via Shutterstock.

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Sustainable investments continue to rise, report says

By *SustainableBusiness.com News*

Over 11 percent of all investments under professional management in the U.S. meet "sustainable" investment standards, a rise of 22 percent over the past two years.

Whether it's through mutual funds or individual stocks, investors are continue to increase their exposure to companies that rate high on environmental, social and corporate governance (ESG) factors, according to the biennial report from Social Investment Forum Foundation (US SIF), which tracks these trends.

At the end of 2011, \$3.74 trillion of the \$33.3 trillion of assets under professional management in the U.S. reflect ESG concerns.

"We are moving closer to a sustainable and equitable economy," says Lisa Woll, CEO of US SIF. "From the growth in mutual funds that consider ESG criteria and increased investment in community development banks and credit unions to increasingly large votes on shareholder proposals and the availability of sustainable investment options across asset classes, SRI strategies are on the rise in the United States."

The US SIF Foundation report is compiled by surveying 1,110 investment management firms and institutional investors, as well as data from third-party sources.

Investors are more often considering ESG issues in company and portfolio analysis. And many are beginning to develop in-house capabilities to analyze ESG criteria.

Mutual funds that include ESG analysis in portfolio selection doubled since 2010 to \$641 billion.

Community development banks have grown 74 percent to \$30.1 billion and credit unions have grown 54 percent to \$17.1 billion.

Interestingly, the concerns for investors related to countries their investments are tied to, such as repressive or terrorist regimes and country-specific corporate governance. About half the social investment assets are influenced by policy in Sudan (up 21 percent from 2010) and placement of over a trillion dollars reflect concerns over Iran (up 180 percent).

Environmental considerations are reflected in \$636 billion of these assets, up 43 percent from 2010. How corporations address climate change is a criteria for 23 percent of the institutional asset owners.

More investors are monitoring corporate political contributions and lobbying activities, accounting for \$459 billion of the assets analyzed.

Compare this year's report to their 2010 report on sustainable investing in the U.S.

Image of graph made up of grass and sky provided by Jezper/Shutterstock



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California's first carbon market takes flight

By Alex Jackson



The California Air Resources Board announced yesterday the results of the first cap-and-trade auction, held last Wednesday, to limit carbon pollution from large emitters under California's clean air law, AB 32.

Two items were for up for sale: carbon pollution permits (known as allowances) for use starting in 2013, and allowances for use starting in 2015. Yesterday's results revealed that auction participants, including the state's petroleum companies and other large industrial emitters, snapped up all of the 2013 allowances, at a clearing price of \$10.09, and 5.5 million of the 2015 allowances, at the auction floor price of \$10. The 2015 allowances that did not sell will be held back from the market until 2015.

As expected, some participants opted for a wait-and-see approach, bidding at or near the floor price. That's not surprising, considering that last week's auction was only the first of five scheduled over the course of 2012-2013. As the market takes shape, participants will glean a better understanding of the true market price of reducing a ton of carbon pollution, which will inform future bidding strategies. The program's first "due date" is not until Nov. 2014, when covered facilities will need to turn in allowances and offsets equal to 30 percent of their 2013 verified emissions.

The advantage of a single statewide cap on pollution is that when and how facilities choose to acquire allowances does not impact the pace of emission reductions: As long as they all come due in full and on time, emissions will have been reduced. Yesterday's results were important in showing the auction went off without incident; expect future auctions to be more indicative of the price of carbon in the market after trading picks up.

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Obama Offers \$6 Billion Investment for Clean Energy Infrastructure in Asia-Pacific

By SustainableBusiness.com News

President Obama is offering a \$6 billion investment in clean energy infrastructure in the Asia-Pacific region under the US-Asia Pacific Comprehensive Partnership for a Sustainable Energy Future.

The Partnership is being formed to drive investment in the region, and also to provide a ready export market for US companies and their technologies.

There are four regional priorities:

1. Renewables and cleaner energy
2. Markets and Interconnectivity
3. The emerging role of natural gas
4. Sustainable development

They plan to engage the private sector as well as partner with countries in the region to determine specific projects in the four priority areas.

"With an estimated \$9 trillion needed in investment in electricity alone through 2035 to meet growing demand in the region, there is enormous potential for U.S. industry to play an important role in the region's energy future."

The US will provide up to \$6 billion to support the Partnership:

- The Export-Import Bank of the United States will launch a program to make up to \$5 billion in export credit financing available to countries in the region over the next four years

to increase access to American technology, services and equipment for the implementation of energy infrastructure projects;

- OPIC will provide up to \$1 billion in financing for sustainable power and energy infrastructure projects.
- U.S. Trade and Development Agency (USTDA) will support programs in partner countries in power generation, power distribution modernization, assistance with upgrading grid efficiencies to accommodate renewable power, and unconventional gas development.
- The U.S. State Department will oversee a \$1 million energy capacity-building fund to support partnership activities via project preparation and technical assistance.

A couple of months ago, Asia-Pacific Economic Cooperation (APEC) - which consists of 21 countries - agreed to reduce import duties for green technologies that grow their economies. 54 technology categories are included, such as solar, wind, biomass and other renewable generation technologies, wastewater treatment, recycling and environmental monitoring systems.

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BP suspended from US federal contracts over Deepwater disaster

By **Suzanne Goldenberg**, US environment correspondent, for guardian.co.



BP has agreed to plead guilty to charges involving deaths of 11 workers on the rig. Photograph: US coast guard/Getty Images

BP will be temporarily banned from seeking new contracts with the US government because of the oil company's "lack of business integrity" during the Gulf of Mexico oil disaster, the Environmental Protection Agency said Wednesday.

The order blocks BP temporarily from competing for new oil leases in the Gulf of Mexico – such as the auction of 20m acres taking place on Wednesday – or from bidding on new contracts to supply the Pentagon or other government agencies with fuel.

It does not affect existing business. BP is the largest oil producer in the Gulf of Mexico, with more Deepwater leases than any other company, according to the BP website.

The order was handed down just two weeks after BP agreed to plead guilty to manslaughter and other charges arising from the April 2010 explosion of the Deepwater Horizon oil rig, as well as pay a record \$4.5bn in fines.

Two BP rig supervisors were also due in a New Orleans court on Wednesday to be formally charged with manslaughter in the deaths of 11 workers aboard the rig. The supervisors, Donald Vidrine and Robert Kaluza, are accused of ignoring abnormal pressure readings seen as a red flag of a well blow-out.

A former BP executive David Rainey was also due in court on charges of lying to Congress about the amount of oil that was gushing from the well.

The EPA said the suspension was based on BP's conduct at the time of the blow-out as well as the 87 days it took to contain the well. Some 4.9m barrels of crude gushed into the Gulf of Mexico before the well was finally capped.

"EPA is taking this action due to BP's lack of business integrity as demonstrated by the company's conduct with regard to the Deepwater Horizon blowout, explosion, oil spill, and response, as reflected by the filing of a criminal information," the announcement said.

The announcement went on to describe the oil spill as the "largest environmental disaster in US history".

It said BP would remain under suspension, and barred from new federal government contracts and transactions, until the company can demonstrate that it meets federal business standards.

"Federal executive branch agencies take these actions to ensure the integrity of federal programmes by conducting business only with responsible individuals or companies. Suspensions are a standard practice when a responsibility question is raised by action in a criminal case," the EPA announcement said.

The agency gave no further details about the duration of the suspension, and the potential costs to BP were not immediately clear.

In its response, BP said the ban would not affect existing business. "The temporary suspension does not affect any existing contracts the company has with the US government, including those related to current and ongoing drilling and production operations in the Gulf of Mexico," BP said.

The company said it was working with EPA and the Justice Department in the US to lift the suspension. "The EPA has informed BP that it is preparing a proposed administrative agreement that, if agreed upon, would effectively resolve and lift this temporary suspension. The EPA notified BP that such a draft agreement would be available soon," the statement said.

The press release also noted that BP had been granted more than 50 new leases in the Gulf of Mexico since the oil disaster.

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KFC chickens out on unsustainable packaging

By **BusinessGreen Staff**

KFC's iconic red bucket is going green, after the company has ditched packaging suppliers accused of using wood harvested from protected forests.

The U.K. arm of the company this week updated its policy statement on packaging sourcing after coming under fire from campaign group Greenpeace in May for its links to companies accused of logging Indonesian rainforests.

A year-long Greenpeace investigation found packaging used in some of KFC's U.K. stores contained significant levels of mixed tropical hardwood, which it said is a clear indicator of rainforest timber.

The campaign group tracked a number of these products back to Asia Pulp & Paper (APP), one of the largest pulp and paper manufacturers in the world and a company that Greenpeace has repeatedly accused of using wood from the Indonesian rainforest.

KFC U.K. has now said it will only work with suppliers that can "demonstrate sustainable forestry management throughout their supply chain and that are not actively involved in rain forest clearance."

It has also committed to ensuring any virgin material that is used does not contain mixed tropical hardwoods and plans to increase its use of Forest Stewardship Council (FSC) accredited paper or cardboard with an overall goal of using 100 percent certified supplies.

Photo credit: TonyV3112 / Shutterstock.com

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Why climate change is a matter of policy for insurers

By **Chrissy Coughlin**



This week on Nature of Business, I spoke with Mark Way, Head Sustainability Americas Hub at Swiss Re, a global reinsurance company that has been around for nearly 150 years. Perhaps not a household name for some of us, Swiss Re insures insurance companies, large

corporations and more recently governments and non governmental organizations. It pays for major losses such as those that have occurred with Katrina, the World Trade Center, and now **Superstorm Sandy**. We spoke about Way's work, including some really interesting projects and collaborations, all in the context of risk reduction, adaptation and mitigation, and climate change.

Way's focus as sustainability head has a heavy focus on the climate topic and converses regularly with all stakeholders who want to engage in dialogue on sustainability matters. He also works internally with Swiss Re's efforts to address their carbon footprint. (In 2007 Swiss Re became carbon neutral — pretty impressive).

So how is Swiss Re approaching the issue of climate?

As Way describes, "Everything is guided by strategy to try to take a comprehensive approach. We do a lot of research on the economic impacts of severe weather and how this might change through climate change. We look at how we can position the products we have to consider climate issues. A lot of the basic products that we provide are very relevant to conversation — insurance policies against wind storms are nothing new but [we determine] how can you take this and look and see what the kind of risks going forward would be and what would then be the appropriate approach and product."

Climate change is certainly a complex topic that must be tackled in a sophisticated way. As Way describes, it isn't sufficient to simply mitigate. There must be a holistic approach in place that includes adaptation. One way to think about it is if we stopped man made greenhouse gas emissions today it would be several decades to see results. Swiss Re feels that we have to prepare society adapt them to make them more resilient. And everything that Swiss Re is seeing as a company is that we need to tackle climate change.

It was particularly timely to speak with Way in the wake of Hurricane Sandy. As Way makes clear, Sandy is a clear reminder of what severe weather can do and serves as a wake up call that severe weather is something that is not going to go away — climate change or not.

One interesting project that Way highlighted is in collaboration with NGO partners CERES, Climate Wise, and Canadian companies Aviva and Cooperators to create an insurance industry platform to discuss climate related issues and resiliency in the urban context. (Way feels that U.S. insurers will be joining soon). The goal, as Way describes, is to put all of the thought into designing a methodology and for that methodology to become a blueprint to help cities within United States and beyond to think through the ways and means of addressing the vulnerability which we currently have.

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HFCs Lurking in Your Air Conditioning System?

By *SustainableBusiness.com News*

If you have an older central air conditioning system, it could be leaking HFCs without your knowledge.

One of the most important accomplishments of the Montreal Protocol, where the world came together to successfully address the growing ozone hole, is the phase-out of super-greenhouse gases known as hydrofluorocarbons (HFCs), which are used in refrigeration, air conditioning, and insulating foams.

Phasing out HFCs is also hugely important for slowing down climate change - they are among what's known as "climate forcers."

By 2015, the US agreed to cut production and imports of HCFC-22 to 10% of levels from 10 years ago. And the Environmental Protection Agency (EPA) has been following through. It enacted strict bans on HCFC production and since 2010, has banned sales of new air conditioning systems that use HFCs. EPA also encourages the gas to be recycled from old machines to prevent release into the atmosphere. That recycled gas is supposed to be use to fix older units.

But getting full compliance isn't so easy. Some 140 million older central air conditioners across the US still use that coolant.

Decades-old habits among air-conditioning repair and services conspire to keep it use, as illustrated in a *New York Times article*.

The story recounts the experience of Connecticut homeowner Mark Spector, whose aging central air-conditioning system stopped working over the summer.

Instead of finding and repairing the leak, the service technician pumped in more coolant - which leaked out by the next day, flaunting EPA's rules. Then the repairman offered to replace the condenser unit, but with one that still uses HCFC-22.

"The US has aggressively pressed poor countries to pick up the pace [to phase out the coolants]. But the US has yet to put its own house in order," says the New York Times.

"Leaks abound in working equipment. Coolant seeps out of discarded equipment in landfills. Regulatory loopholes allow manufacturers to sell parts that rely on HCFC-22, so systems using the old gas can be refurbished rather than replaced. There is almost no reclamation of the gas from old machines for recycling. The E.P.A. is behind schedule in imposing rules to ratchet down domestic production, and smuggling is rarely detected. Even where there are regulations - for example, repair technicians are legally bound to collect old gas rather than vent it - there is little enforcement."

This anecdote is apparently a common one. Older condenser units are still on the market, but without the coolant gas. After it's installed, technicians add the gas. Homeowners would rather repair an old system rather than replace it because it's about three times cheaper.

"It's probably legal since you could claim it's just servicing, but it's ethically disturbing and not fair to companies who've spent a lot to develop new products," Dr. Andersen, director of research at the Institute for Governance and Sustainable Development, told the *New York Times*.

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America's nuclear safety under scrutiny after Oyster Creek's Sandy alert

By Richard Schiffman, for *guardian.co.uk*

We know the bad news about superstorm Sandy: the Jersey shore was devastated and many towns remain waterlogged. New York suffered a direct hit, with the city's mass transit system flooded and part-paralyzed for days to come.



Oyster Creek nuclear power station was offline on Monday for maintenance, but officials said Sandy's storm surge came within 6in of damaging its cooling system. Photograph: PR

But there is good news, too, and that is all that it failed to do. Sandy did not kill hundreds – as Hurricane Katrina did in New Orleans in 2005 – thanks, in part, to timely evacuations and rescue efforts. And luckily, it did not trigger an even greater disaster at one of the region's nuclear power plants. But it could have.

Watchdog groups like the Union of Concerned Scientists (UCS) warn that America's nuclear facilities remain vulnerable to a variety of potential catastrophic events, both natural and resulting from deliberate sabotage or cyber-attack. And they say that federal regulations are currently inadequate to deal with all of these possible disaster scenarios.

I reported on one such danger, solar flares, last May in the New York Daily News. A 2011 study by the Oak Ridge National Laboratory warns that a massive solar storm could knock out electricity in some areas for weeks, overwhelming the capacity of many nuclear plants to keep their critical cooling systems operational.

But nuclear regulators have not required power plants to guard against the risk of solar storms. David Lochbaum, the director of UCS's nuclear safety project told me in an email interview that the Nuclear Regulatory Commission licenses plants "using the rearview mirror". It looks to the past, in other words, to assess future risks.

But, he says, past events are not always a good measure for the worst that can happen. Lochbaum cites Fukushima. The Daichi plant was located behind a seawall that was high enough to protect against the kind of flooding that Japan had seen previously. But nobody had considered the possibility that a monster tsunami could breach the wall.

All 13 of the plant's back-up generators broke down an hour after the earthquake when they were swamped by the tsunami. As a result, that critical cooling system failed.

"Is it prudent public policy to operate facilities of such immense hazard on such tenuous assumptions?" Lochbaum asks. He says that Hurricane Sandy provides further proof that we need to come up

with solutions "sooner rather than later" to fix America's inadequate regulatory system.

Lochbaum points out in a blog that the risks of nuclear power generation are magnified by the fact that the plants are always located near a river, lake or ocean. That is because producing nuclear power creates a lot of heat, which needs to be dissipated by huge volumes of water. These cooling systems are all that prevents the plutonium in reactor cores from going critical and melting down, much like what happened at Fukushima.

But locating nuclear plants near bodies of water has its risks, which range from the clogging of intake pipes by barnacles and mussels – as happened at the Pilgrim nuclear plant near Plymouth, Massachusetts in 1981 – to potential damage from storm surges, such as those created by Hurricane Sandy.

One facility was put in a state of "high alert" during Sandy due to high-water levels in its water intake structure. The Oyster Creek Generating Station on Barnegat Bay – 40 miles north of Atlantic City, and the oldest nuclear facility in the nation – was shut down last week for refueling. Plutonium, however, can dangerously overheat whether or not a plant is actively producing electricity. So, 300 employees stayed at Oyster Creek, Monday night, to ensure that the imperiled cooling system continued to function.

Nuclear plants located near oceans are not the only ones threatened by flooding. Thirty-four reactors, fully a third of those in the US, are sited along rivers with dams upstream. A report released last March by the Nuclear Regulatory Commission suggests that many of these plants were not designed to withstand the massive floods that catastrophic dam collapse would unleash. The Huffington Post reported earlier this month that:

"According to the NRC's own calculations ... the odds of the dam near the Oconee plant [operated by Duke Energy in South Carolina] failing at some point over the next 22 years are far higher than were the odds of an earthquake-induced tsunami causing a meltdown at the Fukushima plant."

This alarming news, however, was blacked out of the NRC's public report. It was leaked by the lead author, Richard H Perkins, who said that his work had been censored because it revealed that:

"The NRC has been in possession of relevant, notable, and derogatory safety information for an extended period but failed to properly act on it."

In another section of the report, about the Fort Calhoun nuclear plant in Nebraska, NRC redactors removed information indicating that the failure of the Oahe or Fort Randall dams could result in levels of rampaging water higher than the plant's flood protection walls. The Nuclear Regulatory Commission evidently believes that it is better to hide the facts about nuclear risks than to fix the problem.

Critics allege that not only does the NRC withhold critical information, but also fails in many cases to enforce regulations that are already on the books. David Lochbaum warns:

"I'm most concerned about the NRC's practice of allowing unsafe reactors to operate. UCS's Nuclear Power Information Tracker shows 47 reactors that NRC knows to violate fire protection regulations and 27 reactors with seismic protection known to be less than the seismic hazards they face. These pre-existing vulnerabilities mean that the American public is protected more by luck than by skill."

And if superstorm Sandy, and the increasing frequency of other extreme weather events in recent years is any evidence, America's luck may be running out.

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Kyoto protocol: Australia signs up to second phase

By Fiona Harvey in Monaco, for guardian.co.uk

Negotiations towards a new global treaty on climate change took a small step forward on Friday as the Australian government announced it would join up to a continuation of the Kyoto protocol beyond 2012.

At the end of this month, governments will meet in Doha, Qatar, to discuss a new treaty that would be signed in 2015 and come into force from 2020. But the mood ahead of the UN conference is tense, as few countries are willing to make the concessions needed for a compromise deal.



Prime minister, Julia Gillard, and climate and energy minister, Greg Combet. Australia has signed up to the second phase of the Kyoto protocol. Photograph: Stefan Postles/Getty Images

Greg Combet, Australia's climate change and energy efficiency minister, said the country would "commit to limiting its greenhouse gas emissions from 2013 to 2020 with a Kyoto target consistent with the bipartisan target of reducing emissions to 5% below 2000 levels by 2020".

But he added that this did not rule out the option later of moving up Australia's 2020 target range of 5-15%, or 25% below 2000 levels if Australia's conditions relating to the extent of action committed elsewhere in the world are met.

The current commitment period of the Kyoto protocol finishes at the end of this year, and developing countries are adamant there must be a continuation if they are to sign up to any 2015 deal.

Also on Friday, New Zealand drew fire from environmentalists and opposition politicians for ruling out a second phase of Kyoto. The country's climate change minister, Tim Groser, said the country would be better served by working towards the new 2015 treaty.

Australia's move makes it one of only a handful of countries outside the European Union's member states to agree to such a deal. It follows the country introducing a carbon tax in June that will lead to a system of carbon trading, similar to that in operation within the EU, intended to reduce greenhouse gas emissions.

Australia finally ratified the 1997 Kyoto protocol in 2007, under the last Labor government, after a decade of refusal, despite signing up to the treaty originally. But subsequent leaders turned away from it again. Climate change is a highly divisive issue in Australian politics – the country is heavily dependent on coal, and is a big exporter. There are many vocal climate sceptics in the country with the ear of government, and a powerful mining lobby.

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Doha conference: carbon cuts talks must wait, says key negotiator

By Jonathan Watts, for guardian.co.uk



Luiz Alberto Figueiredo said the Doha talks should be 'focussed' and not be diverted to other important issues that probably can't be solved quickly'. Photograph: Alex Cruz/EPA

The debate on whether the world needs stronger greenhouse gas cuts to keep the planet from warming by 2C should be deferred until next year, according to Brazil's lead negotiator at the upcoming talks in Doha.

Ambassador Luiz Alberto Figueiredo says delegates at Qatar – the most important climate negotiations of the year – should prioritise an extension of the Kyoto protocol and the rules for a longer-term agreement rather than be distracted by the crucial but contentious issue of emissions reductions.

Environmental groups, however, are calling for greater urgency from Brazil, a country that has won plaudits at previous gatherings for leading the search for common ground between wealthy and developing nations.

With the Kyoto protocol set to expire at the end of the year, Figueiredo told the Guardian there is an urgent need to ensure the continuation of a process that has been the foundation of international discussions for more than a decade, despite its shrinking support among the initial signatories.

"We need a strong second commitment period and we need to decide duration," said Figueiredo, who says Brazil would like the new phase of Kyoto to last until 2020, when a new "internationally binding protocol" is supposed to come into effect.

That new instrument – which should be far more inclusive – will also be negotiated in Qatar, but the rules do not have to be finalised until 2015. With almost universal agreement that the world is off course to achieve the targets set at the international talks in Copenhagen in 2009, some nations and environmentalists want the upcoming talks to embrace greater emissions cuts, but the Brazilian ambassador says this would be a mistake.

"We have to be very focused on what needs to be done in Doha and not be diverted to other important issues that probably can't be solved quickly, such as the ongoing question of ambition," he said. "I don't think Doha should concentrate on that. We'll deal with that during negotiation of the next protocol."

The second phase of Kyoto is expected to go ahead but with fewer nations compared to number that agreed to cut emissions in the original 1997 deal. The US signed but never ratified that agreement because obligations were not imposed on big developing economies like China, India and Brazil. More recently, Japan, Russia, Canada and New Zealand have indicated they will not sign up to a second commitment period.

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The ash tree crisis: a disaster in the making

By **Patrick Barkham**, for *The Guardian*

Ashwellthorpe lower wood is still, wet and silent. Gold and ginger leaves float from the branches above. Pale fungi rise through decomposing leaves below. The only sound is the astonishing cackle of a green woodpecker. Everything is dying back, peacefully, just as it has for hundreds of autumns.

In July, when I last walked in Ashwellthorpe, a rare fragment of thousand-year-old Norfolk forest, the ash trees that gave the wood its name, kept locals in timber for centuries and supplied broom handles to a nearby factory for generations were green and healthy. Now they carry a malignant look: the leaves are not the yellow and brown of an ordinary October but a sickly black. Their graceful slim trunks, the colour of an elephant's skin, are mottled with sinister stains.

Last Friday, DNA tests confirmed that its ash trees were the among the first in an ancient woodland to succumb to *Chalara fraxine*, or ash dieback, a virulent fungal disease that has swept across Europe and entered Britain, most probably via imported saplings, earlier this year. On Monday, the government slapped an import ban on ash trees and pledged to do all it could to contain this "devastating" disease. Critics say this action is far too little, too late. The answers to the obvious questions – What has caused its spread? Can anything stop it? – remain frighteningly uncertain. There are growing fears the disease will kill millions of ashes, which makes up around a third of our woods and hedges. This fungus is likely to transform our countryside more dramatically than Dutch elm disease, another fatal killer accidentally spread around the world by the timber trade, which has destroyed more than 25 million trees in Britain since the late 1960s.

"They shiver in the wind and throw out boughs with a calculated aim, which is to be beautiful," wrote Ronald Blythe of a pair of young ashes near his home in Essex. Gerard Manley Hopkins admired the "contradictory supple curvings" of an ash's boughs. "The ash grove how graceful / how plainly 'tis speaking" goes the Welsh folk song the Ash Grove. Poets and writers have long hailed the aesthetic qualities of the ash, whose Latin name, *Fraxinus excelsior*, celebrates its heavenly height, but it is even more admired for its utilitarian qualities. Fast-growing, strong and flexible, ash is the prince of all timbers. Every handle of every tool was once made from ash (until hickory was imported from the US), and ash was widely used in gates and cartwheels. These days, the wood's attractive grain and light hue makes fashionable furniture. Foresters love ash because it quickly grows tall and true. And as anyone with a wood-burning stove knows, ash is the king of logs: "Ash-wood wet and ash-wood dry / a King may warm his slippers by."

Brendan Joyce, the chief executive of Norfolk Wildlife Trust, does not just admire ash because its wood made his beloved Fender Stratocaster guitar. Ash is a particularly convivial tree. Because it does not cast heavy shade, it allows plenty of other plants to grow alongside it. "Ash woods tend to be rich and diverse places unlike beech woods, which tend to be rather monotonous," says woodland ecologist George Peterken. In Norse mythology, Yggdrasil was an enormous ash tree that harboured all the life in the universe. Beneath the ashes of Ashwellthorpe are carpets of bluebells and early purple orchids in spring and white admiral butterflies in July. Ash's key-like seeds feed woodmice and its bark is particularly conducive to mosses and lichens. Some 80 common insects and 60 of the rarest beetles and flies have an association with ash trees, according to Chris Panter at the University of East Anglia.

Chalara fraxinea first emerged in Poland in 1992. A fungus attacks ash leaves, moving inside young shoots into the heart of the tree, effectively strangling it by preventing it from taking both nutrients from the earth and sugars from photosynthesis. Infected leaves fall in October and the fungus spores spread from these the following July. These spores can be blown in the air: researchers in Norway, where the human movement of ash was quickly banned, discovered the disease travelled 30km each year by itself. In Denmark, 90% of ash trees are now showing symptoms of the disease and will eventually die. In 2010, the disease was confirmed in the Netherlands and Belgium. In February this year, it was discovered in young trees imported from Holland to a nursery in Buckinghamshire. Outbreaks have since been identified in newly planted trees at more than 30 locations, including Scotland, Yorkshire, Leicestershire and Cambridgeshire, and in a new Woodland Trust wood in Suffolk.

The outbreak at Ashwellthorpe, however, is a game-changer. The Norfolk Wildlife Trust reserve has had no new trees imported from anywhere into it. The disease was spotted five weeks ago by Steve Collin of the Norfolk Wildlife Trust. When he reported it, Forestry Commission officials were not overly concerned at first, according to Collin, because it had only been found in new plantations. An inspection and DNA tests, however, showed the disease had somehow found its way into this ancient woodland. Dozens of other possible outbreaks in East Anglia and Kent are now being investigated.

The apparently sluggish response to the disease by the government is another stick with which to beat the hapless Department for Environment, Food and Rural Affairs (Defra) after the furore over the forests sell-off and badger cull. "If they wanted to stop the disease coming in they should have reacted before this year rather than sitting around waiting for it to come in," says Peterken. Why was an import ban not slapped on ash immediately the disease was discovered in February? Or why not years ago, with the disease marching across Europe? The Horticultural Trades Association (HTA) warned Defra of *Chalara fraxinea* three years ago and asked it to ban imported ash trees. According to Tim Briercliffe of the HTA, fatalistic-sounding civil servants told him that as the disease was already endemic on the continent it was likely to come to the UK.



At risk: ash trees at Grange Fell near Watendlath in the Lake District. Photograph: Tim Graham/Getty Images

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Doha climate talks could spark progress

By Jennifer Andreassen



The largest international climate negotiations of the year kicked off Monday in Doha, Qatar, drawing delegates from more than 190 countries in a grand effort to create a global treaty to reduce greenhouse gas emissions and halt climate change.

Worldwide attention is particularly focused on climate after a number of respected and typically conservative global institutions -- including The World Bank, United Nations Environment Program, International Energy Agency, PwC -- in reports released in the weeks leading up to Doha painted grim pictures of the risks of extreme climate change.

These talks in Doha could see measured progress toward a new global agreement in some areas -- or, as The New York Times put it, "the agenda for the two-week Doha convention includes **an array of highly technical matters** but nothing that is likely to bring the process to a screaming halt."

Environmental Defense Fund anticipates three issue areas could see important progress in Doha:

1) Negotiating tracks

The countries now meeting in Doha are scheduled to finalize a second round of commitments under the Kyoto Protocol, the international agreement to cut greenhouse gases, and wrap up the Long-term Cooperative Action (LCA) negotiating track, which was launched in Bali in 2007 and led many countries to make voluntary emission reduction pledges but fell short of a comprehensive binding agreement.

Doha will also set the course for the "**Durban Platform for Enhanced Action**" track, whose goal is a new climate deal for all countries to be agreed to by 2015 and to take effect from 2020.

International Climate Program Director Jennifer Haverkamp said in EDF's opening statement:

"Countries can make real progress in Doha by agreeing to the Kyoto Protocol's second commitment period with minimal fuss and delay, and concluding the Long-term Cooperative Action track, so they can **turn their full attention to bringing lessons learned and key policy tools from those agreements forward** into the new negotiations.

"Even the U.S. founding fathers didn't get the Constitution right the first time -- remember the Articles of Confederation? Countries, in constructing this new agreement, have a chance to incorporate the key elements of these tracks: Kyoto's binding structure and accountability, and the LCA's broadened participation among countries and new tools to fight climate change."

2) Climate finance

Countries in Doha should deliver clear signals of ambitious commitment to address climate change, a much-needed policy signal that will help unlock and **target critical climate finance funds that exist right now** in the stock and bond markets and in countries' national public expenditures.

3) Deforestation emissions

For policies for Reducing Emissions from Deforestation and forest Degradation (REDD+), countries have the opportunity to agree that multiple sources of finance can be used to pay for REDD+ reductions, and thereby send another positive signal to tropical forest nations.

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Lawsuit takes Dole's sustainability claims to task

By Robert Kropp



The Seattle-based law firm Hagens Berman filed a lawsuit against Dole for knowingly purchasing bananas from growers whose operations have destroyed wetlands and poisoned water sources with pesticides in Guatemala.

The lawsuit filed this week suggests that like too many corporations, Dole has found it more convenient to employ the tactics of greenwashing rather than commit to genuinely sustainable practices. According to Hagens Berman, "In spite of Dole's promises to act as a safe and sustainable company in communities where its products are grown, the company knowingly purchased bananas from a plantation in Guatemala that devastated the local environment and community."

This lawsuit flies in the face of Dole's effort to position itself as an environmentally responsible company after settling lawsuits totaling more than \$900 million for its use of a banned pesticide in Nicaragua. In 2011, the company announced that it would sell bananas on farms certified by the Sustainable Agriculture Network, a coalition of conservation groups that seeks to establish sustainable agricultural standards throughout agricultural supply chains.

"A contractor who supplies Dole with approximately 290 million pounds of bananas built a dam in the Department of San Marcos in Guatemala to protect its banana and oil-palm plantations," the law firm stated. "The complaint alleges the dam caused extensive flooding, and that development of the plantation included draining 1,200 acres of pristine wetlands."

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Green Technology Spotlight: Solar Cells Made Completely From Carbon

By *SustainableBusiness.com News*

Stanford University researchers have built a solar cell made completely from carbon, which will make solar much cheaper to manufacture and easy to install.

It would be painted onto a roof as a coating, giving it the "potential to deliver high performance at a low cost," says chemical engineering Professor Zhenan Bao. It could also be painted on the surface of buildings, windows and cars.

And it would be manufactured using simple coating methods that don't require expensive tools and machines. It also would eliminate expensive and increasingly scarce materials like indium. "Carbon is low cost and Earth-abundant," says Bao.

Carbon also absorbs a lot of solar energy and has extraordinary electrical conductivity, she says.

Bao and her colleagues used sheets of carbon just one atom thick and single-walled carbon nanotubes that are 10,000 times narrower than a human hair.

The research team has filed a patent for the device. "Other groups have reported making all-carbon solar cells, but they were referring to just the active layer in the middle, not the electrodes," says Stanford graduate student Michael Vosgueritchian.

There's a long way to go on conversion efficiency, which is less than 1% is the lab now, because it primarily absorbs near-infrared wavelengths of light. That should go up quite dramatically with better materials and better processing techniques, says Bao.

"Materials made of carbon are very robust," she says. "They remain stable in air temperatures of nearly 1,100 degrees Fahrenheit." The ability of carbon solar cells to out-perform conventional devices under extreme conditions is a distinct advantage.

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Dutch government may face legal action over climate change

The move is intended to put the spotlight on the Netherlands' failure to prioritise cuts in greenhouse gas emissions

By **Fiona Harvey**, *guardian.co.uk*

The Dutch government is facing the threat of legal action if it fails to take swift action on climate change.

The move, which is thought to be the first time that European human rights legislation has been used to take a government to court over climate change failures, is intended to put the spotlight on what campaigners say is a lack of action and force them to prioritise cuts in greenhouse gas emissions.

Urgenda, the pressure group behind the move, sent a letter to ministers calling on them to announce new initiatives on cutting emissions. Without that, the group said it would proceed to the courts.

The government of the Netherlands has not yet responded.



The move is intended to put the spotlight on the Netherlands' failure to prioritise cuts in greenhouse gas emissions Photograph Lourens Smak/Alamy

The Dutch campaigners believe similar laws could be used in other countries to force the hand of governments. Marjan Minnesma, of Urgenda, and one of the leaders of the action, said: "We definitely want to give a strong example to other countries. We believe we can take this to the courts and we would like organisations in other countries to look at what we are doing and consider it for themselves."

Their campaign is supported by the Nasa climate scientist Prof James Hansen. "In the climate and energy debate we need more pressure and involvement from the public, willing to defend our rights and those of our children and grandchildren using all the means of our laws to achieve justice," he said.

Wednesday's move came as governments prepared to meet for the next round of United Nations negotiations on climate change, to start at the end of this month in Doha, Qatar. This year marks the end of the first commitment period of the Kyoto protocol, and some governments – including the EU and Australia, but not the US, Japan or Canada – are expected to sign up to a continuation to 2020, with fresh commitments to cut emissions.

For years, the Netherlands were seen as an environmentally conscious nation who were among the first to treat global warming as a serious threat. As a large part of the country lies below sea level, Dutch people have been particularly conscious of the damage that could be done by sea level rises, and from the heavier rainfall and fiercer storm surges that are predicted to result from climate change.

But campaigners say this has changed in the past decade, with the government less willing to talk about climate change and emissions, and a greater focus on the resurgent oil and gas industries.

Minnesma said the performance of the Dutch government on climate issues in recent years had been "disappointing". She accused ministers of failing to take a lead, especially at international climate talks and in developing renewable energy.

Roger Cox, a partner at the law firm of Paulussen Advocaten in the Netherlands who is involved with the legal move, says that the scale of inaction by governments means that pursuing the legal route is justified. "Averting dangerous climate change has become all but impossible, putting western countries at serious risk of committing human right violations on a scale nobody had thought to ever see again after world war two," he wrote in a comment piece for the Guardian. "This leaves the judiciary with the task of stepping in and averting catastrophe. In a democracy, issues certainly stop being only political when they give rise to domestic human rights violations and endangerment."

[<Source>](#)

World's First Net-Zero Stadium Hosts World Cup, Olympics

By *SustainableBusiness.com News*

Brazil will be the host of the 2014 World Cup and 2016 Olympics and is renovating its biggest stadium, Estádio Nacional de Brasília, to prepare for those huge events.

When the renovation is finished this year it will be the first net-zero-energy stadium in the world and will be certified LEED-Platinum.

Besides increasing capacity to more than 70,000 seats, the \$400 million conversion adds renewable energy and green transportation features.

Along with the green building features that are becoming standard practice these days, such as rainwater collection and water recycling, and a focus on natural lighting in the design, the stadium has some unique features.

The stadium's power will come from a ring of solar PV panels on the roof, which will also have a "photocatalytic membrane." That membrane is able to capture air pollution, break down the chemicals and remove them from the atmosphere.

That will remove some of the carbon emissions related to transportation, which accounts for over half of the stadium's carbon footprint. Another way to eliminate those emissions is to provide access to clean transport - parking will be set aside specifically for 3500 bicycles, including 1,000 VIP spots inside the stadium.

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Cocoa – and your chocolate fix – is under threat

By **SE Smith**, for *guardian.co.uk*



'Without cocoa, communities [in west Africa] will have trouble supporting themselves.' Photograph: Greenshoots Communications / Ala/Alamy

The effects of climate change can be seen all around us; all except the most staunch deniers have to admit that it is happening whether they like it or not. Glaciers are shrinking, water levels are changing and regional climates are also shifting. The rapid escalation of change paired with very convincing scientific evidence suggests that the change is anthropogenic in nature, which, in a way, is a good thing. If we're causing it, it means we might have a chance at arresting or reversing it, instead of being forced to accept it as a natural variation that will resist intervention.

One area where we're really starting to see the effects of climate change first-hand is with global agriculture. Most crops grow within a relatively narrow range of climatic conditions. They need the right amount of rain and sunshine, they need to grow in the right kind of soil and they have fussy life requirements, because they've evolved and been bred for very specific conditions. You can't grow bananas in Alaska or broccoli at the equator unless you're willing to expend a lot of money to create a very controlled environment, and even then, it's going to be fussy and painstaking.

In areas where some crops have traditionally been grown with great success, we're starting to see problems. Crop failures are occurring where they shouldn't and those failures are definitively connected to changes in the climate. The drought that devastated the US midwest over the summer could have been an episodic turn of the weather, although there are some strong arguments for a connection to climate change, but what's happening to, say, the cocoa crop in Africa is most certainly linked to climate change. West Africa is getting too hot to support the cocoa crop. While it's going to take some time, it will happen eventually and people are trying to plan ahead for what is looking like the inevitable.

Cocoa has been the recipient of a lot of blows over the last few years. There was a fungal infection that farmers worried could ruin the crop and drive the price of cocoa sky-high, and now west Africa, a major cocoa producer, might not be able to grow it any more within the relatively near future. That's unless researchers can develop drought-tolerant plants capable of handling hotter, drier conditions like those forecast for west Africa, and this raises concerns about reactive breeding and genetic engineering. If everyone's focused on this issue now, what's going to be the problem in 50 years?

The problems with the cocoa crop in west Africa aren't just a worry for chocolate fiends like me. Obviously I want a secure and uninterrupted supply of chocolate because I take my chocolate very seriously. Chocolate is also a huge industry, with a number of major companies involved in the transport, processing, and production of chocolate; Switzerland must be glad it's got banking as a backup, is all I'm saying.

For west African farmers, the loss of cocoa farms could present serious problems. Those farms were installed in the first place because of the high demand for cocoa in the west, displacing food crops and subsistence farming. Cocoa farming in some regions dates to colonial rule and, as a legacy of colonialism, its decline could have very far-reaching effects. Without cocoa, communities will have trouble supporting themselves, providing employment to residents, feeding themselves and maintaining social order. In a world where people are poor and hungry, they tend to get desperate.

Already, some regions of Africa are plagued by food distribution problems created by western interventions. Those problems are going to get worse as the world's supply of food shifts and these same parts of Africa bear the brunt of climate change. Temporary fixes in the order of food aid are often proposed, but those aren't going to solve the larger problem: we are drying Africa out, we are milking it for all the resources we can get, and then we are abandoning the empty husk and letting people fend for themselves.

And then we produce poverty and violence porn to showcase the horrors of Africa. It is a twisted system we have created, and it's one that weaves over and under and back upon itself in a snarled web. Since climate change is heavily influenced by western practices and lifestyles, including pressures on the global south to "develop" in the way we deem appropriate, we must tie environmental justice in with the larger picture of colonialism, food security and traditional ways of life under threat. We have wrought a mess, and now we must clean it up.

[<ReadMore>](#)

Argentina Freezes Chevron's Assets

By *SustainableBusiness.com News*

We thought it was pretty impressive when an Ecuador judge ruled that indigenous farmers in the Amazon could seize \$200 million in Chevron's assets - the first time an indigenous community has prevailed against a multinational corporation.

That's because Chevron refuses to pay a \$19 billion judgement for 30 years of polluting rivers in the Amazon rainforest. This is the world's biggest environmental lawsuit.

In 2011, Chevron was found liable in Ecuador for dumping billions of gallons of toxic waste into the Amazon rainforest, decimating indigenous groups and causing an outbreak of cancer and other oil-related health problems.

Now, the story gets even better.

Plaintiffs are looking to seize Chevron's assets in Brazil, Canada, Ecuador and Argentina.

And the first of those requests has prevailed - an Argentine judge signed an order freezing all Chevron's assets in that country. The freeze order applies to the entire \$19 billion amount of the Ecuador judgment, and Chevron has at least \$2 billion worth of assets in Argentina.

That means Chevron will effectively be barred from investing further in Argentina unless it wants to risk seizure of those assets as well.

The seizure includes 100% of Chevron's capital and dividends in Argentina, its entire stake in pipeline operator Oleoductos del Valle SA, 40% of Chevron's oil sales to Argentine refineries, and 40% of the money Chevron has deposited in Argentine banks, says Enrique Bruchou, the lawyer representing indigenous communities in Ecuador who brought the lawsuit.

"We are now on the fast track to collection in our two-decade struggle to force Chevron to clean up its awful environmental disaster," says Luis Yanza, the Ecuadorian community organizer behind the lawsuit originally filed in 1993.

"We are committed to holding Chevron fully accountable for the crimes it has committed against our indigenous peoples," he says.

The move by the Argentine judge is the first time the plaintiffs have been successful in freezing assets outside their home territory of Ecuador.

This latest twist is made possible by an international treaty in Latin America, the Inter-American Convention on the Execution of Preventive Measures, which dates back to the late 1970s.

The treaty says a defendant's assets will automatically be frozen when it fails to pay a final judgment. It has been ratified by Argentina, Ecuador, Colombia, Peru, Paraguay, Guatemala, and Uruguay. Venezuela and Chile have signed the treaty but not ratified it.

The assets in four countries where enforcement requests are pending are worth \$10 billion, according to plaintiff estimates. They have pledged to file additional requests in other countries until they get the full \$19 billion.

The development in Argentina sends a signal to foreign investors that they should apply the same environmental standards they use at home to areas where vulnerable indigenous and farmer communities are located, says attorney Enrique Bruchou.

"We ask for no more than that and no less than that," he says. "We call it responsible foreign investment."

Oil companies are watching these developments closely and a similar case is pending against Shell in Nigeria.

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What your business needs to do to overcome public distrust

By **Chris Coulter**

Trust is a valued but elusive resource, especially when applied to business. Trust in business is seen as both a driver of corporate sustainability efforts and a hoped-for outcome of any sensible corporate sustainability strategy. New data from the 2012 BSR/GlobeScan State of Sustainable Business Poll offers insights into strategies for enhancing trust in companies.

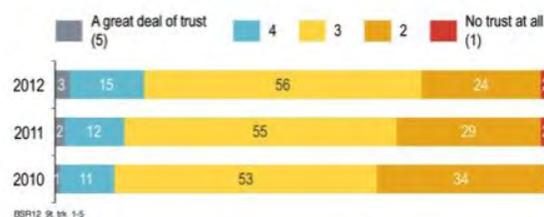
GlobeScan has been working with BSR for the past four years on an annual quantitative survey of BSR member companies. **This year's research, which took place between Sept. 6 and 24, 2012,** is based on a survey with 556 senior corporate responsibility and sustainability practitioners on a range of timely issues, including trust.

How Much is Enough?

For the past three years, we have asked business professionals to assess the level of public trust in business. The results, outlined in the chart below, show that while respondents continue to believe the public has limited trust in companies, there is growing optimism among business leaders that the public is beginning to express greater trust in the private sector. Indeed, the perceived net trust ratings have improved from a score of minus 23 in 2010 to minus 8 in 2012. The findings show a belief among corporate sustainability executives and managers that while the trust deficit continues, progress has been made over the past few years.

Level of Public Trust in Business?

All respondents, 2010-2012



On balance, respondents remain pessimistic about the current level of public trust in the private sector. The majority are neutral in terms of the level of trust they feel people have, with over a quarter (26 percent) believing the public has little trust. However, the proportion believing the public does trust business has increased gradually over the past three years.



Note: Based on a 5-point scale where 1 is "no trust at all" and 5 is "a great deal of trust."
2f. How much trust do you believe the public has in business today?



This optimism among corporate sustainability professionals vis-à-vis trust in business is not completely accurate, according to **GlobeScan's Radar Research Program**. Our latest tracking of global public opinion shows that while there has been a positive shift in trust in global companies in many emerging markets between 2009 and 2012, trust levels in global business remain flat or are declining in most of Europe and North America. This suggests a subtle, but perhaps significant disconnect between perceptions inside companies and the broader general public.

The Road to Higher Trust

The State of Sustainable Business Poll also asked corporate sustainability practitioners to rate the importance of a range of possible actions to build trust among the public.

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The man who would stop hurricanes with car tyres

By John Vidal, for *The Observer*



Stephen Salter with his "rainmaker" which is designed to produce rain clouds from sea water. Photograph: Murdo Macleod

Devastating tropical storms of the kind that battered the US last week could be weakened and rendered less deadly using a simple and cheap technology based on a surprising component – old car tyres.

One of Britain's leading marine engineers, Stephen Salter, emeritus professor of engineering design at Edinburgh university and a global pioneer of wave power research, has patented with Microsoft billionaires Bill Gates and Nathan Myhrvold the idea of using thousands of tyres lashed together to support giant plastic tubes which extend 100m deep into the ocean.

Wave action on the ocean surface would force warm surface water down into the deeper ocean. If non-return valves were used, he says, the result would be to mix the waters and cool the surface temperature of the ocean to under 26.5C, the critical temperature at which hurricanes form.

According to Salter, who has written to the government's chief scientific officer setting out his scheme, harnessing energy from the waves to cool the surface temperature of the ocean makes ecological sense. The naturally working pumps would be located in "hurricane alley", the warm corridor in the Atlantic through which the most damaging storms typically develop and pass.

Salter claims that the hydrological problems have been solved but that research funding is urgently needed. "If you can cool the sea surface, you would calm the hurricanes. I estimate you would need about 150-450 of these structures. They would drift around and send out radar signals so that no one would collide with them," he said.

The idea of what is now known as the "Salter Sink" was first presented to the US government in 2007 at a post-Katrina US Homeland Security meeting on hurricane suppression. It was picked up and developed by Intellectual Ventures, a Seattle-based new tech company run by Myhrvold and backed by Gates which buys and licenses patents and inventions.

"The Salter Sink concept is delightfully simple and singularly gargantuan," the company said in a statement posted on its website. "It has captured our imagination here in the lab. We have done some experiments and computational modelling work to validate this idea, but a lot more research needs to be done by experts in related fields such as climate science and oceanography, and we need partners to pursue the project further."

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GM Revs Up Electric Vehicle Development in China

By *SustainableBusiness.com News*

This week, General Motors (GM) announced it will accelerate development of electric cars in China as it seeks to position itself in that important future market.

GM's Advanced Materials Lab opened in Shanghai last year, where it's doing research on battery technology and lightweight materials.

The Chinese government's short-term goal is to build at least 500,000 electric or "new energy" vehicles a year by 2015. So far, sales are slow, but the government is steadily working on infrastructure and incentives to change that.

An alliance of 16 state-owned car manufacturers including Dongfeng Motors, Chang'an Automobile Group and FAW Group is likely to claim much of that market, but US automakers are also stepping up their efforts.

"China has made electrification a key strategy. Electrified vehicles will play a critical role in efforts to conserve and ultimately displace petroleum as the major source of transportation energy," says Jon Lauckner, GM Chief Technology Officer, vice president of Global Research & Development, and president of GM Ventures.

GM's ultimate aim is to double the energy density of battery packs in electric vehicles so that they are smaller, lighter and less costly.

GM manages 12 joint ventures, two wholly owned foreign enterprises and more than 35,000 employees in China.

The company's electric vehicle strategy runs the gamut from "mild" hybrid technology built on the eAssist system to full hybrid technology used on full-size trucks and SUVs to extended range electric vehicles of all model types.



Many of its existing electrified vehicles are already available in the Chinese market including the plug-in Chevy Volt, Buick LaCrosse with eAssist and the Cadillac Escalade Hybrid.

Last week, Shanghai GM

introduced a pure electric vehicle that will be built and sold in China - the SAIL SPRINGO (pictured below).

The hatchback has a range of about 81 miles per charge on highways and 120 miles in urban driving. Unfortunately, the car will retail for about \$41,460, which is likely to put it out of reach for many Shanghai residents when it hits the market on a trial basis in 2013.

GM's efforts in China will also extend to urban mobility solutions, such as the EN-V (Electric Networked-Vehicle) two-seat concept car. Its first concept car has a top speed of 25 miles per hour and has two electric motors, one on each wheel.

The company is working on next generation concepts - which could be deployed in Tianjin Eco-City.

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Why Kimberly-Clark is banking on bamboo

By Kristine A. Wong

When Kimberly-Clark announced its plan to source 50 percent of its wood fiber to alternative sources by 2025 -- more than the amount that's in three billion rolls of toilet paper -- the company wasn't quite sure how it would make that happen.

It's a tall order, even for the one of the world's top suppliers of facial tissue, toilet paper and paper towels.

"We don't know how we're going to get there yet," Brenda Nelson, a director of business planning and sustainability for the company's family care division, told GreenBiz. "It's not like there was a lot of precision around number and years," she said of the pledge made in June.

So why would Kimberly-Clark, best known for its Kleenex, Huggies and Scott brand products, commit to an actual deadline? After all, Walmart famously announced goals to become 100 percent supplied by renewable energy and create zero waste -- yet failed to disclose a timeline.

Like the advice given to Benjamin, the young man searching for a future in the 1967 film "The Graduate," the answer lies in one word.

Kimberly-Clark is banking on bamboo.

"We did enough research on the fibers and potential barriers to know that it's achievable," Nelson said. "2025 was a date we put out there to hold ourselves accountable to make it happen."

Mitigating risk

In 2011, Kimberly-Clark used 3.53 million metric tons of fiber to manufacture its products, according to company figures. Less than one-third of that amount -- 1.05 million metric tons -- came from recycled sources, the company reported.

Eighty percent of Kimberly-Clark's product line contains wood fiber. Its primary sources are from the U.S., Brazil and Canada. In a 2011 report, the company describes itself as "highly reliant" on the material.

In the last few years, Kimberly-Clark has been hunting for a commercially viable alternative to wood fiber. In 2009, the company adopted a procurement policy requiring 40 percent of its fiber to be sourced either from FSC-certified or recycled sources by 2011. The move brought an end to a five-year campaign by Greenpeace pressuring the company to cut its ties with suppliers hawking non FSC-certified wood. The policy also banned the use of any fiber from endangered species.

But the motivation for the search extends beyond environmental reasons, Nelson says. It's also an effort to insulate the company from a fiber market marked by volatile prices and a dwindling supply.

"We've taken a long look at what are the outlook and trends in virgin and recycled fiber supply," she says. "There's increasing pressures and demand on land that's available. We know that where there's constraints in terms of resources, we'll someday have business impacts associated with them."

To build the business case for alternative fibers, Nelson's team examined a whole range of characteristics for several materials including bamboo and wheat straw, a product left over from wheat farming. They looked at fiber characteristics, biomass available, processing requirements and whether the infrastructure needed for processing was available. The group also identified barriers to commercializing the materials, along with broader trends that could affect the supply.

After a year of initial R&D tests, bamboo appears to have become the focus in the company's alternative fiber strategy. Kimberly Clark is also evaluating other candidates, Nelson said, but declined to disclose more information.

Photo of bamboo grove in Arashiyama, Kyoto, Japan provided by Filip Fuxa via Shutterstock

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Green Technology Spotlight: Gas Up With CO2

By SustainableBusiness.com News

Engineers may have found a way to both produce fuel for vehicles and remove carbon from the atmosphere at the same time.

Researchers at UK-based Air Fuel Synthesis, Ltd. believe they've found a "real, sustainable alternative to fossil fuels," using a simple technology that dates back to World War II.

The synthetic fuel works in all current vehicles - no changes to infrastructure are needed.

"We haven't broken the Second Law of Thermodynamics or anything," Graham Truscott of Air Fuel Synthesis told *Raw Story*. "We take carbon, we combine it with hydrogen, put it in a reactor to make methanol, then we take the methanol and put that in another reactor to make petrol. The processes of making synthetic petrol from carbon are well known and have been around for many, many years. The Germans were doing it during the Second World War. The South Africans were doing it during the apartheid years. But they were taking their carbon source from coal. We're taking our carbon source from the atmosphere."

Other companies are working on related technologies, but Air Fuel is the first to actually capture carbon from the atmosphere and turn it into fuel.

They plan to use renewable energy to power the production process - their first plant should be operating in about two years.

Here's how the process works:

- Air is blown into a tower that contains a mist of sodium hydroxide which reacts with the carbon dioxide in the air, forming sodium carbonate. Electricity is then passed through the sodium carbonate to release the carbon dioxide, which is stored.
- A dehumidifier in the tower condenses water from the air. The water is then split into hydrogen and oxygen using an electric current.
- The carbon dioxide and hydrogen are reacted together to create Syngas, which is then processed to form methanol.
- The methanol is passed through a gasoline fuel reactor, creating petrol.

"Air capture technology ultimately has the potential to become a game-changer in our quest to avoid dangerous climate change," says Dr. Tim Fox, Head of Energy & Environment for the Institution of Mechanical Engineers.

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Mahindra Lifespaces Publishes Its First Sustainability Report

Mahindra Lifespaces

Mahindra Lifespaces became first real estate company in India to publish its sustainability report, which received an A+ rating for meeting the requirements of GRI-G3 Guidelines.



Mumbai, India - Mahindra Lifespace Developers Ltd., the real estate and infrastructure development arm of the \$15.4 billion Mahindra Group, released its triple bottom-line focused Sustainability Report on October 16, based on the Global Reporting Initiative (GRI) Guidelines. The report has been assessed at A+ as per the GRI-G3 Guidelines, indicating the highest level of transparency and voluntary disclosure. Mahindra Lifespaces is the first company in the Real Estate Sector in India to publish a GRI-compliant sustainability report.

Mahindra Lifespaces has always been conscious of the need to strike a harmonious balance between the inevitable need for urbanization, the responsibility towards sustainability, and a healthy bottom line. This 'Business with a Purpose' focus of Mahindra Lifespaces is aligned with the Mahindra brand's Rise philosophy of driving positive change through alternative thinking and accepting no limits.

The first stand-alone sustainability report explores how Mahindra Lifespaces' defines and implements its strategy, identifies material issues and addresses its responsibilities not only to all stakeholders but more importantly to the environment. It highlights the company's economic, environmental, social and governance performance across all aspects of the business and organization.

Commenting on the achievement, **Anita Arjundas**, Managing Director & CEO, Mahindra Lifespaces Developers Ltd. & Member of the Group Executive Board, said, "We recognize that urban growth is inevitable; but it needs to be tempered by a strong responsibility towards scarce resources and environmental conservation. Our endeavor has been to adopt business strategies that meet the needs of our organization and our stakeholders while protecting, sustaining and enhancing human and natural resources. Be it **Green Homes** from Mahindra Lifespaces or new **Urban Centers** from Mahindra World City, our focus has always been on sustainable urbanization. We are proud to be the first organization in the real estate industry to have embraced the triple bottom-line approach to sustainability and to present the first GRI A+ rated sustainability report of Mahindra Lifespaces".

Mahindra Lifespaces has followed the Global Reporting Initiative (GRI) Sustainability Reporting G3 Guidelines, which is the most widely-adopted non-financial reporting framework in the world, and used to help communicate sustainability performance while encouraging transparency and accountability. Third party assurance has been given by **KPMG** after having audited the disclosures. The Mahindra Lifespaces sustainability report has achieved an A+ rating for meeting the requirements of GRI-G3 guidelines. Once published, this report can be viewed worldwide in GRI's 'Sustainability Disclosure Database'.

[<ReadMore>](#)

Wipro takes top spot in green electronics rankings

By Jessica Shankleman

Indian tech giant Wipro has parachuted into the top spot in Greenpeace's latest green electronics rankings, after winning plaudits for its ambitious commitments to cutting carbon emissions and sourcing energy from renewable sources.

Greenpeace today unveiled its 18th annual Guide to Greener Electronics, ranking 16 leading global companies in the market for mobile devices, PCs and TVs, based on their environmental policies and impacts.



Greenpeace each year selects which companies to rank based on latest industry sales figures and global market share for the previous year.

Two Indian firms made their debut in the league table this year having only previously been included in Greenpeace's national rankings.

According to the campaign group, Wipro showed leadership in reducing greenhouse gas emissions, having adopted a target to cut emissions 44 percent between 2008 and 2015, while delivering 85 percent of its emission reductions through the greater use of renewable energy.

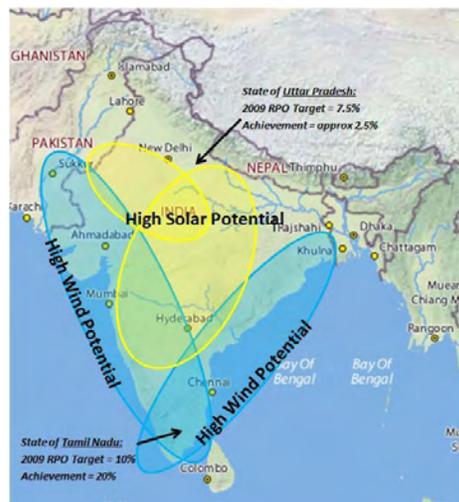
The company has also integrated energy efficiency into its product design, and received the maximum score available from Greenpeace for a take-back policy that promotes the collection and recycling of post-consumer e-waste.

Another Indian outsourcing giant, HCL Infosystems, also joined the rankings for the first time in joint 13th position, alongside electronics giant Sharp.

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Indian CERC to launch Renewable Energy Certificate trading soon, Express says

Financial Express is reporting that the Central Electricity Regulatory Commission (CERC) is planning to launch power exchange-based trading of renewable energy certificates (RECs) soon. "We are going to launch soon formal trading of RECs soon. We are currently in the process of finalising a date," CERC chairman Pramod Deo told Financial Express.



Under the national action plan on climate change, India has envisaged meeting 15% of its electricity requirement from renewable sources by 2015. The country's renewable power generation potential is concentrated in a few states like Rajasthan, Tamil Nadu and Karnataka. Renewable power accounts for a relatively high share of these states' electricity consumption. However, these states are not keen to take more renewable power as it is costly. REC mechanism will help to address this mismatch.

Under the REC mechanism renewable power is to be split into two components – electricity and the green attribute. The electricity component can be sold to local distribution utilities at a price of conventional electricity and the green attribute is converted into REC which the generator can sell to renewable power-deficit states and companies. The price at which REC can be sold have been set by CERC as:

REC Type	Floor price (minimum)	Ceiling price (maximum)
Non Solar	INR 1,500(\$33)	INR 3,900(\$87)
Solar	INR 12,000(\$267)	INR 17,000 (\$378)

[<Source>](#)

IL&FS subsidiary becomes first company to receive RECs from Karnataka

Climate Connect News, 08 November 2012, New Delhi: A subsidiary of the IL&FS Renewable Energy Limited, Tadas Wind Energy Limited, received the very first RECs issued for the state of Karnataka. Tadas Wind Energy Limited has the maximum registered generation capacity in Karnataka, with the value reaching up to 100 MW.

Karnataka boasts of 13 renewable energy projects registered under the REC Scheme, all belonging to wind energy sector with a cumulative registered generation capacity of 127 MW. Tadas Wind Energy Limited is the frontrunner among the project developers with a total of 7 project owned by the firm.

Tadas Wind Energy Limited dominates with 14 wind energy projects registered under the REC Scheme. The projects are located in Andhra Pradesh and Karnataka with a combined generation capacity of 150.4 MW and a potential of generating about 329376 MWh of electricity and an equivalent number of RECs every year valued between Rs 49.4 crore and Rs 108.69 crore.

Tadas Wind Energy Limited, a special purpose vehicle formed by IL&FS Renewable Energy Limited, in March, 2012, raised Rs 876 crore to set up 200.8 MW wind energy capacity in three states – Karnataka, Gujarat and Andhra Pradesh. The total project cost is estimated at Rs 1168 crore. The senior term loan was provided by seven banks and one financial institution led by Canara Bank.

Thus, witnessing the current trend, more projects from Tadas Wind Energy Limited can be expected in the coming future.

[<Source>](#)

REC heavyweights report significant rise in profits in Q2 FY2012-13

Climate Connect News, 16 November 2012, New Delhi: Major projects developers under the Renewable Energy Certificate (REC) scheme have reported significant increase in the net profits during the second quarter of the current financial year. Listed companies with large generation capacities under the REC scheme, specifically Bajaj Finserv Limited, Techno Electric & Engineering Limited and Orient Green Power Limited, have reported substantial increase in profits from their renewable energy assets that include those covered under the REC scheme.

Orient Green Power Company Limited

Net profit at Orient Green Power during Q2 FY13 increased by over seven times compared to Q1 FY13 as well as Q2 FY12. The net profit for first six months of the current financial year also rose by over four times compared to the first half of FY2011-12. The company reported Q2 FY13 net profit of Rs 31.79 crore and H1 FY13 net profit of Rs 36.08 crore.

Managing Director, Mr P Krishnakumar said that the significant increase in the profit can be attributed to the increased wind energy generation realised between July and September. The company had increased wind energy generation capacity that benefited from the increased wind energy tariffs in Tamil Nadu. The company stated that 'RECs continued to boost the top line; however, the contribution from sale of RECs was muted as majority of transactions during the quarter were at floor price due to lower compliance during the mid-year.'

Techno Electric & Engineering Limited (Parent company of Simran Wind Project Limited)

In the power segment, TEEL reported 50% increase in 'profit before tax' in Q2 FY13 compared to Q1 FY 13 and Q2 FY12. Profit for first half of FY13 increased by 76% compared to profit in corresponding period over previous financial year. TEEL's power segment contributed over 68% to the profit of the company in Q2 FY13.

Simran Wind Project has over 150 MW of operational wind energy capacity, including 115.5 MW registered under the REC scheme.

[<Source>](#)

International Conference

on

Interface between Chemistry and Environment (ICICE)

13-14th December 2012

An International conference titled "Interface between Chemistry and Environment" is being organized at at Ramjas College, University of Delhi, Delhi-110007 on 13th and 14th December 2012. Eminent speakers from Indian and abroad are expected to participate in this. The keynote address will be given by one of the founders of Green Chemistry, Professor John C. Warner, President & Chief Technology Officer, Warner Babcock Institute for Green Chemistry, Wilmington, MA, USA.

The topics covered are grouped as: Sustainable Chemistry, Medicinal Chemistry, Chemical & Toxic waste management, Green catalysis & Biocatalysis, Water treatment, Analytical & Environmental Chemistry, Natural Product Chemistry, Food Chemistry, Environmental pollution & Management

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UGC SPONSORED TWO-DAY NATIONAL SEMINAR

ON

“SIGNIFICANCE OF GREEN STRATEGIES FOR ENVIRONMENTAL PROTECTION”

(In collaboration with ANU)

December 14th & 15th 2012

The department of Chemistry KBN College is organizing a two-day National Seminar on "SIGNIFICANCE OF GREEN STRATEGIES FOR ENVIRONMENTAL PROTECTION" on 14th and 15th of December'2012 at their PG Seminar Hall in Vijaywada(AP).

The seminar is being organized to provide the scientific community an opportunity & a common platform to discuss and to work together to understand the Green strategies for protecting the environment. The deliberations will be made on various topics including "the design of new, Greener and safer chemicals and materials", the use of sustainable resources, green chemistry education, environmentally benign synthesis and the development of environmentally improved routes and method to synthesise compounds.

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National Conference on Environment & Pollution – The Future Ahead

15th December 2012

Rayagada, Odisha, India

M.I.T.S. Engineering College, Rayagada, Odisha is organizing a one day “National Conference on Environment & Pollution – The Future Ahead” on December 15, 2012 in the campus of the college. The conference is expected to provide platform to hundreds of academicians, scientists, engineers and students from all over the country to disseminate and exchange information in the fields of Environmental and Safety and pollution control. Moreover this conference is one of its kind in this region.

[<Brochure>](#)

The Fourth International Renewable Energy Congress

December 20-22, 2012

Sousse, Tunisia

The Fourth International Renewable Energy Congress (IREC) is being organized by University of Sfax, Tunisia during 20-22 December 2012. IREC provides a forum for researchers and practitioners around the world on recent developments in the fields of renewable energy. Around the globe all countries are focused for producing renewable energy in such a scenario this conference is of utmost importance and most opportune time.

Authors from academia as well as industry working within the scope of the congress subjects are invited to give deliberations. This will provide a platform where researchers, academicians and high profile persons from relevant areas of industries will interact and share their knowledge and experience.

[<ReadMore>](#)

6th International Perspective

on

Water Resources and the Environment (IPWE 2013)

January 7-9, 2013, Izmir, Turkey

The Environmental & Water Resources Institute of the American Society of Civil Engineers (ASCE-EWRI) is organizing the 6th International Perspective on Water Resources & the Environment conference (IPWE 2013), January 7-9, 2013, Izmir, Turkey. EWRI looks forward to bringing together engineers, scientists, planners, economists and allied professionals from all over the world. It is expected to have eminent speakers like Professor Vijay P. Singh, Texas A & M University, USA, Professor Taikan Oki, University of Tokyo, JAPAN, Dr. Olcay Ünver, UNESCO, ITALY and Professor Zekâi Sen, Istanbul Technical University, TURKEY. The conference is being organized with support of Turkish Water Foundation, Dokuz Eylül University, Georgia Institute of Technology and Auburn University.

[<ReadMore>](#)

Forthcoming Events

An International Conference

on

Enhancing Health, Wellbeing and Sustainability - Opportunities, Challenges and Future Directions

10th - 12th January 2013

International Conference 2013 on "Enhancing Health, Wellbeing and Sustainability - Opportunities, Challenges and Future Directions" will be an International Forum for those who wish to present their projects and innovations, having also the opportunity to discuss the main aspects and the latest results in the field of Education and Research.

The conference is being organized by the **Nirmala Niketan College of Home Science, University of Mumbai (Maharashtra)**. The **Key Note Address will be given by Prof Julie Lovegrove**, Deputy Director of Hugh Sinclair Unit of Human Nutrition and Institute for Cardiovascular and Metabolic Research (ICMR), U.K . The Keynote speaker will be **Prof Maurice Walgraeve**, Dean of the faculty of Education, Health and Social Work, University College Ghent, Belgium. It is expected that participants and delegates will have the opportunity of listening eminent academicians, policy makers and practitioners.

[<ReadMore>](#)

GEOGRAPHY OF CHANGE :

CONTEMPORARY ISSUES IN DEVELOPMENT, ENVIRONMENT AND SOCIETY

on

11th January and 12th January, 2013

The Department of Geography, K.G. Joshi College of Arts & N.G. Bedekar College Of Commerce, Thane is organizing two day conference titled "Geography of Change: Contemporary issues in Development, Environment and Society on 11th & 12th January, 2013 at Thorale Bajirao Peshawe Sabhagruha, "Jnanadweepa", Thane College Campus, Chendani Bunder Road, Thane, Maharashtra, India.

The Conference Theme "**Geography of Change**" proves its significance in the current Geographical Research worldwide as Geography has remained one of the valuable platforms in bringing in the collective understanding of the current economic and social changes. The contemporary global economic restructuring is responsible for bringing in massive transformations. These transformations are responsible for inducing newer forms of spatial organisation resulting in the development of complicated social, economic and cultural structures. The conference is aimed at grasping the impact of such transformations on spatial development, people and environmental systems. It intends to cover the spectrum of issues in this respect. Interested researchers are cordially invited to participate and share their valuable inputs through research endeavors.

[<Conference Brochure>](#)

The Economic Times, Delhi dated November 01, 2012

'Bijli Box' Lights Homes in Rural UP with Solar Power

OMC Power is supplying power to about 3,000 homes in Hardoi district

DEBJOY SENGUPTA
KOLKATA

A renewal energy company, OMC Power, is lighting up rural parts of Uttar Pradesh, delivering solar-charged batteries to homes in an out-of-the-box move that promises cheap and uninterrupted power supply.

A startup company floated a year ago by three former employees of Ericsson, is supplying electricity to about 3,000 households in remote areas of Hardoi district where conventional power lines are yet to reach. The company's promoters hope to energise another 24,000 homes by the end of the year.

The power distribution model involves generation of electricity at an 18-kw solar plant at Jangaon, in Hardoi, from where it reaches villagers' homes in rechargeable batteries contained in boxes, popular called 'Bijli Box' (power in a box).

"One charge is enough for 12 hours. Every evening at 6, our employees collect these boxes from the generating unit and deliver them to their subscribers in nearby villages on diesel vehicles," said OMC Power's chief operating officer Rohit Chandra.

The Bijli Box—weighing about 2 kg and holding an electronic circuit and accompany-



NEW LIGHT IN LIFE

ing software besides the battery—can power a couple of bulbs, a fan and a specially-made television set. The company has employed youth from the villages to replace the spent boxes with charged ones at daybreak.

In OMC's model, there is no security cash deposit or fixed cost and subscribers pay on the basis of usage. The charge for a single electric lantern is ₹5 a day or ₹120 every month. Charge for the box varies from ₹250 to ₹500 per month.

"Our first plant came up in June and we have already garnered a subscriber base of 3,000 households in and around the village. Another three are ready. By the end of the year we hope to cover another 27,000 households," the company's chief executive officer Anil Raj said.

OMC Power plans to set up 500 units of 18-kw each over the next couple of years,

which will produce enough power for about 1.5 million households.

The Bijli Box has started transforming the lives of villagers. For Deepika Singh, a teacher from Jangaon, it means her students will not have to study by candlelight. "Earlier, we could not use any electronic equipment. During exams, students were forced to use candlelight. However, with the Bijli Box it's different now," Singh said, adding, "The society will be educated when its children are educated. Farmers can now use electric pumps for irrigation, resulting in better crops."

Brijor Singh, a villager, is happy that he can now use electronic devices and charge his cell phone at home.

"The light is milky white. The pressure on the eye will be less when kids are studying. The noise from the fan is low and the child who studies is not disturbed, said Radhesham Trivedi, an elderly farmer. "Our community, family and village will be educated. When we are educated, there will be development. If there is development, whatever we are doing—service or agriculture—will give a good income."

OMC's Chandra said the company's power-supply model is unique and cost-effective.

"At present, we are researching with boxes that are capable of running irrigation pumps and are also toying with the idea of introducing electric-based transit vehicles that will connect bus stations with villages," Chandra said, adding that the firm is also considering an electric cycle that can be rented on a per day basis.

The Economic Times, Delhi dated November 02, 2012

Former IT Honcho Turns to Clean-tech

Subash Menon's Kivar Environ bets big on municipal solid waste management and city sanitation

Making Moolah by Cleaning it up

Kivar Environ

FOUNDER: Subash Menon

AREA OF OPERATION

Waste Management—solid & wastewater

INVESTORS

Self-funded

TARGET REVENUE

100 crore

for FY 2013

KEY DEALS

Solid waste management contracts in Raipur, Bhilai and Durg and Pondicherry



There is no point of following others. What I learnt from Subex is to create something new, where you are not trying to catch up and playing the game of competition... We are changing the rules of game here. It is a slow grind, it will take time, and we are in no hurry

SUBASH MENON,
Founder, Kivar



Starship Enterprise

PEERZADA ABRAR

After several ups and downs, Subash Menon transformed his company Subex from a systems integrator in telecom hardware to a leader in telecom software products with over \$100 million in revenues. After two decades of being the flag bearer of the Indian product story, Menon recently resigned as the chief executive of Subex and decided to focus on his new bet—clean technology.

Menon's second entrepreneurial venture Kivar Environ is targeting solid waste, water and wastewater management market, estimated to be over \$10 billion in India. "There is no point of following others," says Menon. "What I learnt from Subex is to create something new, where you are not trying to catch up and playing the game of competition."

Menon's debut in clean technology space has already yielded results. His three-year-old startup Kivar has been awarded projects by municipal corporation of Pondicherry and Chattisgarh state for solid waste management in cities such as Raipur, Bhilai and Durg as part of public private partnership. Kivar, with 50 employees, offers an integrated solid waste management system including collection, operation of transfer stations, transport to waste management facilities, processing and disposal, and sale of by products.

"We hope Kivar's environment-friendly process and technology will make our cities much cleaner," says Ajay Singh, principal secretary, urban development, Government of Chattisgarh.

Kivar also hopes to replicate what many countries in Europe have been doing for years—processing municipal solid waste through incineration and using anaerobic digestion in which bacteria digest organic material and emit biogas. The biogas can then be converted into compressed natural gas or burned for power.

The process also yields recyclable metal, glass, paper, plastic and fertilisers, which will be sold by the company. "Unlike in India, waste is considered a resource in Europe," says Raj Kumar, director of InfraEn Consulting, which advises various state governments on clean-technology solutions.

Kivar generates revenue by charging municipalities for processing the waste and selling power and fertilisers made at its facilities.

For instance, Kivar will treat a total 800 tonne solid waste generated by cities—Raipur, Bhilai and Durg—per day. The government will pay a tipping fee of ₹1,950 per tonne, generating revenues of over ₹56 crore per annum to Kivar.

The company, which has bagged the contracts for a time period of 30 years, is setting up facilities in these three cities at an investment of ₹250 crore.

Waste management is an unorganised sector in India. Many of the processes in the supply chain to manage waste are handled by different contractors, which results in poor management. Uncollected waste accumulated at roadsides are either burned by residents or disposed of in illegal dumps, impacting the environment and public health.

"Kivar's integrated solid waste management processes and technology can be a model for the rest of the country," says Raj Kumar of InfraEn. Industry expert Juergen Porst, director of environmental consulting firm Dr Porst International,

says that solid waste, water and wastewater management is a market of over \$10-billion in India. "However, India is lagging behind by at least 20 years in this sector," says Porst. According to him, most of the technologies and processes in India for managing of solid, biodegradable and hazardous waste are based on practices that are more than 100 years old, are expensive and cause emission of too much toxic fumes.

The total municipal solid waste generated in urban India is estimated to be 68.8 million tonne per year—or 188,500 tonne per day. The urban waste generation in India is expected to grow to 350,000 tonne per day in 2025, opening opportunities for entrepreneurs. Kivar had revenues of ₹28 crore last year, and expects to clock revenues of ₹100 crore this year and ₹800 crore in next five years. "We are changing the rules of game here. It is a slow grind, it will take time, and we are in no hurry," says Menon.

abrar.shz@timesgroup.com

Kivar will treat a total 800 tonne solid waste generated by cities—Raipur, Bhilai and Durg—per day

The Times of India, Delhi dated November 02, 2012

Man-induced global warming brewed superstorm?

The Jury Is Out But Experts Say 'Sandy' Should Be Seen As A Foretaste Of Trouble To Come As Seas Rise

Justin Gillis

From the darkened living rooms of Lower Manhattan to the wave-battered shores of Lake Michigan, the question is occurring to millions of people at once: Did the enormous scale and damage from Hurricane Sandy have anything to do with climate change?

Hesitantly, climate scientists offered an answer this week that is likely to satisfy no one, themselves included. They simply do not know for sure if the storm was caused or made worse by human-induced global warming.

They do know, however,

that the resulting storm surge along the Atlantic coast was almost certainly intensified by decades of sea-level rise linked to human emissions of greenhouse gases.

And they emphasized that hurricane Sandy, whatever its causes, should be seen as a foretaste of trouble to come as the seas rise faster, the risks of climate change accumulate and the political system fails to respond.

"We're changing the environment — it's very clear," said Thomas R Knutson, a research meteorologist with the government's Geophysical Fluid Dynamics Laboratory in Princeton, New Jersey.

By the time hurricane Sandy hit the Northeast coast on Monday, it had become a freakish hybrid of a large, late-season hurricane and a winter storm more typical of the middle latitudes. Though by no means unprecedented, that type of hybrid storm is rare enough that scientists have not studied whether it is likely to become more common in a warming climate.

"My profession hasn't done its homework," said Kerry A Emanuel, a climate scientist at the Massachusetts Institute of Technology. "I think there's going to be a tonne of papers that come out of this, but it's going to take a



WARNING BELL: The storm-ravaged Atlantic coast in New Jersey

couple of years."

Hurricanes draw their energy from warm waters in the top layer of the ocean. And scientists pointed out this week that parts of the western Atlantic were remarkably warm for late October.

Kevin E Trenberth, a scientist with the National Center for Atmospheric Research in Boulder, Colorado, said that natural variability probably accounted for most of that temperature extreme.

But, he added, human-induced global warming has raised the overall temperature of the ocean surface by about one degree Fahrenheit since the 1970s. So global

warming probably contributed a notable fraction of the energy on which the storm thrived — maybe as much as 10%, he said.

He further said that many of Sandy's odd features, including its large scale, derived from its origin as a merger of two weather systems that converged in the western Atlantic. "My view is that a lot of this is chance."

Globally, the ocean rose about eight inches in the last century and the rate seems to have accelerated to about a foot and scientists say most of the rise is a direct consequence of human-induced climate change. [NY NEWS SERVICE](#)

The Times of India, Lucknow dated November 03, 2012

RAINWATER HARVESTING IS NOW MANDATORY

With several governments banning the use of ground water in construction and making it mandatory for residential projects to have water harvesting units, most developers are meticulously following this directive,

PUNITA writes

Developers like DLF, Unitech, Ansal APL, Sobha Developers, Omis Infrastructure, Anulish Group, Associated Ltd, Chaitis Group, Bahaja Developers, TDI, Aulou, Vardhaman, Supertech, Adityana Housing, JP Group, Wave Infotech, Cairsons, Earth Infrastructures, Ajara, Gulshan Homz, etc. are taking initiatives to conserve rainwater and raise the water table through rainwater harvesting.

This is in the best interest of the developers to ensure that rainwater harvesting projects are taken up and completed on priority. The construction of these water-harvesting units will entail prevention of water logging and recharge of ground water so that the local water table rises.

In fast-developing cities like Noida-Greater Noida, rainwater harvesting is mandatory for all the developers.

Any construction on 100 or more than 100 sq metres has to mandatorily put in place water-harvesting systems for their projects. According to rules and regulations being implemented by the Noida-Greater Noida development authorities, a NOC (no objection certificate) will not be issued for any project that has not built rainwater harvesting units.

Even in cities like Chennai, Bangalore,

Thiruvir, Hyderabad, Mumbai, Pune, and Nagpur rainwater harvesting is mandatory.

In South India, almost 90% projects of developers like Sobha Developers, Puravankara Projects Limited, Godrej Properties, Tata Housing, Prestige Estates, Loka Developers, Unitech Ltd, DLF, Sunil Mantri Realty, Belani Group, Ambuja Realty and Rajapazaru Group are equipped with a rainwater harvesting system consisting of rainwater percolation pits and rainwater collection tanks.

Rama Ramani, the CEO of Greater Noida Industrial Development Authority (GNIDA), says, "Rainwater harvesting systems are mandatory for any type of construction on 100 or more than 100 sq metres. Water-harvesting plants are very essential for maintaining the underground water table. We continuously keep tabs over the maintenance work of the harvesting plants."

In a step to conserve rainwater in Gurgaon, the DLF Foundation has begun construction of over 45 rainwater harvesting (RWH) units, which will also stem the flooding of the roads and low-lying areas that causes tremendous inconvenience to the public during the monsoons.

Sanjeey Roy, the vice-president (corpo-

rate communications) of DLF says, "We are fully aware that there is an urgent need to replenish the depleting water tables in Gurgaon. We have, accordingly, initiated this project in partnership with SURGE. Our target is to complete the remaining 45 units over the next 6-7 months. Construction is underway to set up these water-harvesting units in the DLF City from Phase 1 to Phase 5."

"The construction of these water-harvesting units will entail prevention of water logging and recharge of ground water so that the water table rises. Until recently, there has been little talk of the rate of groundwater abstraction in Gurgaon, which is reportedly more than three times the quantity replenished by rains," Sanjeev says.

Prasanna Venkatesh C, the senior vice-president (design & engineering) of Sobha Developers Ltd, says, "We started

rainwater harvesting in 2004, by providing rainwater collection tanks to make optimum use of the rainwater within the projects. Before 2004, ground water was recharged by diverting the run-off water from hard-paved and landscape areas of the building to rainwater percolation pits through external drains. Gradually rainwater collection tanks were designed and the stored water was used for landscaping, car and floor wash. This process has resulted in the conservation of 50,000 l of fresh water consumption during monsoons."

In 2010, Sobha considered the use of rainwater for domestic purposes within the apartments and villas. Sobha Lifestyle, a residential villa project has one of the largest rainwater harvesting facilities in a community of this kind, complete with water filtration and water softening. A rainwater storage tank with a capacity of 13,440 cubic metres has been constructed on the project. This tank is capable of sustaining the domestic water requirements of all the 165 villas in full occupancy for eight months of a year, without an external supply of water, saving enormous amounts of fresh water.

"The Sola City of Sobha Developers in Thiruvir is built on the water front of the biggest man-made lake, over 4.5 acres. This 6.5-acre lake, one of the biggest rainwater harvesting facilities in the country, effectively addresses Sobha City's potable water needs. Water for the entire project is sourced only from rainwater, harvested from the 6.5 acres artificial lake. This water is treated in a RO plant for consumption. Waters saved by RWH is used for landscaping, car washing, and floor cleaning. After suitable treatment, rainwater is



used for domestic purposes," Prasanna Venkatesh says.

Prashant Solomon, the managing director of Chintels Group says, "Rainwater harvesting is one of the best ways to recharge the ground water table and, heretofore, this year we have had a good monsoon. Chintels Group is going to make 12 rainwater harvesting pits in its project Chintels Pandeko. Our integrated township will have 150 rainwater harvesting pits when completed."

Robit Puri, the vice president (marketing) of BPTE says, "In all our projects, like Parkland Pride in Sector 77, Park Grandeur in Sector 82, The Resort in Sector 75, Park Arena and Discovery Park in Sector 80, Park 81 in Sector 81 and Park Elite Premium in Sector 65 — all in Faridabad — we have rainwater harvesting systems. Undoubtedly, the depleting water table has become a serious concern. Harvesting rainwater will not only solve the problem of availability, but also of quality. Every stakeholder should be involved in maintaining the rainwater harvesting sys-

tem."

Manpreet Singh Chudha, the joint managing director of Wave Infotech Ltd, says, "The rainwater harvesting system for our project has been planned as per the guidelines of rainwater harvesting manual of the government of India and the prevailing bylaws of the government of Uttar Pradesh. There will be more than 20 rainwater harvesting units in our forthcoming projects like Wave City Centre in Noida and Wave City on NH-24."

Nikhil Jain, the CEO of Ramprastha Group, says, "Ramprastha is committed to maintaining the ecological balance in and around all our projects. Rainwater harvesting projects are being taken up at all our construction sites to ensure the most efficient utilization of water in construction and, after the completion of the projects, these units will be used to ensure better availability of potable water to the residents as well."

Pranav Ansal, the vice chairman of Ansal APL says, "We have established rainwater harvesting units in our projects,"



- EVEN IN CITIES LIKE CHENNAI, BANGALORE, THIRUVIR, HYDERABAD, MUMBAI, PUNE, AND NAGPUR RAINWATER HARVESTING IS MANDATORY
- THE CONSTRUCTION OF THESE WATER-HARVESTING UNITS WILL ENTAIL PREVENTION OF WATER LOGGING AND RECHARGE OF GROUND WATER SO THAT THE WATER TABLE RISES

*The Times of India, Lucknow
dated November 03, 2012*

India's construction industry, one of the largest contributors to the Indian economy, is also contributing to the degradation of the environment. This industry has led business leaders, government officials and non-governmental organisations address to one intrinsic question - Why energy efficiency should be an integral part of architecture, engineering and construction process?

Buildings alone are responsible for at least 40% of energy use in most countries. The absolute figure is rising fast, as construction booms, especially in countries such as China, India and Southern Mediterranean countries. For these countries, the expected development of

with the satisfaction alone of not being environment polluters.

Today, the country has seen a spurt in the number of construction projects compete for the green tag. Currently there are 1700 green buildings in India out of which 267 green building projects are certified and fully functional in India.

These include offices, factories, hospitals, hotels, it parks, airports, banks, residential spaces, SEZ's, townships among others.

Mumbai itself has about 250 buildings

air conditioning, 13% for refrigeration, 4% for televisions and 10% for other appliances in the urban sector. By the year 2025, buildings will be the single largest energy consumers and emitters

A GREEN LEASE OF LIFE

By the year 2025, buildings will be the single largest energy consumers, says **NAND KUMAR**

the building sector and higher standards of living, directly connected with the consumption of the residential sector, are the main reasons for this consumption upsurge.

The household sector is the single largest consumer of energy in India, accounting for 40-50 per cent of the total energy consumption in the country. In rural areas, the residential (domestic sector) accounts for nearly 80 per cent of the consumption of energy. The resulting carbon emissions are substantially more than those in the transportation sector.

New buildings that will use more energy than necessary are being built every day, and millions of today's inefficient buildings will remain standing by 2050. Urbanization and economic growth in India point out to the rapid growth of new building stock. In India, taking into account sustainable building considerations at the time of design and construction makes good economic sense. However, the green construction and energy efficiency is limited within the boundaries of new construction. A significant chunk of existing buildings in India still continue to largely contribute to greenhouse gas emissions, a major cause of concern for the country.

Can old existing buildings be energy efficient at all? The answer is yes.

Green retrofitting of old buildings is one such solution to answer the energy efficiency queries. It carries higher costs at a later stage invariably, both financially and environmentally than integrating sustainability considerations already at the early stages of design and construction. But it rationalizes the cost of retrofitting in the long run with lesser energy and water consumption bundled

registered with IGBC, which are at various stages of construction. Mumbai ranks second in the country with 36 rated operational green buildings.

However, these green buildings constitute on 2% of the number of total buildings in the country. The rest 98% are old existing buildings which have to be regularly maintained and which consume maximum amount of energy.

of greenhouse gasses on our planet. Therefore, it has become increasingly necessary to make appropriate efforts to bring down carbon emissions from the building sector.

Energy efficiency of new buildings determines the energy consumption for far longer than in other end-use sectors. Unfortunately, projects and legislation are based on short payback times on a few years. Energy issue buildings should be evaluated over life time of the building or at least over 30 years. Since buildings are typically renovated several times, renovation offers a special opportunity for improvements of energy efficiency. But it has to be done right in the first place! By construction!

Considering in particular the hidden costs and market failures that characterise the building industry, regulatory and control measures are likely to be the most effective and cost-efficient in bringing about a green transformation of the sector. These need to be combined with other pricing instruments for greater impact, considering realities such as the level of development of the local market and household income-levels.

Additionally, government-owned buildings such as public schools, hospitals, and social housing units are ideal locations to begin implementing greener building policies, including green public procurement. At the same time, the role of progressive private sector actors organised for example through Green Building Councils can drive the transition to lower carbon and more resource efficient buildings.

*Nand Kumar is
Head of Corporate
Communications, ACC Limited*

Energy consumption in Indian buildings is expected to increase substantially due to economic growth, construction growth and human development. It is estimated that in a typical residential building, around 28% of the total electricity is consumed for lighting, 45% for

Lower temperature led to higher level of pollution: DPCC



NO SMOKING: Environment Pollution Control Authority tells Delhi government to crack down on vehicles emitting smoke

Neha Lalchandani | TNN

New Delhi: The smog that had enveloped Delhi since Monday finally showed signs of clearing over the weekend. However, amidst concerns that similar conditions may arise again in the coming winter months and the Environment Pollution Control Authority asking the environment department of Delhi government to take stringent steps to curb pollution, the department has claimed that the situation was not so bleak.

"Delhi faces such conditions every year between the third week of October and the first week of November due to weather changes. In the present condition, pollution did not cause the problem but, in fact, the problem led to high pollution levels. On Saturday, when the weather improved, so did pollution levels," said Sandeep Mishra, member-secretary, Delhi Pollution Control Committee.

Officials said the smog was a weather phenomenon, a result of calm climate with wind speeds less than 1m per second, lower temperatures, high dust concentration and higher humidity levels. "A major factor that possibly contributed to high pollution levels in the city in the past few days was a massive number of fires in Punjab. NASA's satellite images from October 31 show fires raging all across the state and they are quite possibly agricultural fires. This could have contributed to the sudden rise in particulate matter over Delhi," said an official.

The Met department confirmed that this was a period when rice chaff was burnt in Punjab every year but they would need to study wind patterns etc before it could be confirmed whether the particulate matter

was carried to Delhi. "In any case, Delhi's in situ pollution is already high enough. The agricultural fires could have contributed to the smog but conditions would have been poor even without it," said RK Jenamani, director-in-charge, IGI Met.

DPCC studied the problem and said while pollution levels have been similar between October 22 and November 22 in 2010, 2011 and 2012, this year has been different due to temperature. "Compared to an average temperature of over 23 degrees in 2010 and 2011, 2012 so far has seen an average temperature of less than 20 degrees this month. This led to the inversion phenomenon setting in earlier when air cools down and doesn't rise, trapping all pollutants close to the earth's surface," said an official.

However, an EPCA member said Delhi's problem was of multi-pollutants and biomass burning could only add to PM levels. "Cold and inversion levels are not unique to Delhi. Western countries are much colder and at one point England also had a major smog problem. But they have taken care of pollution levels, which is why smog is under control. Inversion will lead to higher pollution levels but to what extent depends on how much is already present in the atmosphere," said a member.

The department has been directed by EPCA to crack down on vehicles that are visibly emitting smoke. Action also has to be taken against open burning of leaves, garbage etc. "We have asked the department to have a helpline, if possible, where people can complain about these issues. The department has also been told to take action against... polluting vehicles that have no work in Delhi but use it as a transit route," said an official.

The Times of India, Delhi dated November 04, 2012

Post CNG shift, pollution fight on the backburner

Neha Lalchandani | TNN

New Delhi: It was one bold stroke of introducing CNG for public transport in 2001 that brought about a dramatic change in Delhi's air quality. Beyond that, the good intentions remained on paper.

The government's action plans submitted to the court in 2001 said that by 2020, 80% of all travel would be by public transport. The city was to would have 11,000 buses by

► Shrinking diesel gap, P 7

2012, battery-operated vehicles and so on. Of this wish-list, only the Metro rollout has seen light of the day.

Only 6,300-odd buses have made it to the roads, and the figure is being further scaled down. "Delhi's biggest contributor to air pollution is its vehicles, which number more than 65 lakh. The biggest plan that has been on the government's drawing board for some years now is to promote public transport. However,



A Nasa satellite image shows a large number of fires, denoted by red dots, in Punjab. Met officials said the fires, caused by farmers burning down post-harvest stubs, may have added to the smog in Delhi | P 7

this is taking ages," says Anumita Roychowdhury, associate director of the Centre for Science and Environment.

In 2000, 60% of commuters were taking the bus; now, the figure has dropped to around 40%. Personal vehicles form 90% of the vehicle fleet in Delhi and account for more than 80% of the pollution from vehicles.

City choking on dust, says study

The School of Environmental Sciences at JNU has blamed the severe smog and low visibility, an annual feature in the capital, on dust. They have found that 80% of the total suspended particulate matter is from natural sources. P 7

The Times of India, Delhi dated November 04, 2012

Why you can never find garbage in Sweden

Even as Indian cities like Bangalore slowly transform into one huge garbage dump thanks to faulty civic planning, Sweden finds itself with a unique problem on its hands: there's no garbage left in the country. The Scandinavian nation has been 'importing' trash from neighbouring Norway to feed its waste-to-energy programme that

MORE THAN 90% OF HOUSEHOLD WASTE IN SWEDEN IS RECYCLED, REUSED OR RECOVERED

provides, through incineration, heat and electricity to thousands of households in the country with a population of 9.5 million.

The story first broke on the American public radio organization Public Radio International and has since been picked up by a number of green blogs and websites. Sweden's super-

efficient waste segregation and recycling systems have made sure only about 4% of the country's waste ends up in landfills.

So how did Sweden get so good at waste management, and what can other countries learn from it? Firstly, Sweden started putting effective systems in place from the early 1990s and took a holistic approach, through policy changes, engagement with industry and awareness programmes, to reach out to all stakeholders of Swedish society. Producers were made responsible for dealing with several categories of waste. Landfill bans and taxes were introduced, and targets set for increased recycling. More than 90% of household waste in Sweden is recycled, reused or recovered.

By law, companies are responsible for collecting the entire waste-stream stemming from their products, either on their own or through public or private contractors, writes Magnus Schöningh in the *Toronto Star*. There

BREAKING IT DOWN

43% of non-hazardous waste was recycled

28% of waste was used as fuel

60% of household waste went towards energy recovery



1% of domestic waste was sent to landfills

Figures represent 2010 data from Swedish Environmental Protection Agency

TALKING TRASH: Sweden generated 118 million tonnes of waste in 2010

is a strong economic incentive for companies to produce less waste from products and product packaging. Sweden has encouraged heavy recycling by combining economic incentives,

such as garbage collection fees, with easy access to recycling stations and public awareness campaigns, says the *Toronto Star* report. In 2005, Sweden made it illegal to landfill organic

waste. Instead, the waste is biologically treated to make compost, biogas and fertilizer.

However, the bulk of the waste is converted into energy through processes that have been refined over the years to be as clean and environmentally sustainable as possible. In fact, Sweden claims that the damage to the environment caused by the release of dioxins, harmful chemicals released when waste is incinerated, is less than the damage caused by the burning of fossil fuels.

Thanks to these proactive measures, landfilling of household waste fell from 1,380,000 tonnes in 1994 to 380,000 tonnes in 2004. Around 1.3 million tonnes of materials and 5.7 TWh (terawatt hour) of energy in the form of heat and electricity were recovered from household waste in 2004: an increase of 140% and 70%, respectively, since 1994. Surely, Sweden is showing Asia's growing cities how to make a clean sweep.

For more: pri.org; naturvardverket.se

The Economic Times, Delhi dated November 05, 2012

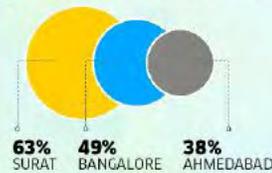
Creating Sustainable Cities With Tech Props

Governments are hard at work, trying to make cities sustainable as well as great places to live and work in. Germany, for example, has aggressive sustainability plans and wants to use renewable sources for 50% of its energy needs by 2030 and 80% by 2050. "We could do that using only the technology available now," says Hans-Jörg Bullinger, former president of Fraunhofer Gesellschaft and one of the architects of the German national high tech strategy. India presents a different scenario

India Challenge

Indian cities grew extremely quickly compared to the West

Growth over last decade



It is hard to plan for this kind of growth, says V Sriram, COO of ICRA Management Consulting Services, tells ET

Three simple ideas that can make a difference to our cities

1 MOBILITY

- **Lightweight design**, improved batteries and networking are revolutionising electric car development
- **Future cars** in cities will be networked, reducing congestion. This can help solve energy problems

Electric cars parked in offices could be a good way of providing energy during peak time," says Chetan Maini, chief of technology and strategy at Mahindra Reva

2 ENERGY

40% AMOUNT OF GLOBAL ENERGY USED BY BUILDINGS

- **Tomorrow's buildings** may not be consumers, but generators of energy.
- **They can give this energy** to the grid
- **To make this work commercially** and technologically, the grid has to reinvent itself

TECHNOLOGIES FOR ENERGY-PLUS BUILDINGS:

Generation: Solar roofs, micro-wind turbines, biomass etc

Efficiency: Insulation, passive solar design, ventilation, energy-efficient equipment

3 WASTE DISPOSAL

1.3 b tonne Amount of waste produced by urban residents a year

2.2 b tonne Amount of waste expected by 2025 a year

- **Some cities** around the world are promoting the development of a zero-waste city
- **This means 100% recycling** of waste and recovery of all resources from the waste

TECHNOLOGIES

- **Pneumatic waste collection:** Vacuum pipes underground suck the waste quickly into a central facility, avoiding transport through the surface
- **Automatic sorting:** Robots use spectrometers, metal detectors and 3D laser scanners to sort out waste. Now in its early days, automatic sorting can change how cities handle waste

Sources: Conference organised by Fraunhofer Gesellschaft in Bangalore; ZenRobotics; World Bank; Deloitte and analyst reports

VASU

The Times of India, Delhi dated November 06, 2012

DELHI CHOKES ON PUNJAB SMOKE

State fails to implement laws to stop stubble burning, tillers say they don't have option

Priya Yadav | TNN

Chandigarh: As Nasa satellite images over the past few days show, Punjab is literally on fire. In the images, the state is pock-marked with red dots which correspond to blazes deliberately lit by farmers to get rid of their paddy stubbles after harvest. It's an environmentally disastrous practice that the state government has shown little urgency in tackling.

Among the fallout of this mass-burning is smog that spreads ill-health through the region, making its way as far as Delhi and beyond. This year, the smog has been particularly severe in Delhi because of reinforcing factors such as cyclone Nilam, lower-than-usual temperatures and calm winds. Numbers associated with the burning are staggering and shocking. More than 20 million tonnes of straw is set afire within a fortnight that farmers get to prepare their fields for the wheat crop, filling the air with toxic soot and smoke.

An estimated 12 megatonnes of CO₂, a greenhouse gas, is released in the air. It causes loss of nitrogen content of soil worth Rs 250 crore. Besides, the soil loses its fertility and farmer-friendly insects and micronutrients.

The scale of the problem is huge, but the state's response has been tepid. "We know this is happening. We are trying to create awareness among farmers about schemes the government is offering through which farmers can earn money for giving away their paddy straw. Action is also being taken by

A BURNING PROBLEM

Ban on sowing paddy till **June 10** because of falling groundwater levels in Punjab delays harvest. That means farmers have few days to clear fields of paddy straw before planting wheat

Burning stubble cheap & effective. One hectare reduced to ash in **10 mins**

Over a fortnight, more than **1 mn ha** set ablaze, releasing an estimated **12 mega tonnes** of carbon dioxide. Out of **23 mn tonnes** of

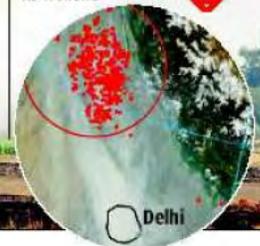
paddy residue generated in Punjab, **20 mn tonnes** burnt in a year

- Practice a major environmental hazard, impacting soil and people's health
- Ban against paddy-burning never enforced in Punjab

FIRES SEEN FROM SPACE

Burning of paddy straw in Punjab & Haryana captured in Nasa satellite images as little red dots

“What is striking...is the large number of fires. Smoke from hundreds of fires obscures most of the Punjab region | Nasa comment on its website



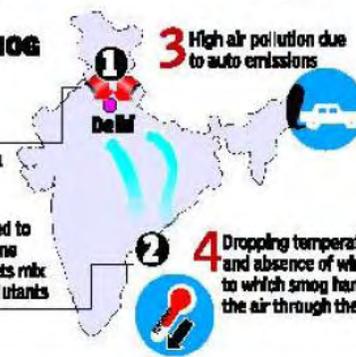
4 FACTORS BEHIND DELHI SMOG

1 Smoke wafting in from farm fires in Punjab and Haryana

2 Moisture transported to north India by cyclone Nilam. Water droplets mix with smoke and pollutants to form smog

3 High air pollution due to auto emissions

4 Dropping temperatures and absence of wind due to which smog hangs in the air through the day



ALTERNATIVES TO BURNING

► Use of Happy Seeders, a tractor designed to remove stubble

45,000 Seeders required to cover Punjab; only 200 being used

WHAT'S BEING DONE

► DMs have issued prohibitory orders under Section 144

This is to prevent stubble burning **200** cases registered in 2012 (till Nov)

► No arrests

DMs against defaulters," says Rakesh Singh, chief secretary, Punjab.

The seriousness of these efforts can be gauged from the fact that while fires have been burning in most fields across

the state, just 200 people have been booked for burning stubble so far this year. Last year, 180 cases were registered.

"The idea is not to penalize but to regulate. For the first time, we've issued advertise-

ments telling farmers they would be paid Rs 1,200 per acre for their paddy straw. But the window between paddy harvesting and wheat sowing is narrow and farmers are preferring to put fields on

fire," said Punjab Pollution Control Board chairman Ravinder Singh.

Punjab has empowered district magistrates to invoke Section 144, with cases against farmers setting their fields on

fire. Once booked for violating Section 144, the Air (Prevention) and Control of Pollution Act, 1981 is slapped on the offender. Experts say it would have been more effective to invoke the act directly.

The reason why Punjab has failed to stop farmers from burning stubbles is simple. The state has been unable to give farmer's an alternative. All that has been done is developing a special tractor, and that too in inadequate numbers to cater to the large farmer population.

P S Rangl, consultant to Punjab State Farmers' Commission, said the new tractor called Happy Seeder, developed by Punjab Agriculture University with support from the Australian government, is a viable solution.

"Happy Seeder, introduced two years ago, has been successful. But it is in excruciatingly short supply. It is a tractor-powered machine that cuts and lifts the rice straw, sows seeds and deposits the straw over the sown area as mulch. It combines stubble-mulching as well as seed and fertilizer drilling operations in a single pass," says Rangl.

Punjab has failed in promoting this new technique that is promising a solution to the acute environmental problem. Till last year, there were less than 50 Happy Seeders in Punjab, which have increased to nearly 200 this year.

"Punjab needs at least 40,000 Happy Seeders to tackle paddy burning for its over 12,000 villages," said Rangl. He didn't comment on whether all farmers would be able to afford the machine.

The Times of India, Delhi dated November 07, 2012

Green ministry likely to review oil, gas pipeline approval norms

TIMES NEWS NETWORK

New Delhi: Environment ministry could review the rules for green clearances and regulation of more than 40,000 km of oil and gas pipelines spread across the country.

The move comes after Union environment minister Jayanthi Natarajan made a spot visit to the second oil spill in a year from an ONGC pipe in Nagapattinam, Tamil Nadu.

Natarajan said, "I am going to review the conditions applied when giving clearances for pipelines and if required impose new ones."



A pipeline set up in 2003 and not in use anymore had leaked, damaging croplands and pumping oil into an irrigation canal in Tamil Nadu

She added, "The ministry will give notice to the ONGC to decommission all unused pipelines and to set in place a formal approved protocol for it."

Natarajan visited the spot where sources in the ministry said a pipeline set up in 2003 and not in use anymore had leaked, damaging croplands and pumping oil into an irrigation canal.

She noted that the company had informed that hazardous waste was being disposed off in a pit instead of being sent through a legally-mandated treatment facility. She said the company would also be sent a notice on the issue.

"I am also going to talk to the Union minister for petroleum and natural gas, Veerappa Moily to ensure that there affected people, whose lands are damaged are not only given a compensation but also provided a rehabilitation package," she said.

She pointed to the need of implementing the state-of-art technologies to monitor oil carrying pipelines noting that ONGC alone had 30,000 km of pipelines across the country.

The Times of India, Delhi dated November 08, 2012

4 biodiversity parks planned in capital

Neha Lalchandani | TNN

New Delhi: The city will soon have a special committee on biodiversity for 10,000 hectares designated for the purpose. In a meeting held recently LG Tejendra Khanna announced the creation of the Delhi Biodiversity Foundation Society that will function as a registered body under the Delhi Development Authority. Officials said that four biodi-



TAKING WING

The land is on Haryana border and will provide a direct corridor for the wildlife of both states, said Prof C R Babu, project in-charge of the BDPs

versity parks in addition to the Yamuna and Aravalli BDPs will be developed.

Of these, Tilpat Valley which is contiguous to the Asola and Bhatti sanctuaries, will be used for compensatory plantation to be carried out by the DMRC. "The land is on Haryana border and will provide a direct corridor for the wildlife of both states. Plantation by DMRC will not be in the usual order of 10 trees to one but will be in keeping with the local biodiversity," said Prof. CR Babu, project in-charge of the BDPs.

Phase Two of the Yamuna BDP has commenced while work is on to develop the Aravalli BDP as a nature reserve. In a few years, the Aravalli BDP will welcome visitors to a specially designated zone that will function as a park within the park. The 70-acre area will have over 200 species of threatened plants and trees native to the Aravalli areas of Delhi, Haryana and Rajasthan. The remaining park will be designated a nature reserve.

Scientist in-charge of the park, M Shah Hussain, said plantation on the identified site, entry to which would be from Nelson Mandela Marg, has begun with species that can no longer be found in Delhi. So far visits to the park are restricted with only education trips and groups of more than 30 permitted in guided tours. "Plant species like Kullu, Karaya Gum, Salai, Dhaba, Palash and Gurjan are being planted at present," he said.

The biodiversity park is being planted with native species, though even now about 30% of the park is covered with a dense growth of *Prosopis juliflora* or the *vikayati kikkar*, a plant that was introduced by the British and which did not allow any other species to prosper. "We started with 85% coverage of *Prosopis juliflora*, but in the past 5 years we have re-introduced native species," said Hussain.

The park, being developed by DU's Centre for Environment Management and Degraded Ecosystem, will be divided into 4 zones eventually. The major part will be occupied by the nature reserve while the other three sections will include the visitor's area, a nature educational zone and a rangeland.

Photos: Piyal Bhattacharjee



The Economic Times, Delhi dated November 09, 2012

Budgeting for Climate Change

As weather patterns get more unpredictable, nations must start budgeting for natural disasters



AJAY CHHIBBER

It's extreme weather season in Asia again. Deadly cyclones, blinding rain, floods and mudslides are becoming the norm from Nepal to Fiji. The world's policymakers must reflect on extreme weather patterns while budgeting their nations' finances.

In Thailand last year's floods caused losses of \$46.5 billion. Reconstruction costs will reach at least \$50 billion, according to the government and UN's assessments. In Pakistan widespread flooding two years ago affected 20 million people. Damages estimated by the World Bank reached \$10 billion, with reconstruction calculated at \$9 billion. How can countries find funds today to build climate resilient roads, bridges, schools and other vital infrastructure to prevent losses tomorrow? How can they prepare for a time when the only certainty is uncertainty?

One answer is more international finance under the principle of common but differentiated responsibility. This means that developed countries should take the lead in combating climate change and its adverse effects. They are more likely to have the

technical and economic capacity to address climate change, whereas developing countries may not.

Another part of the answer lies in developing countries taking a look at how climate change is reflected in their own budgets and expenditures. While the world debates who should cover the costs of reducing carbon emissions or adapting to climate risks, developing countries themselves are responding to climate change by examining their own resources from their existing budgets. The UN Development Programme (UNDP) has begun work with some countries in Asia - Bangladesh, Cambodia, Indonesia, Nepal, Samoa and Thailand - to help them to undertake a Climate Public Expenditure and Institutional Review. More than 20 countries sent representatives to a UNDP and World Bank workshop in Bangkok last week to learn how the approach works.

This means looking through the national budget to identify where climate change is already influencing allocations. For example, how much is being allocated to strengthen infrastructure so it is resilient to increased flooding? Or spent to adapt agricultural extension services to help poor communities in areas with increased risk of drought? Or to reform the energy sector to reduce carbon emissions?

Traditionally, ministries of finance have not reviewed their budgets from a climate



ARINDAM

finance perspective. So, existing climate-related expenditures are not always evident or visible to national leaders, politicians and decision makers.

With a better understanding of how much and where existing national budgetary resources are going on climate change, more informed choices can be made about how and where to channel additional resources, or how to realign funds that are already being spent.

For example, the Nepal climate expenditure review signalled the need to channel more funds to local agencies that are better placed to deal with climate challenges, rather than continue to channel most of the resources to national authorities.

In Thailand, the climate expenditure review has helped to show how fiscal measures, such as a carbon tax, might be introduced to promote the

government's energy conservation aims, and to leverage much needed private capital.

In all countries, these studies have pinpointed which sectors are receiving the most climate funding, and how much is coming from domestic versus international sources. They are also useful in charting trends like changes in the proportion of climate spending in overall public expenditure.

These reviews can also help target increased international climate finance, by ensuring that it is better aligned with national planning and budgeting. One of the main criticisms of traditional overseas development assistance is that it is fragmented, of limited impact, and not sufficiently in line with national priorities. There is an opportunity to avoid these same mistakes in new international funds that will provide climate finance, such as the Green Climate Fund.

Climate expenditure reviews try to solve a common problem that ministers of finance face. How do you make sense of the need to resolve challenges that are going to affect peoples' lives in 40 years, by spending money now? Where does one spend, how does one find the money, and how is it put into normal national planning and budgetary processes?

By building more climate resilient infrastructure today, countries can save money in the long run. International climate finance can help, as countries may not have the money up front. This type of international finance can assist countries as they realign their own budgets.

This is not only a matter of new funds changing hands, but also of realigning existing funds, of new ideas changing old ways, and ultimately, of investing today for a safer tomorrow. Global policymakers may not be able to change the climate, they could help countries build resilience to better deal with it.

(The author is UN Assistant Secretary-General and Regional Director for Asia and the Pacific)

AFTERTHOUGHT

"Climate is what we expect, weather is what we get."

- Mark Twain, American novelist, humorist and author of 'The Adventures of Tom Sawyer'

The Times of India, Delhi dated November 10, 2012

Green energy: Diesel to be made from sugar

Researchers Find A Way To Use Bacterial Fermentation Of Sugar To Produce Renewable Fuel

London: Sweet diesel! Scientists have discovered a process to convert sugar directly into renewable diesel that could replace fossil fuels used in vehicles.

University of California, Berkeley scientists found that a long-abandoned fermentation process once used to turn starch into explosives can be used to produce renewable diesel.

Researchers teamed up to produce diesel fuel from the products of a bacterial fermentation discovered nearly 100 years ago by the first president of Israel, chemist Chaim Weizmann. The retooled process

produces a mix of products that contain more energy per gallon than ethanol that is used today in transportation fuels and could be commercialized within 5-10 years.

While the fuel's cost is still higher than diesel or gasoline made from fossil fuels, scientists said the process would drastically reduce greenhouse gas emissions from transportation, one of the major contributors to global climate change.

"What I am really excited about is that this is a fundamentally different way of taking feed-stocks - sugar or starch - and making all sorts



SWEET NEWS

of renewable things, from fuels to commodity chemicals like plastics," said Dean Toste, professor of chemistry and co-author in a statement.

The late Weizmann's process employs the bacterium *Clostridium acetobutylicum* to ferment sugars into acetone, butanol and ethanol.

Researchers developed a way of extracting the acetone and butanol from the fermentation mixture while leaving most of the ethanol behind, while developing a catalyst that converted this ideally-proportioned brew into a mix of long-chain hydrocarbons that resembles the

combination of hydrocarbons in diesel fuel.

Tests showed that it burned about as well as normal petroleum-based diesel fuel. "It looks very compatible with diesel, and can be blended like diesel to suit summer or winter driving conditions in different states," said coauthor Harvey Blanch.

The process is versatile enough to use a broad range of renewable starting materials, from corn sugar (glucose) and cane sugar (sucrose) to starch, and would work with non-food feed-stocks such as grass, trees or field waste in cellulosic processes. ■

The Times of India, Delhi dated November 10, 2012

Diwali crackers get louder, silent on pollution

Boxes Don't Bear Pollution Labels, No Quality Checks For Crackers: Experts

Jayashree Nandil TSN

Graphic: Shalish Waran

New Delhi: Two days to Diwali and Sadar Bazar's market for fireworks is teeming with people. Bright colourful boxes of crackers blazoned with wide smiles are flying off the shelves. In the crush of people, there's hardly enough time to scan the price and try a quick haggle. Nobody has time for the fine print — it's another thing that few boxes have any fine print at all. No allergy advice, no word on harmful chemicals or noise levels, although these are required to be declared under the law.

Experts say most crackers contain toxic heavy metals that can have a severe effect on health. Chinese fire crackers, especially, are infamous for high sulphur dioxide emissions but are available aplenty despite the restriction on their sale in India.

"We have crackers that are extremely loud. The 'Nazi bomb', for instance. The demand for colourful crackers and sparklers is also high. People want crackers that are noisy but cheap," a trader told TOI on condition of anonymity. "People want China-made crackers although these are more polluting," said another seller.

Most crackers contain heavy metals to produce colourful sparks. "Heavy metals like lead and cadmium are extremely harmful," said Ravi Agarwal of the NGO Toxics Link, adding, "They also contain fine particles that drasti-

LIGHTS, SOUND, CHEMICAL REACTION

TYPES OF FIRECRACKERS AND THEIR COMPOSITION

BOMBS	AERIAL FIREWORKS	SPARKLERS
<p>These include 'atom' bombs, 'sutli' bombs and even a chain or a string of a thousand crackers</p> <p>Chemicals A black powder, also known as gun powder, which contains charcoal, sulphur and potassium nitrate. A tight paper tube with a fuse is used to light the powder</p> <p>Metal A composition used in a firecracker might have aluminum instead of or in addition to charcoal to brighten the explosion</p>	 <p>These include all types of rockets or those that shoot up in the air and then explode</p> <p>Chemicals These, too, contain the black powder which includes charcoal, sulphur and potassium nitrate</p> <p>Metal Aluminium</p>	 <p>These include all fireworks that burn up to a minute and produce extremely bright and showery light such as anar, chakri and sparklers</p> <p>Chemicals These include charcoal, sulphur, aluminum perchlorate or barium nitrate. A variety of chemicals are added to produce vibrant colours</p> <p>Metals Iron or steel powder. Also, it is very common for fireworks to contain aluminum zinc or magnesium dust to create bright, shimmering sparks</p>





cally raise the PM 10 and PM 2.5 pollutant levels in the air".

Vivek Chattopadhyay, senior researcher, Centre for Science and Environment, said, "There appears to be no monitoring of the quality of crackers flooding the market. Most of the crackers do not bear pollution labels which were made mandatory by the Supreme Court. Every year, emissions peak on Diwali, which is proof that fire crackers are not of good quality." Last year, on Diwali, the PM2.5 value at RK Puram, which is usually around 141 microgram per cubic

metre, shot up to 220. At Mandir Marg, the nitrogen oxide (NO₂) level rose from 45 to 75.

There are restrictions on noise emissions also. The Petroleum and Explosives Safety Organization's (PESO) notification to fire cracker manufacturers prohibits crackers with

noise level exceeding 125dB (A) or 145dB (C) at 4 metres from the point of bursting. The Supreme Court has also directed PESO to set chemical formulae for each type or category of cracker: "It's doubtful whether these rules are being followed," said Vivek.



The Times of India, Delhi dated November 10, 2012

Lax pollution control norms exposed: IFTRT

'Over 99.5% Trucks, Buses Violate BS-IV Norms'

Neha Lalchandani | TNN

New Delhi: The recent spell of smog in the city has brought to light loopholes in vehicular emission control norms that transporters have been using to their advantage while playing havoc with air quality.

Rules require commercial vehicles registered in Delhi to comply with the rigorous Bharat Stage-IV emission norms or convert to CNG. However, the Central notification on emission standards spares vehicles with national permits these conditions. As a result, many transporters have taken national permits for their Delhi-registered vehicles even though these run only in the city and the NCR.

The Indian Foundation of Transport Research and Training claims more than 99.5% of trucks and buses are violating BS-IV norms. SP Singh, senior fellow with IFTRT, says the February 2012 notification on BS-IV standards was passed to control vehicular pollution in Delhi but there are no checks on violations. "The notification states that commercial vehicles registered in Delhi with a national permit cannot ply between two points in the NCR if they



PLAYING HAVOC

do not conform to BS-IV standards. Vehicles with a Delhi permit have to necessarily conform to BS-IV standards. But commercial vehicles take advantage of the national permit clause, claiming they have to travel outside Delhi."

Singh added that non-conforming vehicles are being used by government departments as well. Transport department officials say they can't do much as it is not possible to stop each vehicle to check where it is going or coming from. "It is very difficult to conclusively establish that these vehicles are operating between two points within the NCR. We do fine those who violate the rule, but that is not very often," said a source.

In 2009, the Delhi government had ordered light goods

vehicles to convert to CNG. IFTRT claims many are still operating on diesel. "If these vehicles have a national permit, we cannot force them to convert to CNG. When the notification was issued, several light goods vehicles with a Delhi permit got national permits to avoid the mandatory switch to CNG," said the official.

Anumita Roychowdhury, associate director of Centre for Science and Environment, says the government needs to crack down against the misuse of the national permit clause. "The government is aware that the law is being misused and should formulate stricter policies. It is not enough to say that they will fine violations when they are unable to detect them," she said.

Singh said overloading of trucks also increases engine emissions. "In 2008, a Central Road Research Institute report showed that emissions go up significantly on overloading. Take the case of nitrogen oxides: a vehicle that emits 3.17 mg/cubic metre under standard loading, starts emitting 119.2 mg/cu m under 30% overloading. Particulate matter emissions also shoot up from 104.13 mg/cu m to 611.75 mg/cu m. But there is no check on overloaded vehicles."

*The Times of India, Delhi dated
November 11, 2012*

Teri gets Unesco chair on climate science

New Delhi: United Nations Educational, Scientific and Cultural Organization launched the Unesco chair on 'climate science and policy' at Teri University on Saturday. Aimed at promoting knowledge dissemination, technology development, transfer and information sharing on climate science and related policy issues, the chair was officially launched by the director general of Unesco, Irina Bokova.

With this chair, the university seeks to strengthen the design and delivery of its new programme in climate science and policy and boost research on the subject. It will facilitate collaboration between internationally recognized researchers and tea-

ching staff of the university and other institutions, particularly within India as well as in Asia, Europe and North America.

Bokova said, "The university is playing a key role in addressing issues pertaining to sustainability, which require a multidisciplinary approach." Unesco has been closely associated with Teri on the SEARCH project and Green Olympiad, she added.

Vice-chancellor Leena Srivastava said, "This collaboration is an exciting opportunity to work with Unesco on the larger discourse of sustainable development in India and globally. There is a great scope for sustainable solutions despite the diverse challenges faced by the country." **TNN**

The Times of India, Delhi dated November 12, 2012

ACs, refrigerators may get more expensive

Rich Nations Likely To Push Case For Climate-Friendly Costly Gas

Nitin Sethi | TNN

New Delhi: The cost of air-conditioners and refrigerators could go up considerably starting next summer if the US and other rich countries force a decision at the UN climate talks in November at Doha to order a global ban on existing refrigerant gases and replace them with extremely costly though relatively more climate friendly alternatives.

One of the alternatives being proposed is produced jointly by DuPont and Honeywell, two US-based multinationals, and the other by Japanese firm Daichi Sankyo Company Limited. A decision to make the costly worldwide change-over could bring windfall profits to the companies holding the patents at the cost of consumers regardless of their paying capacity and responsibility.

The move comes with the developed countries, with the US in the lead, pushing that short-lived greenhouse gases (GHGs) be reduced immedi-



COSTLY AFFAIR: At the Doha meet this month, US and other allies are likely to demand global ban on existing refrigerant gases

ately. Short-lived GHGs do not last long when released in the atmosphere but several of them have an intense effect on the climate before they disintegrate. The refrigerant being used at the moment in India and to be phased out starting next year — HCFC22 — is one such gas.

Another UN convention,

this one to close the hole in the ozone layer, has already mandated that the industry shift away from HCFC22 starting 2013 and phase it out by 2030. Indian industry is shifting to HFC410A—a less harmful gas. But now, the developed world has stepped up pressure to demand that all countries transit to newly found, much costlier

but greener alternatives.

But with only a clutch of companies owning these new gases, India and other developing countries could be forced to pay for the expensive alternatives with the US and other rich countries making it clear that they will not facilitate the transfer of technology to poor countries. The new alternatives, government experts believe, could cost 15 times the refrigerant gas India is now transiting to. India and other developing countries have consistently raised concern about rich countries using climate change as a tool to enhance business for their industry and not easing the IPR regime to facilitate transfer of clean technologies.

In contrast, at the negotiations, the rich countries have tried to put the issue of historical responsibility and consequent transfer of technology and finances on the backburner. In recent years, they have also used the excuse of a recession in the West to shirk their responsibility on these fronts.

*The Times of India, Delhi dated
November 12, 2012*

Girls develop generator to turn pee into power

London: In a breakthrough, four teenage schoolgirls in Nigeria have invented a 'pee-powered' generator that converts one litre of urine into six hours of electricity.

Fourteen-year-olds Duro-Aina Adebola, Akindele Abiola, Faleke Oluwatoyin, and 15-year-old Bello Eniola showed their creation at the Maker Faire Africa entrepreneurs event, in Lagos, southern Nigeria on 5 and 6 November, using a resource that is free, unlimited and easily obtainable.

According to the Maker Faire blog, urine is put into an electrolytic cell, which cracks the urea into nitro-

The contraption created by four Nigerian girls aged 14 and 15 can produce six hours of electricity from one litre of urine

gen, water, and hydrogen.

The hydrogen goes into a water filter for purification, which then gets pushed into the gas cylinder, the Daily Mail reported.

The gas cylinder pushes hydrogen into a cylinder of liquid borax, which is used to remove the moisture from the hydrogen gas. This puri-

fied hydrogen gas is pushed into the generator, and one litre of urine provides six hours of electricity.

Maker Faire blog described the generator as "possibly one of the more unexpected products" at the event. While the system does have one-way valves for safety, more robust measures may be needed before it can be sold widely.

The report noted: "Let's be honest that this is something of an explosive device".

Nigeria's economy is on the rise, however, more than half of the country's 162 million citizens have no access to electricity. #

*The Times of India, Delhi dated
November 12, 2012*

Smoke from field fires can travel up to 1,000km: Study

'Pollutants Cause Smog, Reduce Rice Yield'

Amit Bhattacharya | TNN

New Delhi: Plumes of smoke and pollutants rising from the burning fields of north India can spread through the air to places as much as 1,000km away, cause persistent fog over the region and could even be playing a part in depressing rice yields, various scientific studies on the phenomenon have found.

The fires that raged through Punjab since the last week of October — deliberately caused by farmers to clear paddy stubbles and ready the fields for the rabi crop — were seen as a major cause of the 11-day spell of dense smog in the capital and surrounding areas. Biomass-burning is rampant, practiced in around 90% of Punjab's paddy fields, and has continued unabated for decades despite its obvious role

SMOKING FIELDS

- ▶ Smoke particles from north Indian crop fires can travel 1,000km and rise high to 'burn' clouds. Traces of smoke found in Hyderabad, Arabian Sea
- ▶ Biomass burning a major cause of persistent winter fog over north India
- ▶ New classes of pollutants, such as polycyclic aromatic hydrocarbons, found in biomass emissions
- ▶ One study links crop fires to slowdown in rice yields



in emitting greenhouse and a toxic mix of gases, and destroying soil nutrients.

The practice has been studied by atmospheric and earth scientists for more than a decade and many of these have thrown up more grim facts. A 2009 study by K V S Badarinath of Indian Remote Sensing Centre and others reported that aerosols and trace gases from crop-burn-

ing in north India had been found over Hyderabad and Arabian Sea.

"Particles from these fires can travel up to 1,000km," said Prof S N Tripathi of IIT Kanpur's chemical engineering department. "While smoke plumes usually clear out in a week's time, and particles rise higher in the atmosphere and can 'burn' clouds."

Fires from biomass burning are also a major cause of winter fog in north India as suspended pollutants attract moisture. "We have found a direct link between fires and winter fog in north India," said Dr M M Sarin, senior professor of geosciences at Ahmedabad's Physical Research Laboratory.

Sarin's team also found that biomass emissions contain a preponderance of organic carbon, a class of sticky particulates whose properties are different from soot, or black carbon. The proportion of black carbon — which absorb heat and light, and were linked to glacier melting — was earlier thought to be higher in these emissions.

"Our studies also found another class of possible carcinogenic compounds called

polycyclic aromatic hydrocarbons in the biomass emissions," Sarin said.

In another paper published last year, Tripathi's team showed that once fog forms over north India, it gives rise to more particles — called secondary organic aerosols — which become seeds for more fog. "This becomes a vicious cycle and explains why winter fog persists for so long," he said.

Given the scale of burning across north India — an estimated 17 million tonnes of paddy stubble is set afire in Punjab alone — one study has indirectly linked the practice to slowing growth rate of rice yields. In a paper published in the Proceedings of the National Academy of Sciences (USA), Maximilian Auffhammer of UC-Berkeley and others used statistical models to show that a joint reduction in brown haze (partly caused by biomass burning) and greenhouse gases would result in a rise in rice harvests.

The results imply that adverse climate changes due to the winter brown haze and the rise in greenhouse gases have contributed to a slowdown in growth rate of rice yields in the past two decades.

The Economic Times, Delhi dated November 12, 2012

Uttarakhand Tops Plan Panel's Green Ranking

URMIA GOSWAMI
NEW DELHI

Uttarakhand has been rated top in the Planning Commission's green ranking based on quality of air and water, waste management, forest cover and climate change.

The panel lists Himachal Pradesh, Chan-

digarh, Sikkim and Andhra Pradesh as the other top four states on its Environmental Performance Index, which will serve as a measure of a state's green initiative and be linked to financial assistance from the Centre.

The index was prepared after the government in 2010 decided to rework the Gadgil-Mukherjee formula for determining central assistance to states to include an environmental parameter.

Environment performance will account for 2% of a state's overall performance. The measure is meant to be both an incentive and compensation to states for green initiatives. For allocating funds tied to environmental performance, the government has two options. The first is to devolve 2% of the gross budgetary support on the basis of the performance index. The second is to allocate funds by giving an additional weightage of 2% to the performance criteria of the Gadgil formula.

The index, which gives equal weightage to each of the five parameters for environmental performance, lists Mizoram, Kerala, Goa, Sikkim, Tripura and Puducherry as the best performing states with regard to air quality.

A state's performance on air quality is based on its deviation from target amounts of nitrogen oxides (NOx), sulphur oxides (SOx) and respirable suspended particulate material (RSPM) in the atmosphere.

Performance on water is based on

waste management and sewage disposal, water quality determined as the biochemical oxygen demand in local rivers, and the coliform count.

According to the panel, Himachal Pradesh is the only state to have set up 100% capacity in sewage treatment. The performance of the other states in this regard ranges from no effort to about 20%. Not only is the performance on sewage disposal dismal, the total fecal coliform is as high as

92%. The states that show a semblance of having adhered to the prescribed river-water quality are Himachal Pradesh, Goa, Maharashtra, Andhra Pradesh and Puducherry. Delhi, Rajasthan, Punjab, Diu and Daman, and Puducherry extract

more water than they recharge, according to the index.

Chhattisgarh outperforms all states in waste management. It collects 98% of the municipal solid waste, treats 100% of the biomedical waste and has capacity to dispose 89% of hazardous waste.

In keeping with India's efforts to counter climate change, increase in forest cover is considered as an input. Chandigarh, Sikkim,

The index lists Mizoram, Kerala, Goa, Sikkim, Tripura and Puducherry as the best performing states with regard to air quality

The Times of India, Delhi dated November 13, 2012

EU freezes carbon tax on aviation

India, China And Many Other Countries Had Strongly Opposed The Tax

Nitin Sethi | INN

New Delhi: The European Union (EU) announced on Monday deferring plans to charge a carbon tax on passengers flying to and from its 27 member countries.

European Commissioner for EU, Connie Hedegaard, said, "In order to create a positive atmosphere around these very important negotiations, I have just recommended in a telephone conference with the 27 member states that the European Union stops the clock when it comes to enforcement of the inclusion of aviation in the EU ETS to and from non-European countries, until after the ICAO general assembly next Autumn."

India, China and several other



DIPLOMATIC CRISIS AVERTED: India had banned its airlines from providing data to the EU for carbon tax assessment. China, too, had done the same

countries had strongly opposed the carbon tax, sparking a heated trade war that was hurtling towards a diplomatic crisis.

TOI had earlier reported on In-

ternational Civil Aviation Organization's (ICAO) proposal to create an international market-based mechanism for taxing international flights which would apply to flights between developing countries at a later date, and initially covering only the developed countries. Revenues from developing countries' airlines would be reverted back to the respective nations to deploy in reducing greenhouse gas emissions from the aviation sector. And, the tax collected from rich country carriers would be shared with developing countries.

While agreeing with the idea in principle, India had made it clear that it would not negotiate till the EU withdrew its unilateral measure of imposing a carbon tax

starting January 1. India had banned its airlines from providing data to the EU for carbon tax assessment. China, too, had taken a similar step.

India and other developing countries had strongly opposed the EU's attempt to break the principles of the UN climate convention in attempting to unilaterally tax other countries' fliers in disregard for ongoing negotiations.

The EU earlier had said that it would withdraw the idea of carbon tax if the countries can reach an international agreement.

But, with the upcoming Doha round of climate negotiations and a host of countries still opposed to the move, the EU has stepped back with only a new proposal on the table.

Deccan Chronicle, Hyderabad dated November 13, 2012

US spots energy in Alaska ice

Alaska, Nov. 12: A half mile (800 meters) below the ground at Prudhoe Bay, above the vast oil field that helped trigger construction of the trans-Alaska pipeline, a drill rig has tapped what might one day be the next big energy source.

The US department of energy (DOE) and industry partners over two winters drilled into a reservoir of methane hydrate, which looks like ice but burns like a candle if a match warms its molecules. There is little need now for methane, the main ingredient of natural gas. With the boom in production from hydraulic fracturing, the US is awash

in natural gas for the near future and is considering exporting it, but the DOE wants to be ready with methane if there's a need.

"If you wait until you need it, and then you have 20 years of research to do, that's not a good plan," said Ray Boswell, technology manager for methane hydrates within the DOE's National Energy Technology Laboratory.

The nearly \$29 million science experiment on the North Slope produced 1 million cubic feet (30,000 cubic meters) of methane. Researchers have begun the complex task of analysing how the reservoir responded to extraction.

DOE and industry partners drilled into a reservoir of methane hydrate, which looks like ice but burns like a candle if a match warms its molecules

Much is unknown but interest has accelerated over the last decade, said Tim Collett, a research geologist for the US Geological Survey in Denver.

The US operators in Alaska, he said, may want to harvest methane so they can re-inject it into the ground. Crude oil is more lucrative than natural gas, which is routinely injected into North Slope fields to maintain underground pressure to aid in oil extraction. Japan, South Korea, India and China, however, want to cut down on natural gas imports by burning methane. Japan is setting up for a production test on a gas hydrate accumulation in the Nankai Trough south of Honshu.

"That will be the first marine gas hydrate test anywhere in the world," Mr Collett said. — AFP

The Economic Times, Mumbai dated November 14, 2012

Big Cities are Gasping for Fresh Air, Again

Air Condition

Poor quality of 2-wheeler & truck engines, & also of diesel contributes to air pollution



100% increase in the number of vehicles on road in 5-6 years

50% of cars sold in 2010 ran on diesel

13

cities follow Bharat Stage IV (BS4) emission norms

₹7,000

extra investment needed for better tech for greater fuel efficiency

24%

of children exposed to vehicular pollution suffer from lung impairment

After seeing improvement from 1998 to 2006, air pollution worsens in metros

SHELLEY SINGH
NEW DELHI

Along with your tablet, smartphone and car keys, get ready to pack a gas mask. And if you thought the recent smog in Delhi and the more-than-usual pollution levels (20% higher) in the last fortnight were due to the burning of residual crop in Punjab and Haryana, you are wrong.

After a steady improvement since the late-1990s, the air in Delhi — and all other Indian cities — has been getting worse in the last five years. The reason: differential norms in large and small cities. Overloading of trucks, time lag in emission norms and poor quality of fuel also contribute. Some hard facts: particulate matter (PM10 and PM2.5) levels in Delhi

have gone up by 47% between 2000 and 2011, while nitrogen dioxide has gone up by 57%. PM10 is one-fifth of the human hair's diameter, small enough to penetrate the lungs.

In IT hub Bangalore, PM10 has shot up 41% between 2005 and 2010. In Kolkata, nitrogen dioxide emissions have increased 59% from the 2005 levels. In Mumbai, PM10 increased 18% between 2005 and 2010. And there aren't enough carbon monoxide emission detection centres, even in big cities. "We have a multi-polluter crisis situation," says Anumita Roychowdhury, executive director, Centre for Science & Environment. "Ozone, sulphur, carbon monoxide, NO2 (nitrogen dioxide), PM10, PM2.5, air toxicity are contributing to a deadly cocktail. Even tier-II cities like Nagpur, Kanpur, Mysore are

seeing rising pollution — small cities are the new air pollution hot spots."

While Roychowdhury paints a grim situation, the air quality had actually improved between 1998 and 2006, due to what she calls "first generation" action. "Supreme Court orders in 1990s to relocate industries outside cities helped. There was a lot of improvement in air quality, but we lost that initiative and polluters have come closer to people. That's due to more than 100% increase in the number of vehicles on the road in 5-6 years," says Roychowdhury. Specific incidents aside, it's the cars you drive in, galloping population of low-technology two-wheelers and trucks that are contributing to the deteriorating air quality.

Years Behind EU in Emission Norms ▶▶ 13

The Economic Times, Delhi dated November 16, 2012

The Times of India, Delhi dated November 19, 2012

BP to Pay \$4.5 b in Fines for US Spill

REUTERS
HOUSTON | WASHINGTON

BP Plc will pay \$4.5 billion in penalties and plead guilty to felony misconduct in the Deepwater Horizon disaster that caused the worst offshore oil spill in the US' history, the company said on Thursday.

The settlement includes a \$1.256-billion criminal fine, the largest such levy in US history, the company said. A settlement with the US Securities & Exchange Commission is also part of the deal, as are payments to the National Fish & Wildlife Foundation and the National Academy of Sciences.

The April 2010 explosion on the Deepwater Horizon rig in the Gulf of Mexico killed 11 workers. The mile-deep Macondo oil well then spewed 4.9 million barrels of oil into the Gulf over 87 days, fouling shorelines from Texas to Florida and eclipsing in severity the 1989 Exxon Valdez spill in Alaska.

The oil company said on Thursday it would plead guilty to 11 felony counts related to the workers' deaths, a felony related to obstruction of Congress and two misdemeanors.

BP, which replaced its chief executive after the spill as its market value plummeted, still faces economic and environmental damage claims sought by four Gulf Coast states and other private plaintiffs. BP has been negotiating for months with the US government and Gulf Coast states to settle billions of dollars of potential civil and criminal liability claims.

BP's US shares were up about 1.3% on Thursday while its London-traded shares were 0.3% higher.

Wall Street analysts were encouraged that the plea deal could resolve a significant share of the liability BP faces. But it is not a 'global' deal to resolve all outstanding civil and criminal liability with the US government and Gulf Coast states. "It certainly is an encouraging step," said Pavel Molchanov, oil company analyst with Raymond James. "By eliminating the overhang of the criminal litigation, it is another step in clearing up BP's legal framework as it relates to Macondo."

BP has sold over \$30 billion worth of assets to fund the costs of the spill. Matching that, it has already spent



A file photo of the spill

about \$14 billion on clean-up costs and paid out, or agreed to pay out, a further \$16 billion on compensation and claims. The disaster has dragged it from second to a distant fourth in the ranking of top western world oil companies by value.

In an August filing, the Justice Department said "reckless management" of the Macondo well "constituted gross negligence and willful misconduct" which it intended to prove at a civil trial set to begin in New Orleans in February 2013.

Negligence is a central issue to BP's potential liability. A gross negligence finding could nearly quadruple the civil damages owed by BP under the Clean Water Act to \$21 billion in a straight-line calculation.

Still unresolved is potential liability faced by Swiss-based Transocean Ltd, owner of the Deepwater Horizon vessel, and Halliburton Co, which provided cementing work on the well that US investigators say was flawed. Both companies were not immediately available for comment.

According to the Justice Department, errors made by BP and Transocean in deciphering a pressure test of the Macondo well are a clear indication of gross negligence.

"That such a simple, yet fundamental and safety-critical test could have been so stunningly, blindingly botched in so many ways, by so many people, demonstrates gross negligence," the government said in its August filing.

Transocean disclosed in September that it is in discussions with the Justice Department to pay \$1.5 billion to resolve civil and criminal claims.

Sun fuels hearth at Akshardham

Langar Serves 4,000 Solar-Cooked Meals A Day

TIMES NEWS NETWORK

New Delhi: The Akshardham temple in the capital has switched from piped natural gas to solar technology for cooking its daily quota of close to 4,000 meals every day.

The solar concentrator, named ARUN®-100, produces steam which powers the cooking process. "It works on the principle of a parabola. It uses an ingenious, two-dimensional, fresnelized mirror arrangement scheme to get the parabola effect. The system automatically tracks the sun from rise to set on both the east-west and north-south axes with an accuracy of more than 99.5% intercepting maximum sunlight," Abhishek Bhatewara, director of the company which set up the project, said.

The receiver is designed to operate at temperatures up to 400 degrees Celsius and works as a solar boiler, making it an effective replacement of conventional polluting fuels such as furnace oil, diesel, PNG and coal. The dish is mounted on a single pole and occupies a ground area of 3m by 3m and can therefore be erected in locations with space constraints.

"At the Akshardham langar (community kitchen), we

HOT TECH

Some solar appliances that can be purchased for home* use and their subsidized prices

- ▶ Solar water heaters | ₹1,200 -1,500
- ▶ Rooftop power panels with battery backup | ₹1.8 lakh
- ▶ Rooftop power panels without battery backup | ₹1.3 lakh
- ▶ Solar cooker | ₹2,500-4,000
- ▶ Geyser with storage facility | ₹5,000 onwards
- ▶ Geyser without storage facility | ₹3,000 onwards



*For a family of four

prepare around 4,000 meals each day comprising rice, dal and vegetables. So far we had been using PNG but with solar cooking, we plan to cut down our costs substantially. The project cost the temple

Rs 21 lakh and a similar amount was funded by the ministry of new and renewable energy. We hope to recover our entire investment in the next three years or so," Janak Dave, spokesperson for the temple, said.

However, based on their experience of the smoggy conditions over the past few days in Delhi, temple authorities say they need to retain PNG as a back-up system. "We will not have sunlight all through the year. So we have kept our PNG connection. Since the system has no scope for storage of solar energy, we can use the apparatus for cooking only breakfast and lunch even on ordinary days. Dinner is cooked using conventional fuel," Dave said. He said the solar cooker was an experimental project and if it worked in the next six months or so, the temple would consider sun power for other purposes including lighting.

The temple used about 40-50 standard cubic metres (scm) of PNG each day and about 10,000 scm annually. "The temple will not gain just financially. Most Indian PNG is imported and is also slightly polluting. Solar power is the best renewable energy option in a city like Delhi," Bhatewara said.



BRIGHT IDEA: The solar concentrator at the temple produces steam which powers the cooking procedure

Deccan Chronicle, Hyderabad dated November 20, 2012

Wipro tops green firms' list

New Delhi, Nov. 19: Wipro has topped the 'Greenpeace's Guide to Greener Electronics' list in its maiden appearance, surpassing global giants Apple, Samsung, Dell and Nokia among others.

The 18th version of the list has Wipro topping the list of 16 electronic companies across the world based on their commitment and progress in three environment criteria: energy and climate, greener products and sustainable operations.

Wipro has scored the most points due to its efforts to embrace renewable energy and advocacy for greener energy policies in India.

Wipro also scored well for post-consumer e-waste collection for recycling and for phasing out hazardous substances from its products, the report said.

"Wipro has set a new benchmark for sustainability, not only in India but across the globe, that will have a long-term impact in shaping the green energy debate in the electronics industry."

GREEN TITAN

The list has Wipro topping the list of 16 electronic companies across the world based on their commitment and progress in three environment criteria: energy and climate, greener products and sustainable operations.

RANK	COMPANY	COUNTRY
1	WIPRO	INDIA
2	HP	USA
3	NOKIA	FINLAND
4	ACER	TAIWAN
5	DELL	USA
6	APPLE	USA
7	SAMSUNG	S KOREA
8	SONY	JAPAN
9	LENOVO	CHINA
10	PHILIPS	HOLLAND



Greenpeace India Senior Campaigner Abhishek Pratap said.

Wipro is followed by HP in the second place, Nokia (3rd), Acer (4th), Dell (5th), Apple (6th), Samsung (7th), Sony (8th), Lenovo (9th), Philips (10th), Panasonic (11th), LGE (12th), HCL Infosystems and Sharp (13th), Toshiba (15th) and RIM (16th).

Since the last year's list,

HP has dropped from top slot to the second rank. Nokia has moved up from fourth to third place.

Taiwanese computer maker Acer was the most improved company, moving up nine spots to the 4th slot, while Dell dropped from third to fifth place.

Apple dropped from fifth place in last year's edition to 6th position and BlackBerry maker RIM did not

improve from its 16th ranking, the bottom of the group.

While most information and communications technology (ICT) companies made progress in removing toxic chemicals from their products, their manufacturing and supply chains are still heavily dependent on fossil fuels.

Besides these companies also lag behind in effectively managing e-waste they produce, particularly in India, the survey said.

"Given a massive global energy crisis caused by polluting fossil fuel, the next big environmental challenge for consumer electronics firms is to reduce their carbon pollution," Greenpeace International IT analyst Casey Harrell said.

She further said that "companies should work with suppliers to implement efficient manufacturing processes and to power the supply chain with renewable energy, not fossil fuels, just as they have successfully done to reduce the toxic materials in electronics". — PTI

The Times of India, Delhi dated November 21, 2012

Plastic ban to begin with carry bags only

Agencies To Monitor Big Stores First, Come Down Hard On Manufacturers From Friday

Neha Lalchandani | TNN

New Delhi: The ban on plastic bags will finally be imposed in the city on November 23 but for the time being, only carry bags will be prohibited.

The ban, notified in October, says that no person shall manufacture, import, store, sell or transport any kind of plastic bag in the area that makes up the National Capital Territory (NCT)

LOOKING FOR ALTERNATIVES

of Delhi. It stipulates that no person, including a shopkeeper, vendor, wholesaler, retailer, trader and hawker, shall sell or store or use any kind of plastic bag for storing or dispensing eatables or non-eatable goods or materials. However, in the absence of viable alternatives, government officials said that they cannot



COMPLETE NO-NO: More agencies have been roped in to make the second attempt to ban plastic bags successful

clamp down on packaging material and will only start with carry bags. "Nothing is likely to change overnight but this time we are hopeful that the

BRACE FOR BAN

- ▶ The ban will be only on plastic carry bags for the time being
- ▶ Packaging material permitted
- ▶ It will apply uniformly to all parts of the city, including residential areas
- ▶ Manufacturing of plastic bags banned
- ▶ No plastic material will be permitted, including virgin plastic, biodegradable or non-woven variety
- ▶ Government will meet stakeholders this week to fine-tune the ban

ban will be more effective. More agencies have been roped in to carry out raids and we will start by making an example of big stores and shops to discourage others from using the bags," said an official from the environment department.

Manufacturing of plas-

tic bags will also come to a complete halt in the capital from Friday. "This is one area where we will not allow any leniency. The manufacturers have gone to court with the issue but so far there are no directions, and we will proceed according to the law," said the official.

This is the second effort by the Delhi government to ban plastic bags. In its first attempt in 2009, it had failed to make any dent in the use of plastic bags as monitoring has been the sole headache of the Delhi Pollution Control Committee.

"The department continues to be short of manpower, which is why more agencies have been roped in. Certain segments like big stores will be monitored first. The idea is not to imprison or fine people, and we also do not want the law to turn into a tool for harassment of small vendors and shopkeepers," said a government official.

The earlier version of the ban had implied that no plastic bags, including packaging material was to be permitted. This included garbage disposal bags, carry bags without handles and plastic bags used in grocery stores for keeping spices and pulses. With no clear alternative in mind, the government will be holding a meeting with stakeholders to decide on the implementation of the ban.

"We have switched to bags without handles for selling meat but are still not sure whether this is permitted," said Abdul Qureshi, a meat seller in Lakshmi Nagar. Others like Bhim Singh who runs a small dhaba in east Delhi have switched to plastic containers.

"It is slightly more expensive but so far we haven't had the need to hike prices. In the long run we may have to consider that option," he said.

neha.lalchandani@timesgroup.com

The Times of India, Delhi dated November 21, 2012

23 Delhiites die every day due to respiratory ailments

Durgesh Nandan Jha | TNN

New Delhi: The city seems to be paying an increasingly heavy price for its deteriorating air quality. An average of 23 people die every day due to respiratory diseases in the capital, a number that has doubled in the past four years, data released by the

► Decline in deaths, P 4

Delhi government reveals.

Doctors warn that worsening air quality, a major trig-

CHOKES CAPITAL

Deaths due to respiratory diseases in Delhi



ger for respiratory conditions such as chronic bronchitis, lung cancer and infections,

may cause more fatalities in the coming years if appropriate measures are not taken.

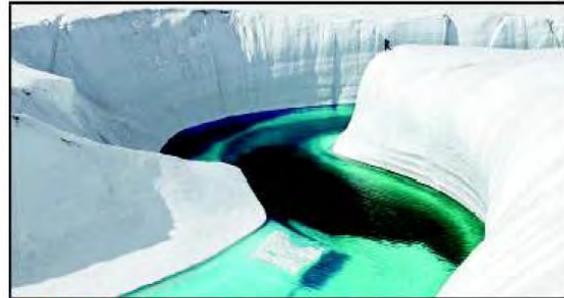
The latest statistical handbook, released by Delhi government on Tuesday, shows respiratory diseases to be the fastest growing killer in a city where fatalities from most other ailments were declining. The total number of deaths annually has also declined significantly, which is being attributed to better access to healthcare facilities and treatment.

The Times of India, Delhi dated November 21, 2012

Every year, Greenland is losing 200m tonnes of ice

Sat Photos Reveal Alarming Trend

Greenhouse gas level reached a new high in 2011



GROWING PROBLEM

Washington: Greenland is losing an average of 200 million tonnes of ice every year since 2003, which could have a big impact on sea levels, scientists claim.

The latest analysis by scientists studying the changing mass of the island using satellite data backs the previously reported trend without even including the last two summers of record-breaking ice melts.

"Greenland is really the place where everyone agrees that (the ice melt) is definitely accelerating with time and there is a big contribution to sea level rise," said researcher Isabella Velicogna of the University of California (UCI).

Velicogna is an expert at analysing the same kind of data used in this most recent study: from the Gravity Recovery and Climate Experiment (GRACE) which can detect mass changes on the surface of the Earth over time, the 'Discovery News' reported. GRACE does this by detecting subtle increases and

decreases in gravity, which is directly related to the mass below the two orbiting GRACE satellites.

Roughly, 200 million tonnes of ice is the amount needed to fill enough railroad coal cars to encircle the Earth. Princeton University researcher Chris Harig and Frederik Simons applied a new method to analysing the GRACE data. They found that during 2003 and 2004, mass loss was centred along the eastern coast of Greenland.

From 2005 to 2006, mass loss dropped in the northeast but rose in the southeast. Meanwhile, more mass was lost along the northwest coast, especially from 2007-2010.

"The study confirms what we already knew," says Eric Rignot, an Earth systems science professor at UCI and scientist at NASA's jet propulsion lab. "The authors use a new decomposition, but the sources of error and corrections are essentially the same as for other studies," said Harig. PTI

Geneva: Atmospheric volumes of greenhouse gases blamed for climate change hit a new record in 2011, the World Meteorological Organization (WMO) said in its annual Greenhouse Gas Bulletin on Tuesday. The volume of carbon dioxide, the primary greenhouse gas, grew at a similar rate to the previous decade and reached 390.9 parts per million (ppm), 40% above pre-industrial level, the survey said.

It has increased by an average of 2 ppm for the past 10 years. Fossil fuels are the primary source of about 375 billion tonnes of carbon that has been released into the atmosphere since the industrial era began in 1750, the WMO said.

WMO secretary-general Michel Jarraud said the billions of tonnes of extra carbon dioxide would stay in the atmosphere for centuries, causing the planet to warm further.

"We have already seen that the oceans are becoming more acidic as a result of the carbon dioxide uptake, with potential repercussions for the underwater food chain and coral reefs," he said in a statement.

Levels of methane, another long-lived greenhouse gas, have risen steadily for the past three years after levelling off for about seven years. The reasons for that evening out are unclear. Growth in volumes of a third gas, nitrous oxide, quickened in 2011. It has a long-term climate impact that is 298 times greater than carbon dioxide. PTI

The Economic Times, Delhi dated November 23, 2012

Ethanol-blending Made Mandatory

Oil marketing companies have to mix 5% ethanol with petrol; CCEA allows market-based pricing of the biofuel

Blending Season's Here

5%

Ethanol blending with petrol is likely to reduce India's fuel import bill besides cutting down pollution levels

105
crore litres

Amount of ethanol that will be required annually for the ethanol-blended petrol (EBP) programme



The department of chemicals had been opposing the EBP programme arguing that it would hurt the chemicals industry by diverting its share of ethanol to the OMCs

220
crore litres

The production of ethanol in 2010-11

13

Number of states with the ethanol-blended petrol (EBP) programme already in effect



OUR BUREAU NEW DELHI

The Cabinet Committee on Economic Affairs (CCEA) has made it mandatory for oil marketing companies (OMCs) — Bharat Petroleum, Hindustan Petroleum and Indian Oil Corporation — to blend 5% ethanol with petrol. This is likely to reduce the fuel import bill and lower India's dependence on fossil fuel as the ethanol prices are lower than petrol.

OMCs have been blending ethanol with petrol for the past two years but the policy was partially implemented in absence of any clear directive.

The committee, headed by Prime Minister Manmohan Singh, has also approved market-based pricing of the biofuel, opening the market for ethanol producers — mostly sugar companies. So far, the OMCs have been contracting ethanol at the provisional procurement price of ₹27 per litre, fixed by the Cabinet Committee on Economic Affairs (CCEA) in August 2010.

The petroleum ministry is now likely to come up with a gazette notification and float tenders for price discov-

ery and procurement of ethanol.

The CCEA has also allowed import of ethanol if OMCs face any shortage of the biofuel in the domestic market for blending purpose. "There is no shortage of ethanol in the country as it had produced 220 crore litres of ethanol in 2010-11. However, if need be, the OMCs may be allowed to import for blending purpose," said a minister, who had attended the meeting.

The ethanol-blended petrol is in effect in 13 states out of 19 states mandated for EBP programme. In these 13 states also, the implementation was partial with lifting of only 44 crore litres of ethanol. The department of chemicals, which is a major user of ethanol, had been opposing the EBP programme arguing that it would hurt the chemicals industry by diverting its share of ethanol to the OMCs.

The EBP programme will require 105 crore litres of ethanol annually and will help OMCs to save cost by way of difference in the prices of ethanol and petrol. "While a litre of petrol costs around 70, ethanol costs ₹40 a litre. Besides, ethanol gives better mileage to the consumer. A study by

Indian Oil Corporation says that it also lowers emissions cutting down pollution levels," said a ministry official.

The committee has asked the petroleum ministry to ensure that oil companies compulsorily sell petrol doped with 5% ethanol. In fact, the proposal of making ethanol blending mandatory was first floated by the petroleum ministry, which was approved by the CCEA in October 2007. But since then the programme has been struggling to take off despite the fact that the CCEA in November 2009 directed that a financial penalty be imposed on OMCs for their failure to reach targets. Finally in August 2010, the CCEA set up the Saumitra Chaudhuri committee for determining the ethanol pricing after a Committee of Secretaries (CoS) failed to reach at a consensus.

"After a long wait, finally there is a firm decision on ethanol blending. It will boost the ethanol industry and we expect petroleum ministry to come up with gazette notification soon to start this programme as early as January next year," said Abinash Verma, director general, Indian Sugar Mills Association (ISMA), an industry body.

The Times of India, Delhi dated November 24, 2012

Plastic bag: Ban starts with soft rap

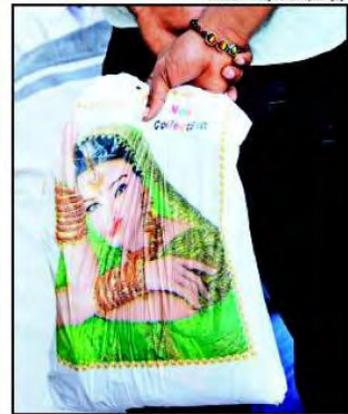
DPCC Teams Caution People, To Take Action Against Production Units From Next Week

TIMES NEWS NETWORK

New Delhi: The first day of the plastic bag ban in the city passed without much ado as Delhi Pollution Control Committee (DPCC) did not prosecute anybody for violations. The bag continued to be in use, though several shopkeepers have already made the transition to paper bags.

"Teams were sent out to markets across the city and they warned people against the use of plastic bags. The teams were instructed not to fine on the first day but just create awareness. If people are found repeating the offence, action will surely be taken but the idea is not to unnecessarily harass anyone," said a senior government official.

In the absence of any ruling from the Delhi high court on the petition filed by plastic bag manufacturers, the department said that from next week, action would also be initiated against units found operating. "We will ensure that none are operating in the city. Even the new woven bags that have been introduced are technically plastic but we do not want to confuse people. As of now, only normal carry



MORE TO FOLLOW: Even the new woven bags are technically plastic but as of now, only normal carry bags have been prohibited, says the environment department

bags have been prohibited," said an environment department official.

Delhi has around 4,000 manufacturing units of which 200-300 have licences. The rest operate in unauthorized areas and employ over a lakh people.

Meanwhile, as several big

stores and shops have already shifted to paper and woven plastic bags, polythene packets could largely be seen with small vendors and street hawkers. There were some who claimed that these were the last few packets which they were trying to dispose of. "We are aware of the ban and have

already ordered paper bags. But we wanted to finish off our plastic bags today since they will otherwise get wasted. The paper bags will be chargeable," said Ashok Tomar, a shopkeeper in Lajpat Nagar.

Others, like Raju running a clothes stall in the GK-1 M

Block market, said he was clueless about the ban. "Is there any such ban?" he asked while handing a packet of clothes to a customer. "If yes, then why are all vendors in the market using plastic bags?" he added.

In Patparganj, there was an incident where a consum-

er forced the shopkeeper to pull out a plastic bag. "How are we supposed to carry back goods from the shop. The chicken that I bought cannot be taken back in a paper bag as that will make it soggy," said Suman Joshi after the helpless shopkeeper tried to pass on a paper packet to her.

The Times of India, Delhi dated November 26, 2012

'Developing nations cheated of \$30 bn'

Rich Countries Had Committed To Transfer Climate Funds From 2010 To '12

Nitin Sethi | TNN

Doha: A report released on the eve of climate change talks in Doha has suggested that rich countries have largely cheated the developing nations of the \$30 billion funds they had committed to transfer to the poor ones between 2010 and 2012.

The fund has largely been a green-wash — recycling and renaming existing funding as 'climate funding' and giving loans instead of grants, the report said.

The developed world in 2009 had promised to fast-track funding of \$30 billion between 2010-2012 and an annual transfer of \$100 billion starting 2020. The money was not aid or a loan. It was reparation for having contributed largely to climate change.

It was meant to go to the poorest countries to help adapt to the inevitable climate change. The funds were supposed to be new and in addition

BURNING ISSUES

- ▶ Will the level of cuts undertaken by the rich world to reduce greenhouse gas emissions be increased or would developing world be forced to take more burden?
- ▶ Will India have to undertake new targets to reduce emissions from agriculture and other specific sectors?
- ▶ Will India have to give in more to get European Union to operationalize

- Kyoto Protocol?**
- ▶ Will Obama-2 bring any commitment on finance or emission reduction from the US?
 - ▶ Will the new post-2020 global treaty be based on equity?
 - ▶ Will the rich world force the world to trash existing discussions on finance, technology, unilateral measures and other issues of the developing world?



any concrete financial commitments for the period 2013 to 2020. Oxfam's research suggests that levels of public climate finance are set to fall in 2013 compared to the past three years. At the very moment that finance must be scaled up to meet the \$100 billion per year Copenhagen promise, rich countries look set to scale down."

The Doha talks starting on Monday are expected to see developing countries demand more accountability and clarity from the developed world on how they shall upscale their promised funds. The rich world is keen to let private investments largely be the solution but the developing countries want public funds as the central source, helping attract private investments in clean energy and adaptation. But the continued fiscal ill-health of the developed countries has become an excuse used often to evade obligations.

tion to the overseas development aid (ODA) money that the rich world already gives. It was supposed to be largely for adaptation and with flexibility for the poor countries to use based on their priorities.

Research by Oxfam now suggests the developed countries have deceived the world and largely given loans or re-

cycled existing promises as part of the ODA commitments as contribution to the fast-track funds.

Only one-third the total funding provided till date appears to be new money and only 24% of it was in addition to existing aid commitments. Only 43% of this went as grants, the rest were given as

loans on which the developed countries will actually earn interest. A mere 21% of this was spent on adaptation to climate change.

Oxfam said while releasing the report, "It reveals that many of the contributions so far are more of a 'false start' than a fast start. Developed countries have yet to make

The Times of India, Delhi dated November 26, 2012

India to defend its rights at Doha talks

Nitin Sethi | TNN

Doha: The Indian negotiating team in Doha will not be looking to score any big victories at the climate negotiations starting on Monday but to ensure that it does not lose ground. Unlike the previous annual UN climate talks, in Qatar, environment minister Jayanthi Natarajan is tasked to defend the battle lines India drew at Durban last year and earlier.

With the developed world losing its appetite to either make a greater contribution to reducing its emissions or to transfer funds to the developing world, for countries like India, the Doha round of talks is set to be a battle of attrition. India would be asked to pay yet again for a bargain it made

with the developed world at Durban talks — starting talks for a new post-2020 deal in return for the rich countries keeping Kyoto Protocol alive beyond 2012.

The primary risk at the talks would be to India's agriculture and its farmers. At Doha, the 194 countries will gather to decide if and how short-lived emissions of methane from rice-fields can be controlled. Methane, when released in the atmosphere, heats it up but it remains, like several other 'short-lived gases' in the atmosphere, for a little while before disintegrating. The developed countries will push that the world first address these short-lived gases that predominantly come from the developing world, instead

of addressing the more treacherous carbon dioxide emissions from burning fossil fuels.

A large push is also expected to come asking India and other developing countries to increase their voluntary pledges of reducing emissions. India has already committed 20-25% reduction below 2005 levels of energy intensity of the economy by 2020. Along with other developing countries like China, these voluntary pledges add up to more action than what the rich world has so far promised. Yet, a strong attempt will be made to get India and other poor countries to do more. An enhancement of pledge could shave off a substantial bit from the country's economy, Indian government's early estimates have shown.

The Doha talks will also see an attempt to whittle down the existing principles of the UN Framework Convention on Climate Change in the negotiations over a new global deal which is to be finalized by 2015 and operationalised by 2020. The EU is keen to delay its existing commitment to operationalise Kyoto Protocol beyond 2012 and link it to how the basic elements of the new global compact are shaped.

Doha will see if the emerging economies, along with other like-minded countries, can counter EU and push for an unconditional operationalisation of Kyoto Protocol, which requires them to make a paltry reduction in their emissions over the next few years.

The EU and other devel-

oped countries will try to chip away at the existing firewall between obligations of the developed world and the poor nations in the talks over the new deal. There will be a strong attempt to de-link the commitment from the rich over transfer of finances and technologies to the global ambition for reducing emissions between now and 2020 and in the new post-2020 deal.

So little is expected of the developed world that even a line in US President Barack Obama's victory speech admitting to the need to address climate change is seen as a great leap for mankind. Despite Obama's one-off admission, the US has not indicated any change to its minimalist pledges.

Deccan Chronicle, Hyderabad dated November 27, 2012

RADIOACTIVE THREAT

Vijayawada power plant pollutes water, soil

DC CORRESPONDENT
HYDERABAD, NOV. 26

Alarming, people living within a radius of 10 km from the Vijayawada Thermal Power Station are exposed to highly radioactive isotopes of Radon (R226), Thorium (Th228), Potassium (K40) and heavy metals like lead, mercury and cadmium.

Latest research on ground water and soil samples from habitations as far away as 10 km from the fly ash

pond of the thermal power station, showed that a cocktail of dangerous radionuclides and heavy metals has seeped into the soil and the ground water table.

The Krishna river, which flows in the vicinity, carries a part of these harmful substances downstream. The VTPS is now in search of a new pond to pump in fly ash as the existing one is almost filled to the brim. Harmful substances like sodium, sulphates, arsenic, selenium, molybdenum, chromium

and lead are found in higher quantities in areas affected by fly ash pollution. Some of these substances exceed the safe upper limit prescribed by World Health Organisation. Leaching of zinc, lead and iron from the VTPS ash pond into the ground water has been observed. The problem gets worse during the rainy season when the leaching of ions is relatively higher due to ground water recharge.

"Water samples at a distance of 10 km around the

thermal power plant showed an increase in total dissolved solids, hard calcium, magnesium, chlorides and alkalinity. These substances also made their way to plants through a process called bio-accumulation," points out a research study conducted by the Centre for Ecological Sciences (CES), Indian Institute of Science, Bengaluru.

The energy and wetlands research group of CES conducted studies on various thermal power plants in the

country, including VTPS.

The CES researchers said leachate from fly ash ponds into the ground water table has genotoxic potential and may lead to adverse effects on vegetation and on the health of exposed human beings. They damage the delicate DNA in the blood cells. Damage to DNA was also observed in plants.

Studies near the VTPS fly ash dumpsites showed that contamination increased in the case of toxic ions with the passage of time.

Deccan Chronicle, Hyderabad dated November 27, 2012

Cap diesel subsidy: Parikh

■ SUV owners must be made to pay ₹50,000 a year as road tax: Panel

New Delhi, Nov. 26: A proposal to levy an annual road tax — higher by up to ₹50,000 for diesel SUVs than petrol driven ones — has been made to the Union finance ministry to help reduce the fuel subsidy burden, Mr Kirit Parikh, who heads a think-tank, on Monday said.

The auto industry, however, said any such step to impose additional taxes on the sector will not "make sense".

Mr Parikh, who was roped in by the government to check the mounting fuel subsidy burden, said diesel prices should be made market-driven after fixing the subsidy cap at ₹9 per litre.

A former Planning Commission member Parikh now heads the think-tank Integrated Research and

Bigger the cars, bigger the road tax

- Diesel prices should be made market-driven and the subsidy should be capped at ₹9 per litre.
- Levy annual road tax instead of the current practice of collecting one-time tax at the time of purchase.
- Annual road tax for petrol can be ₹10,000, diesel cars ₹20,000 and SUVs can be charged at ₹50,000
- Car makers, however, say any step to impose additional taxes on cars will not make any sense.

Action for Development. "Instead of looking at a one-time diesel tax on new purchases, the alternative could be to abolish the existing one-time road tax and make it annual and apply a differential between petrol and diesel vehicles."

Asked what could be the difference on road taxes between diesel and petrol-

driven vehicles, Mr Parikh said: "For normal cars, it can be higher by between ₹10,000 and ₹20,000 for diesel version and for the sports utility vehicles (SUVs), it should be higher by up to ₹50,000."

Reacting to the development, Society of Indian Automobile Manufacturers (SIAM) vice-president Vikram Kirloskar, who is

also the vice-chairman of Toyota Kirloskar Motor, said: "Today, 45 per cent of selling price of a vehicle is tax and any additional tax does not make sense."

Calling for deregulation of diesel, he said: "We don't want diesel vehicles to be over-taxed. We would rather have market pricing of diesel."

Mr Kirloskar said the industry's views would be presented at the pre-budget meeting today with finance ministry officials, including the revenue secretary.

"We want reduction in taxation and we will share our view on how to spur growth of the automotive industry," Toyota Kirloskar vice-chairman said.

Supporting the industry, heavy industries and public enterprises minister

Praful Patel said: "We need to encourage manufacturing in India and diesel is the new technology, which require huge investments and we should not do anything, which will discourage the major investments."

Commenting on ways to reduce diesel subsidy burden, Mr Parikh said as hiking diesel prices fully to the market rates is not possible at the moment, the government must consider an alternate mechanism by taking into account the current level of under recovery of the fuel.

"What we can do is fix the subsidy cap at ₹9 per litre and make the diesel price market driven so that it can increase or decrease as per the international price," Mr Parikh said. — PTI

The Economic Times, Delhi dated November 27, 2012

UN Climate Talks Start at Doha

URMI GOSWAMI
DOHA

The UN climate change negotiations at Doha have kicked off with India, China and other developing countries seemed set to cross swords with industrialised nations about the way ahead.

Industrialised countries like the United States and the European Union are keen to get on with framing a new climate regime after 2020. Developing countries like India and China insist that the older negotiating platforms cannot be closed till all outstanding matters are resolved satisfactorily. Issues that need to be resolved relate to equity, providing finances and technology to developing countries, and higher emission reduction targets by industrialised countries.

The opening day clearly indicated the potential for skirmishes to come over the next fortnight. This difference in perception of what Doha should deliver was reiterated through the statements made by different countries or groupings at the opening session of the conference.

For developing countries,

the first priority is to resolve issues related to equity. "Doha must result in an ambitious, equitable and comprehensive agreed outcome in line with the Bali Road Map. These outcomes should be based on science, equity, the right to development and common but differentiated responsibilities.

— **Developing countries insist that the older negotiating platforms cannot be closed till all outstanding matters are resolve**

"One of the key elements of the Durban package is the understanding that the work under the Kyoto Protocol — and long-term co-operative action (the Bali Road map) working

groups would be comprehensively resolved at Doha," the like-minded developing countries (LMDC) said in a statement at the opening session of the conference. The LMDC is a group comprising a dozen-odd members, including Argentina, Philippines, India, China, Saudi Arabia, Egypt, Pakistan, Dominican Republic, Bolivia, Cuba, Ecuador, Nicaragua, Venezuela.

The Times of India, Delhi dated November 27, 2012

US won't raise carbon footprint bar

Nitin Sethi | TNN

Doha: Forget US President Barack Obama's statement on climate change upon his re-election, stating, "We haven't done as much as we need to."

On the first day of the Doha round of UN climate negotiations, Washington announced that it won't raise the commitment it has made to reduce greenhouse gas emissions until 2020.

"I don't anticipate the United States will in the pre-2020 timeframe modify the commitment we have made," said Jonathan Pershing, US deputy special envoy for climate change.

This effectively sealed the chance of the US increasing its paltry commitments of reducing emissions by 17% below 2005 levels within another eight years.

The small island nations and some other countries have been demanding a rise in the appetite countries have so far shown to reduce emissions between now and 2020.

Developing countries, including India and China, have made voluntary pledges too, which studies show add up to more than what the rich countries have offered. But as UNEP and other expert panels have warned, these pledges aren't enough to keep the planet from hitting runaway climate change.

The United States on Monday locked down any hope of an increase in emission by stating that at Durban last year countries had decided to negotiate only a post-2020 deal, and not increase emission pledges anytime before that.

"At Doha here we will sketch out the next steps in the process for developing this new (post-2020) agreement. We gave ourselves a careful remit at Durban...our task is not to renegotiate that mandate but to implement it," Pershing said.



Christiana Figueres, executive secretary of the United Nations Framework Convention on Climate Change, speaks during the first round of talks in Doha on Monday

The Economic Times, Delhi dated November 29, 2012

Developed Nations Say They Are Keeping Promise on Green Lending

URMIA GOSWAMI
DOHA

Industrialised countries countered the claims of unmet promises and lack of transparency about the promised \$30 billion known as fast start finance, and argued that they had kept their commitment despite the economic downturn.

Developed nations asserted their position at the climate talks in Doha, where developing countries such as China and India and industrialized nations have taken conflicting positions on the road ahead to reduce emissions.

In previous negotiations, industrialised countries had committed to provide \$30 billion to developing countries over the three year period beginning 2009. This money was earmarked for the most vulnerable and least developed countries. It was agreed that the money would be spent equally

on adaptation and mitigation. The fast start financing comes to an end on December 31, 2012.

In its report card on fast start financing, the European Union said that it had mobilised €2.34 billion in the current year, and taken together with the €2.34 billion provided in 2010, the EU fast start contribution for 2010-12 comes to €4.68 billion, which is 65% of the total amount. The EU says it is on track to meet its commitment of providing €7.2 b for the three-year period.

In 2012, the EU disbursed 57.1% of the funds through the bilateral route, another 34.4% through the multilateral agencies.

The gap between funds directed

at adaptation, or dealing with the damages wrought by climate change, and mitigation, or countering the impacts of climate change, efforts has clearly narrowed from the past two years—in 2012 adaptation accounted for 23.5% of the funds while mitigation for 27.2%, as against the cumulative spend between 2010-12, adaptation accounted for 40.5% of the funds. Typically mitigation is less critical for the vulnerable countries like island states or less developed countries as compared to adaptation. This presents a problem since for vulnerable countries particularly small island states and less developed countries, adaptation is the key concern. Adaptation to effects of climate change is the key in these countries. This could take the form of building reinforcement walls in island states, which face the danger of losing large tracts

as the sea levels rise.

However, a greater concern is the larger sum of money 38.3% of funds have been spent on "other purposes". Experts say that this could mean repackaging of existing funding, such that any money for projects which could have a climate impact is counted as fast start finance.

The US said it has provided \$7.5 billion as fast start finance in the three years, of this \$2.3 billion was provided in 2012. "The three-year fast start finance total consists of more than \$4.7 billion of Congressionally appropriated assistance and more than \$2.7 billion from U.S. development finance and export credit agencies," the US said.

Japan said that it has delivered \$17.4 billion. Masahiko Horie, Japan's representative at the Doha conference said that his country's contribution exceeded the \$15 billion that Tokyo had pledged.

Industrialised countries had committed to provide \$30b to developing countries over 3 years beginning 2009

The Times of India, Delhi dated November 29, 2012

Rich nations stall green tech transfer talks

Nitin Sethi | TNN

Doha: Developed countries — US, Japan, Australia and others — have stalled negotiations on transfer of technology from rich to the poor nations in an attempt to throw the issue out of the new global regime, which is now under the works.

The talks reached acrimonious levels as the developed countries raised procedural issues to block talks on the substantial content of the negotiations.

Under what is called the LCA (Long Term Cooperative Action) track, the 190-plus countries have since 2009 been negotiating the flow of green technology from the developed to the developing



STAND-OFF CONTINUES

world, including concerns about costly IPRs (Intellectual Property Royalties) that companies holding the technologies demand.

India insisted that the unresolved concerns on technology transfer had to be addressed and not sidetracked by procedural ta-

China criticizes EU, US for aiming low

China criticized the EU and took a swipe at US President Barack Obama for their lack of ambition to address climate change and unwillingness to take stronger emission reduction targets. China's chief negotiator at Doha Su Weisaid, "The EU is not ready or willing to change the target... of 20% reduction compared to 1990 level by 2020. The EU's 27 member states have already achieved very much close to the 20% target." Su added, "We would very much hope US would get back on track with a more pro-active climate policy and really turn those policies into real actions, real contributions to the reduction of greenhouse gases." TNN

eties or dumped out of future negotiations.

With the LCA track set to close at Doha, the developed countries pushed on the third day that all unresolved issues be forgotten and the world live with only those elements that had been agreed to previously.

An Indian negotiator said, "These parties want that the key concerns that they have locked horns over so far now be removed entirely from future agenda. They hope that all such issues that are not in their interest must not live to be resolved in the negotiations for the post-2020 global

regime, which is to be negotiated between now and 2015."

Under the UN Framework Convention on Climate Change, the developing nations are expected to reduce emissions only when aided by finance and technology from the developed world—a linkage rich countries are keen to break.

Green technologies remain extremely costly and an imposition of an emission reduction target in the post-2020 regime without their transfer would force poor countries to buy these from the private sector at high prices.

The talks became very heated as developed countries were unwilling to even engage in negotiations on technology, and India intervened to counter the attack, sources said.

Edited by: Prof. Sushil Kumar
Centre for Business Sustainability, IIM Lucknow