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## Business Sustainability News

## International

### Creative Resiliency Plan Transforms New Orleans Into City of Canals, Like Amsterdam

*SustainableBusiness.com News*

For decades, New Orleans has relied on levees and pumping systems to protect it from floods, but a new urban water management plan would flip that strategy upside down.

Instead of creating even higher, stronger levees - effectively walling in the city to keep water out, the idea is to make use of existing levees and restored wetlands to manage the flow more sustainably. Doing so would create a new city waterscape akin to that of Amsterdam - one dotted with a "living" network of ponds and canals that are regularly recharged.

"The Greater New Orleans Urban Water Plan serves a symbiotic dual purpose, simultaneously preserving the value of businesses and communities," says Michael Hecht, President and CEO of Greater New Orleans (GNO), the organization proposing this regional development strategy. "Implementation of the Urban Water Plan will make Greater New Orleans a better place to live and work, while building our new brand as national 'water experts' - something clearly to be in demand in a world of increasing weather volatility."

The Urban Water Plan addresses a historical problem that will only grow worse through the effects of climate change.



Many cities face rising waters due to climate change and are actively planning for a wetter future with climate adaption strategies.

But New Orleans' problem is particularly acute. Built on swampland and dotted by canals that are prone to flooding (like the Jefferson Lowlands system pictured below), its only recourse for handling heavy rains or rising seawater is to pump

water out of its streets and communities into nearby Lake Pontchartrain,

until it overflows back into the city again. This system all but failed during the devastating Hurricane Katrina in 2005 - eight years later, many of the hardest hit areas of the city still haven't been rebuilt.

"St. Bernard Parish is the owner of hundreds of vacant lots, all because of Hurricane Katrina flooding, and we are looking for ways to use the lots to benefit the neighborhoods in which they're located," says Parish President David Peralta. "Learning how to retain and mitigate some of the flooding that we have in neighborhoods will go a long way in improving the quality of life for the area."

The GNO plan, created by New Orleans-based Waggoner & Ball Architects along with a team of Dutch water infrastructure experts, calls for an urban landscape filled with rain gardens and bioswales, interconnected with canals and ponds.

The plan could bring a projected \$22 billion in economic benefits to the region over the next 50 years, projects GNO. That includes not having to spend a projected \$8 billion on future flood-related damages and \$2.2 billion on infrastructure costs for cracked pipes and building foundations damaged by sinking ground. It could also increase property values by creating new waterfront areas in the Orleans, Jefferson and St. Bernard parishes, according to the organizers.

The New Orleans plan starts with seven demonstration projects across the three parishes that would cost \$6.2 billion, each showcasing a different water management approach.

One example is the Lafitte Blueway (pictured below), which would recharge groundwater as it winds through the city, restoring the historic connection between the Bayou St. John and the French Quarter.

Another idea is the proposed 25-acre Mirabeau Water Garden, a lowland composed of a series of open-bottom beds and filled with organisms that filter the water before it runs into a nearby fresh-water swimming pool.

Other plans call for designing canals with more gradual edges than current designs. Not only would this make them more aesthetically "inviting," it would allow water to be raised and lowered more easily on a seasonal basis, as dictated by rainfall levels.



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# Africa's mines ditch polluting practices to produce its first Fairtrade gold

By David Derbyshire, for *theguardian.com*



Workers mix gold ore with mercury and pan it to separate gold particles at the Nsangano gold mine in Geita, north Tanzania. Photograph: Matt Crossick/Fairtrade

In a bustling area of Nyarugusu, in the heart of Tanzania's gold lands, a stocky man is fanning a dustbin lid of smouldering charcoal, gold ore and mercury on the pavement. Each waft sends a cloud of toxic vapour into the faces of children and adults as they gather to watch.

The burning of mercury is a common sight in the streets, homes and cottage-industry mines

throughout east Africa. The liquid metal is used to extract the gold and then vaporised to leave behind flakes of the precious metal.

But in this dangerous industry, seeds of a gold revolution are being sown: Fairtrade International announced this week that up to 12 mines in Tanzania, Uganda and Kenya are on course to sell Africa's first ethical gold within a year.

There are no official figures for how many Tanzanians are poisoned by mercury fumes, but accounts of memory problems, sickness and impaired vision are common in the small mines that litter the countryside. The sight of open mercury poisoning may seem shocking, but it is just one of a host of appalling working conditions that blights the production of gold throughout east Africa.

Tanzania is Africa's fourth largest gold producer. About 15 million people work in mines – many illegal, small-scale and unlicensed – producing about 200 to 300 tonnes a year. Most miners work 24-hour shifts without basic safety helmets, boots or goggles in fragile mines with little or no timber supports.

On the surface, the ore is crushed by women using hammers or mortars, sometimes with babies on their knees. In some mines, cyanide is used to remove gold from low-grade ore. Like mercury, it is highly toxic. Mercury and cyanide pollution into rivers is common and, according to a report last week by Human Rights Watch, child labour is rife.

But the Fairtrade scheme could herald a change. Under a three-year scheme funded by Comic Relief, the mines are changing working practices – banning children, enforcing health and safety rules and preventing toxic run off – in the hope that shoppers in Europe, Asia and America will be prepared to pay more for “green gold”.

In return they will get a fairer price for their gold and a Fairtrade premium that can be invested in mines, education, childcare and community groups.

At the Ilani mine near Nyarugusu, in the northwest of Tanzania, the appropriately named Golden Hainga has already barred children from his mine and processing areas, and runs a crèche. Open burning of mercury is banned and personal protection equipment is compulsory.

Lufta Weja, 30, has worked at the mine for five months. “The main difference between other mines is health and safety,” he said. “It's the first time I've had a helmet – in other mines we had no helmets, or gloves or boots.”

A few miles from the Ilani mine, Renatus Nsangano has also been working with Fairtrade to improve working conditions. But change is slow. His mine suffers from a chronic lack of capital and cash flow, and is vulnerable to the low prices paid by local gold brokers.

“My dream is to be able to use the technology that was used in Tanzania 50 years ago,” said Nsangano.

“But we thank God for Fairtrade because it has lifted us from one level to another. We have put in wooden steps to get to the bottom of the mine. We no longer burn mercury in the open and we ensure that waste water from the mine doesn't contaminate the environment.”

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## Tips:

There is immense need to educate common people about sustainability. Though literacy rate is going up continuously people are very much unaware of sustainability and how they can contribute towards sustainability. We need to urge people to behave in a responsible manner and do their part; even small efforts can make big difference. Below are given some very simple tips with sincere request to use and practice them and also to tell others to do so.

- Buy some reusable Jute, cloth or canvass bags. Whenever you go for buying some grocery etc carry with you and say no to plastic or paper bags.
- Use hand towels or rags to wipe instead paper napkins and tissues.
- If you intend to change your wooden house furniture look for second hand furniture and modify it according to your taste. And do not destroy your old furniture or put in the backyard, instead sell it or give it to somebody who may use it. Thus you save money and trees (plus, create original furniture!)
- Cover pots with lid while cooking this will reduce the cooking time and save fuel/energy as well.
- Never put a small pan on big burner that wastes heat and also never put uncovered pan on low flame for cooking.
- Ensure that window panes are fixed properly no glass is loose, if required replace the putty to hold the pane in place.
- You may put reflective film on windows that will help reduce heat gain during the summer, and will also save furniture and carpets from fading.
- Use hot water only for very dirty loads, and remove clothes from dryer while still damp and dry them in the sunshine.
- Plant trees to shade your home. Appropriately placed trees can considerably reduce your energy bill on air conditioning or cooling.
- Make a water tank to collect rainwater and use the same for watering your plants and lawn.
- Try and reduce your shower time by just a minute, this way you could save about 150 gallons of water every month.

## ‘Super grass’ could vastly reduce agriculture emissions, say scientists

By Jonathan Watts, for *theguardian.com*



Brachiaria grass has been shown to inhibit nitrification, helping to reduce the greenhouse gas emissions from agriculture.

Photograph: Neil Palmer/International Center for Tropical Agriculture

Scientists will call for a major push this week to reduce the amount of greenhouse gas emissions from agriculture through the use of a modified tropical grass.

Brachiaria grasses have been found to inhibit the release of nitrous oxide, which has a more powerful warming effect than carbon dioxide or methane, leading them to be called a super grass.

The authors of several new papers on this grass, which is already used in pastures across much of Latin America, say enhanced strains, wider usage and improved management will provide the most effective means of tackling climate change through agriculture, which accounts for about a third of all greenhouse gases.

Nitrous oxide – largely from livestock production – makes up 38% of agriculture emissions, but this share could be substantially reduced, they say.

“On a conservative estimate, we assume that at least half of the gases can be saved in livestock production in tropical environments,” said Michael Peters, of the International Centre for Tropical Agriculture. “I think this is the best strategy you can have in agriculture to mitigate greenhouse gas emissions.”

The papers, which will be presented at an **International Grasslands Congress** in Sydney this week, claim that additional benefits will also include higher productivity, less need for fertiliser, lower levels of nitrate pollution in waterways and considerable carbon capture.

Brachiaria grasses originated in Africa, but have been most extensively used for grazing in Brazil, Colombia, Nicaragua and parts of Australia and south-east Asia.

During the past decade, scientists have discovered the chemicals that enable the plant to bind nitrogen into the soil, thus making it more productive and less “leaky”.

They are now breeding different strains of brachiaria to maximise these nitrogen-inhibiting properties and encouraging wider use of the grass in pastures and in rotation with crops such as soy and corn.

Although the authors hope it can be used in an additional 100m hectares, the brachiaria is not a solution for all countries as it does not grow well in temperate climates.

There are potential downsides. The extra productivity could provide an additional economic incentive for the clearance of forests and – as with all monocultures – the proposed expansion of brachiaria pastureland poses a challenge to biodiversity.

But the scientists say the benefits outweigh the risks.

“There will be positive impacts on the economy and at the same time benefits for the environment,” Peters said.

[<Source>](#)

## New Jersey's Microgrid Will Provide Protection in Natural Disasters

*SustainableBusiness.com News*

Connecticut is the first to develop a state-wide microgrid and it looks like parts of New Jersey will soon follow, in attempts to learn from the Superstorm Sandy disaster.

During Sandy, the few communities that had smart grids and back-up solar power fared much better than those that didn't.

For New Jersey, the current focus is on its transit system, the third largest in the nation, carrying 900,000 people a day, and a major evacuation route for Manhattan. The power went out during both Superstorm Sandy (\$400 million in damages) and Hurricane Irene.

This is the first time a microgrid is being developed for a transit system - NJ TRANSITGRID is a partnership between the Department of Energy (DOE) and its Sandia National Lab and the State of New Jersey, NJ Transit and New Jersey Board of Public Utilities.

The microgrid will keep the power on during storms and whenever the central grid is compromised.

“As we rebuild New Jersey from Superstorm Sandy, I am committed to making our state stronger and more resilient. NJ TransitGrid is an important step in that process,” says NJ Governor Christie. “This first-of-its-kind electrical microgrid will supply highly reliable power during storms, and help keep our public transportation systems running during times of disaster, which is critical not only to our economy, but also emergency and evacuation-related activities.”

NJ Transit is extremely vulnerable to flooding and is also in the process of raising critical power substations and installing nearly 600 steel catenary power poles.

The microgrid will have more than 50 megawatts of power, consisting of smart grid technologies and distributed energy resources such as backup generators, small wind and solar, and energy storage.

“I think it will be a model for the country,” says Christie. “People across the country that have either been affected by natural disasters or have not yet faced that kind of problem will benefit from the technology we develop here.”

Sandia National Lab has designed microgrids that are up and running at more than 20 military bases in the US. Its tool, “Energy Surety Design Methodology,” allows communities to evaluate their regional energy needs, identify advanced solutions to improve the reliability and resiliency of their electric grids, and understand the most cost-effective strategies for system upgrades.

New York's new Energy Highway Blueprint appropriates \$250 million for smart grid technologies to “create the most advanced energy management control center in the US.”

[<Source>](#)

# Walmart seeks to clear toxics from its shelves

By Jonathan Bardelline



The largest retailer in the world has set its sights on chemicals, with plans to increase transparency on chemical use while finding safer alternatives.

Walmart announced the new chemical policy at its Global Sustainability Milestone Meeting today, where it also laid out new goals

centered on sustainable beef and crop fertilizers, and detailed progress around its Sustainability Index.

Walmart said it is targeting "about 10" specific chemicals and will work with suppliers to increase transparency about the chemicals and risks associated with them on packaging and online.

Simultaneously, the retailer will team with its private-label suppliers and other partners to reformulate personal care items, cleaners and other products to meet the U.S. EPA's Design for the Environment standards. The goal being to reduce harmful chemicals with safer, benign alternatives.

The company has not yet named which chemicals are being focused on, nor set a timeline for when they will be announced.

While Walmart's product initiatives have been self-guided, its chemical work will need to also go along with the demands of California's new Safer Consumer Product Regulations, which go into effect in October and will target small groups of chemical-product

combinations at a time.

Chemicals are just one aspect of products that Walmart has been investigating through its Sustainability Index, a scorecard for products that Walmart buyers use when evaluating goods.

Since the launch of the Sustainability Index, more than 1,000 suppliers covering 300 product categories have filled it out, said Mike Duke, Walmart President and CEO. The company expects that will grow to 5,000 suppliers and 300 product categories by the end of the year, he said.

Among those rated products include plenty of food items, and food scores have increased 12 percent since the launch of the index, with coffee scores raising the most, by 32 percent.

One way Walmart and its suppliers are working to lower the impact of the food chain is through fertilizer. Tim Robinson, director of Walmart's baking team, said he was looped into the company's work on fertilizer about 15 months ago.

"I've made small wins in packaging and I've optimized freight lengths," he said, a far cry from trying to link his flour purchasing with massively reducing greenhouse gas emissions.

What followed was a number of initiatives, syncing up with industry groups, the Environmental Defense Fund, National Corn Growers Association and a buyer coalition to develop and spread best practices on fertilizer use, all of which fed into the Sustainability Index.

Through that work, Walmart projects that its suppliers will reduce how much fertilizer they use by about 30 percent, on 14 million acres of farmland, by 2020, which will also reduce GHG emissions by 17 million metric tons.

Along the same lines as sourcing crops, beef was highlighted as a major target of the index and Walmart's collaborative work. The retailer is developing a pilot program that will include environmental criteria focused on the production of beef, with plans to have 50 percent of the beef on Walmart's shelves sourced from that criteria by 2023.

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# Not Surprisingly, Copenhagen Wins 2014 Green Capital Award

*SustainableBusiness.com News*

Not surprising, Copenhagen has been named Europe's Green Capital for 2014 by the European Commission, and also received the 2013 INDEX Award - the world's largest design award - for the sustainable design solutions in its climate plan.

Copenhagen's goal is to be the world's first carbon neutral capital city by 2025 and completely independent of fossil fuels by 2050. Green living is at the core of its 540,000 residents, from its bicycle culture to farm-to-table cuisine.

The city has over 100 hundred miles of bike lanes and 55% of citizens commute by bike. It mandates green roofs on all new developments and over 60% of its land is cultivated for farming, making local foods second nature. Its citizens eat more organic food than anywhere else. 63% of hotel rooms are green-certified and Scandinavian Airlines aims to cut emissions 20% by 2020, one of the few airlines that even has a target.

Denmark's biggest offshore wind farm just came online - the 400 MW offshore wind farm will provide 4% of the country's electricity, adding to the 30% that wind already contributes. The goal is for renewables to provide 50% by 2020.

Denmark is one of 10 countries that recently formed the international "Renewables Club" to scale renewable energy worldwide.

Neighboring Sweden is also a leader, with goals of eliminating fossil fuels to produce electricity by 2020 and gasoline cars by 2030. In 2009, Sweden launched the world's first carbon label on foods and all state-owned companies are required to file annual sustainability reports. Norway's target is 67.5% renewables by 2020.

[<Source>](#)

**WALMART SUSTAINABILITY INDEX KEY INITIATIVES**

- Recycled UPSWING**  
More than 29 million tons of valuable plastics end up in landfills in the U.S. every year. We're working with cities to reclaim plastic and with our suppliers to use more recycled content and make packaging more recyclable.
- Clean & GREEN**  
Sustainable chemistry has come a long way. We're asking suppliers to transition to greener substitutes for priority chemicals in household cleaning, personal care, beauty and cosmetic products.
- Fertilizer ENERGIZER**  
We're working with suppliers who use corn, wheat and soy in their products to use fertilizer more efficiently. We have the potential to reduce fertilizer use on as many as 14 million acres of U.S. farmland by 2020!
- Go GLOBAL**  
We're using the Sustainability Index to improve products around the world. Having previously launched the Index in China, we're now seeing it adopted by our business in South Africa and we are expanding the Index to Walmart Chile and Walmart Mexico next year.
- POWER to the People**  
By selling 500,000 of our private label LED lightbulbs, we estimate that we can save our customers more than \$67 million dollars over the lifetime of those bulbs, which last about twice as long as a CFL and 20 times longer than a traditional lightbulb.

Join the conversation on Twitter with hashtag #WMTgreen and by following @WalmartGreen. To learn more about sustainability at Walmart, visit [walmartgreenroom.com](http://walmartgreenroom.com).

Walmart

## World's First Ecomobile City: Suwon, South Korea

By Environment News Service

**SUWON, South Korea**, August 27, 2013 (ENS) – One neighborhood, one month, no cars. When it kicks off the world's first EcoMobility Festival on September 1, the City of Suwon will aim to prove that a truly ecomobile city – one where citizens can move freely, safely and sustainably – can exist.

A major city with over a million residents, Suwon lies about 30 km (19 miles) south of the capital Seoul.

There, on the first day of September, 4,300 residents will exchange their 1,500 petrol-powered cars for ecomobile vehicles, and adopt what festival organizers are calling "the ecomobile lifestyle" for the entire month.

Haenggung-dong, one of the most crowded neighborhoods in Suwon, will be designated as a car-free zone, where various cultural and arts performance will take place. The first vehicles are now arriving in Haenggung-dong in preparation for the festival opening.



Ecomobile vehicles escort petrol-powered cars to their month-long parking spaces, August 15, 2013 (Photo courtesy City of Suwon)

This unique undertaking is backed by a €9 million euro public investment to regenerate the inner city of Suwon. It is part of Suwon Mayor Yeom Tae-young's program to transform the neighborhood into one that prioritizes sustainability and accessibility, particularly for low-income residents whose access to employment and services has been limited.

"With this festival, we will work together to show what an eco-mobile city looks like and deliver the message that this new urban lifestyle is possible," said Mayor Yeom. "We aim to lead and inspire other cities around the world to follow suit."

ICLEI – Local Governments for Sustainability, the world network of cities for sustainability, is organizing the festival together with the City of Suwon and UN-Habitat.

Around 5,000 international visitors, led by mayors, policy makers, CEOs and concerned citizens, will witness the transformation of the Haenggung-dong neighborhood. They will test drive human-powered and electric vehicles offered by some 40 manufacturers from eight countries, including the United States, Germany, Taiwan and South Korea.

The festival will feature a wide range of bicycles. There's Yikebike, a tiny bike to ride, fold and walk away with under your arm; there are electric bikes by Inskey, and there's Trimobile, a tricycle that can carry three people at a time but only requires one to pedal.

Then there's Gobax, a customized ambulance bike, Row-n-Go, a bike that the rider pedals and rows simultaneously, and the child carrier bicycle by Zigo.

Alongside month-long exhibitions and vehicle test tracks, visitors and

residents can take part in concerts, movie festivals, singing contests using pedal-powered karaoke, art fairs, street tours, conferences and workshops – all celebrating the ecomobile lifestyle.

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## Report shows companies still don't take climate change seriously

By Jo Confino, for *theguardian.com*

For all the talk of companies taking the threat of climate change seriously, the latest evidence shows the corporate sector is failing to respond in a meaningful way to the threat of environmental catastrophe.

Global NGO CDP, which works on behalf of 722 institutional investors representing \$87tn in invested capital, has just released its latest annual report on carbon emissions and it makes bleak reading, despite a few rays of light.



The continuing failure to reduce emissions means that tougher regulation will almost certainly be necessary, said an adviser on the report. Photograph: Alamy

Even during a period of global recession, total direct emissions from the 500 largest listed companies in the world have not changed significantly in the past five years.

Worse still, the 50 largest emitters, which primarily operate in the energy, utility and materials sectors, have actually seen an increase of 1.65% to 2.54bn tonnes since 2009.

The report concludes: "The biggest emitters, who have the largest impact on global emissions and so present the greatest opportunity for large-scale change, need to do more to reduce their emissions. There is a disparity between companies' strategies, targets and the emissions reductions which are required to limit global warming to 2C."

That is the diplomatic way of saying that major corporations, for all their fine words on sustainability being integrated into the heart of their operations, are doing too little, too late with potentially disastrous consequences.

Malcolm Preston, global lead, sustainability and climate change, at PwC, which advises on the report, warns that the continuing lack of action means that tougher regulation will almost certainly be necessary.

"It raises questions for some organisations about whether they are focused on sustaining growth in the long term, or just doing enough to recover growth until the next issue arises," he says. "With the initial IPCC report only weeks away, corporate emissions are still rising. Either business action increases, or the risk is regulation overtakes them."

The analysis, based on the climate and energy data from 389 companies listed on the FTSE Global 500 Equity Index, also shows little progress in measuring, managing and reducing greenhouse gas emissions in supply chains, known as scope 3.

What the report shows is that companies are seeking to take the simplest route by measuring the easiest to reach aspects of their supply chains, even when they know they are having a negligible impact.

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## Arctic sea ice shrinks to sixth-lowest extent on record

Sea ice recovers from record low of 2012 but long-term trend continues towards an ice-free Arctic during the summer months

By Suzanne Goldenberg, *The Guardian*,

Sea ice cover in the Arctic has shrunk to one of its smallest extents on record, bringing the days of an entirely ice-free Arctic during the summer a step closer.



Melting sea ice near Ellesmere Island, Canada. Photograph: Gordon Wiltzie/ Gordon Wiltzie/National Geogra

The annual sea ice minimum of 5.099m sq km reached last Friday was not as extreme as last year, when the collapse of ice cover broke all previous records.

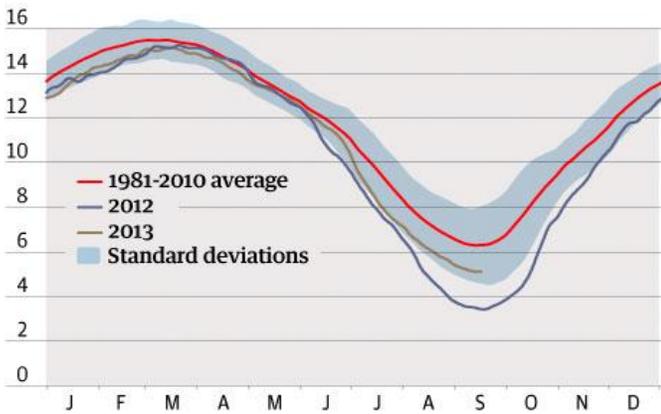
But it was still the sixth

lowest Arctic sea ice minimum on record, and well below the average set over the past 30 years of satellite records.

This suggests the Arctic will be entirely ice-free in the summer months within decades, scientists said.

### Arctic sea ice extent

Ocean area with at least 15% sea ice (km sq millions)



SOURCE: NATIONAL SNOW AND ICE DATA CENTER

Arctic sea ice extent graph. Photograph: guardian.co.uk

The annual sea ice minimum, based on a five-day average, is expected to be officially declared by the US National Snow and Ice Data Centre in Boulder, Colorado, within the next few days.

"It certainly is continuing the long-term decline," said Julienne Stroeve, a scientist at the centre. "We are looking at long-term changes and there are going to be bumps and wiggles along the long-term declining trend, but all the climate models are showing that we are eventually going to lose all of that summer sea ice."

Overall, the Arctic has lost about 40% of its sea ice cover since 1980. Most scientists believe the ocean at the north pole could be entirely ice-

free in the summer by the middle of the century – if not sooner.

The most dramatic changes have occurred in the past decade. The seven summers with the lowest sea ice minimums were all in the past seven years.

The loss of sea ice cover is a leading indicator of climate change, and will be a key part of the findings released next week by the United Nations' climate science panel, the IPCC. It has also emerged as a driver of extreme weather events in Europe.

The extent of Arctic sea ice has generally decreased in all regions since satellite records began in the late 1970s. The Arctic continues to warm at about twice the rate of lower latitudes.

This year's minimum was reached despite cooler temperatures in some areas that slowed melting, Stroeve said. Air temperatures in the central Arctic were 1-4C colder than in the past six years.

"We had a pretty cold summer in general for the time period we're looking at and yet the sea ice cover didn't recover to the extent that we had in the 1970s and 1980s," she said.

Rapid warming last year reduced the area of frozen ocean water in the Arctic to less than 3.5m sq km.

This year's low was more in line with the summer of 2009, Stroeve said. After shrinking to a minimum of 5.099m sq km on 13 September, the summer sea ice extent increased to 5.104m sq km on 14 September and 5.105m sq km on 15 September before falling back to 5.103m sq km on 16 September.

But the decline of the surface area of frozen water tells only part of the story, scientists said.

Ice in the Arctic has also been thinning over the years – which makes it more vulnerable to melting in the summer.

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## Nome, Alaska: First US City to Run on Geothermal

*SustainableBusiness.com News*

The city of Nome, Alaska could be the first in the US to be powered by geothermal - right now, exploration holes are being drilled deep into the ground.

With about 3600 residents, the city rests on the southern Seward Peninsula coast on Norton Sound of the Bering Sea.

Geothermal would be delivered to the city from Pilgrim Hot Springs, 60 miles away. After several years of research, exploratory drilling will confirm the amount of hot water is sufficient to supply the city's power. If so, a production facility will be built in Nome along with transmission lines from the hot springs.

Estimates are that 2-4 megawatts of electricity are available, enough to supply most of the city's needs. The goal is for Nome to begin receiving geothermal electricity by the end of next year. The hot springs, listed on the Register of Historic Places, would also have the potential for



greenhouses and fish hatcheries in addition to tourism.

The huge drilling tube:

The project started with a grant from the

Department of Energy and Alaska Energy Authority's Renewable Energy Fund. Research partners are the US Geological Survey, the Alaska Center for Energy and Power (ACEP) based at University of Alaska/Fairbanks, Unataaq - a consortium of seven local Native corporations - and Potelco, a private developer.

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## Waste CO<sub>2</sub> Could be Source of Renewable Power

By Tim Radford, *Climate News Network*



Dutch scientists argue that they could pump the carbon dioxide through water or other liquids and produce a flow of electrons and therefore more electricity. Power-generating stations release 12 billion tons of carbon dioxide every year as they burn coal, oil or natural gas. Credit: flickr/simplerich

LONDON – They could, they argue, pump the carbon dioxide through water or other liquids and produce a flow of electrons and therefore more electricity. Power-generating stations release 12 billion tons of carbon dioxide every year as they burn coal, oil or natural gas; home and commercial heating plants release another 11 billion tons.

This would be enough, they argue, to create 1,750 terawatt hours of extra electricity annually: about 400 times the output of the Hoover dam in the U.S., and all without adding an extra gasp of carbon dioxide into the atmosphere. So the exhaust from one cycle of electricity production could be used immediately to deliver another flow of power to the grid.

They make the claim in a journal called *Environmental Science and Technology Letters*, which is published by the American Chemical Society, and the claim rests on a 200-year-old technique pioneered by Sir Humphry Davy and Michael Faraday: electrolysis.

### Harvesting energy from waste

Behind the reasoning is a simple proposition, that every chemical event involves some exchange of energy. In a solution, this movement of energy involves electrons, and ions that migrate to cation or anion electrodes. In a mix of two different solutions, the final mixture has an energy content lower than the sum of the two original solutions: since energy cannot be created or destroyed, therefore there must be some energy available for exploitation.

Bert Hamelers of Wetsus, a center for water excellence in the Netherlands, and colleagues from Wageningen University report that they used porous electrodes and flushed carbon dioxide into water to get their flow of current: the gas reacted with the water to make carbonic acid, which in the electrolyte became positive hydrogen ions and negative ions of the bicarbonate HCO<sub>3</sub>. As the pH of the solution gets higher, the bicarbonate becomes a simple carbonate and the higher the CO<sub>2</sub> pressure, the greater the increase of ions in the solution.

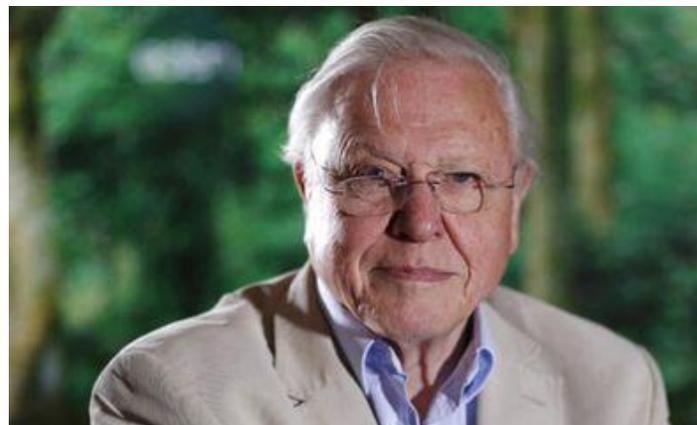
In their experiment, they found that as they flushed their aqueous electrolyte with air, and alternately with CO<sub>2</sub>, between their porous electrodes, a supply of electricity began to build up. Since the air that comes from the chimneys of fossil fuel-burning power stations contains anything up to 20 percent of CO<sub>2</sub>, even the emissions represent a potential for more power.

They found they could get even more power if instead of a water solution they used an electrolyte of monoethanolamine. In experiments, this delivered an energy density of 4.5 mW a square meter.

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## David Attenborough: trying to tackle famine with bags of flour is 'barmy'

By Mark Tran, *for theguardian.com*



Sir David Attenborough: 'What are all these famines in Ethiopia? What are they about? They're about too many people for too little land.' Photograph: David Parry/PA

Sending food aid to famine-stricken countries avoids the more fundamental problem of population growth, Sir David Attenborough has said, as he called for more debate about population control.

The renowned broadcaster told the Daily Telegraph the world was "heading for disaster", and without action the "natural world will do something".

"What are all these famines in Ethiopia? What are they about?" he said. "They're about too many people for too little land. That's what it's about. And we are blinding ourselves. We say, get the United Nations to send them bags of flour. That's barmy."

He admitted the issues had huge sensitivities, but insisted it was important to "just keep on about it".

One area of concern, he said, was about the right to have children. "To start with, it is the individual's great privilege to have children. And who am I to say that you shan't have children? That's one thing," he said. "And the last sensitivity – and the most tricky of all – is the fact, when you talk about world population, the areas we're talking about are Africa and Asia, you know."

But Hannah Stoddart, Oxfam's senior policy adviser, said: "We can't look the other way while men, women and children starve in a famine; it is our moral duty to help. David Attenborough is wrong – there is plenty of food in the world to feed everyone if we share what we have more fairly. Also, we could easily boost production by reversing decades of under-investment in poor countries' agriculture."

"Of course we need to act to reduce climate change and protect scarce natural resources but that does not mean turning our backs on people in dire situations who need our help."

The veteran broadcaster admitted that the debate over population control could be construed as just being about poor people, adding: "And to have a European telling Africans that they shan't have children is not the way to go around things."

But the subject could not be avoided, he said: "We keep on talking about the problem without putting names on it in that sense. And getting it on the agenda of people. Because – you obviously can see it just as I can – you know, that we are heading for disaster unless we do something."

The world's last famine took place in Somalia, where an estimated 258,000 people died in southern and central parts of the country between October 2010 and April 2012, including 133,000 children under five. It was the worst famine in 25 years.

The UN declared famine in Somalia in July 2011, after repeated warnings of an impending crisis after severe drought and failed harvests.

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## Technology could help rural areas become thriving and sustainable

By Flemmich Webb, for *theguardian.com*



Technology, improved connectivity and sustainable infrastructure can be used to help make rural communities more resilient to future challenges. Photograph: Roger Bamber / Alamy/Alamy

Globally, more of us now live in cities than in rural areas. If we want to live more sustainably, we will have to do so surrounded by concrete rather than fields and woodland.

Not so idyllic

perhaps, but it makes sense — cities' high population density relative to their geographical footprint makes for more efficient use of land, product distribution, employment, travel, technology deployment — the list goes on.

It's not surprising, therefore, that resources have been poured into urban centres — they are generally the main income generators of industrialised economies, after all.

And if we want to have the most impact on improving the UK's sustainability, cities are the obvious target due to the numbers of people who live and work in them. Smart cities with smart buildings interconnected with smart technology will inevitably lead to smart living, so the thinking goes.

But while all this may be true, spare a thought for rural communities, seemingly left behind in the headlong rush to embrace urban life.

Despite city-centric perceptions to the contrary, the countryside is much more than a place to buy a second home, to finally get to use the four-wheel drive function on the Range Rover and get the Hunter wellies dirty. About 12.7 million people live in rural communities in the UK — about a quarter of the population. Rural areas are home to more than half a million businesses, which contribute more than £200bn to the economy.

Worth investing in you'd think. Well apparently not. A recent Environment, Food and Rural Affairs Committee report found that rural communities pay higher council tax bills per dwelling, receive fewer government grants and have access to fewer public services than their urban counterparts. Wages are lower, house prices are higher, and infrastructure is less developed, not least the provision of high-quality broadband.

"The government needs to recognise that the current system of calculating the local government finance settlement is unfair to rural areas in comparison with their urban counterparts and should take action to reduce the disparity," the report says.

Despite this and other misgivings over current policy, the report welcomed the Government's Rural Statement, published in September last year, which confirmed its commitment to rural communities especially in relation to economic growth and access to public services.

But while new policies in this area are thrashed out, perhaps it's time to indulge in some "green field" thinking. Imagine a rural community underpinned by the highest-spec software and hardware; a village that's self-reliant and thriving, making the best use of technology and superfast internet connectivity to drive a robust local economy and exemplary environmental stewardship; a place where people, households and community centres, such as pubs, are interconnected, where children can access virtual classrooms and share entertainment across the internet.

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## Sustainable development: business has a long way to go

By Paul Hohnen, for *theguardian.com*



Elephants in the room: the role of governments and financial markets in sustainable development. Photograph: EPA

A question that will be on everyone's minds at the forthcoming Global Compact Leaders Summit in New York is how to bridge the gap between what business is doing on sustainable development and what it still needs to do.

The centrality of this issue has been underlined for me recently by three developments.

The first was the release by the Global Compact of 'The Global Corporate Sustainability Report 2013'. As readers of **Jo Confino's analysis** will recall, the report provides a summary of the state of corporate sustainability that is, at once, both encouraging and deeply troubling.

Reflecting the views of 25% of the Global Compact's global corporate membership base (and thus probably those most advanced along the sustainability road), the report makes one point abundantly clear.

This is that while many companies have made a range of credible commitments on their social and environmental goals and policies, and generally seem to understand the serious sustainability risks and opportunities for the future of business, they are finding it difficult to implement these either quickly or consistently, whether internally or along their supply chains.

While they are strong on developing codes and supplier policies, issues remain in relation to providing the needed staff incentives and training, monitoring of performance, and stakeholder dialogue. In short, significant implementation gaps remain.

Given that the 8,000 corporate participants reflect 'just a sliver' of the world's estimated 70,000 multinationals (and many millions of SMEs), the report rightly concludes that 'even those committed to sustainability still have a long journey ahead...'

Here we have both an engagement gap and a timing gap. More broad-based and faster change is needed.

These points are also emphasised in the report of the UN High-Level Advisory Panel (HLAP) on [The United Nations in the Age of Sustainable Development](#) (PDF), released this week.

Taking as its starting point the proposition that 'achieving sustainable development will be the overriding challenge of this century', the report calls for 'a new era of change', including on the parts of government, the UN system and the private sector. The crises of sustainable development, it concludes, 'have already become crises of national and global security.'

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## Britain Invests £148 million to Boost Cycling

By Environment News Service

**LONDON, UK**, August 26, 2013 (ENS) – British Prime Minister David Cameron has launched a nationwide drive to promote cycling in cities and national parks across England. More bikes on the road will mean fewer cars, less air pollution and a reduction in greenhouse gas emissions.

Considering both national and local contributions, new funding for upgrades that will help cyclists will be worth a total of £148 million (US\$230.4 million) between now and 2015.



Cyclists participate in the Prudential Ride London festival, August 3, 2013 (Photo courtesy Prudential Ride London)

A total of £77 million will be divided between Manchester, Leeds, Birmingham, Newcastle, Bristol, Cambridge, Oxford and Norwich. This funding means that investment in cycling in the eight cities is now in excess of £10 per person per year, as recommended by the All Party Parliamentary Cycling Group's recent report.

New Forest, Peak District, South Downs and Dartmoor will each share a slice of £17 million funding for national parks.

In Greater Manchester, for instance, Department for Transport funding of £20 million paired with a local contribution of £11.1 million will kick start Velocity 2025, which will, over time, create a city-wide cycle network.

This will involve a series of high quality cycle lanes that will lead from the city center out to the M60 like spokes of a bicycle wheel. Spokes will have a Cycle and Ride station located several miles from the city center, allowing cyclists to leave their bikes and swap onto Metrolink or a local rail service for the last leg of their journey if they wish.

As part of a door-to-door approach the proposals involve the introduction of 20 mph zones in some residential areas adjacent to the cycle "spokes" to enable safer access to the cycleways.

Greater Manchester's vision is to double the number of cycle journeys within five years and to double them again by 2025. The government funding will bring 56 kilometers of new or improved cycle paths and predicted health and wellbeing savings of around £7 million a year.

Prime Minister David Cameron said, "Following our success in the Olympics, the Paralympics and the Tour de France, British cycling is riding high – now we want to see cycling soar. Our athletes have shown they are among the best in the world and we want to build on that, taking our cycling success beyond the arena and onto the roads, starting a cycling revolution which will remove the barriers for a new generation of cyclists."

"This government wants to make it easier and safer for people who already cycle as well as encouraging far more people to take it up and business, local government, developers, road users and the transport

sector all have a role to play in helping to achieve this," Cameron said while announcing the new funding August 12.

Cameron said government has plans to cut red tape that can stifle cycle-friendly road design and to encourage changes to the way roads are built or altered.

Local councils will be expected to deliver infrastructure that takes cycling into account from the design stage.



Olympic Gold medalist Joanna Rowsell, front left, was one of 8,000 riders at the 52-mile Great Manchester Cycle event, July 1, 2013 (Photo courtesy Great Cycle)

New plans for major roads that have a significant impact on cyclists, such as junction improvements or road-widening, will be cycle-proofed so they can be navigated confidently by the average cyclist.

Junction upgrades and other improvements will help cyclists at 14 locations on the trunk road network where major roads can prove an obstacle for journeys by bike. £5 million will be invested in upgrades this year and a further £15 million will be invested in 2015 to 2016, with plans in place for many more similar schemes.

This commitment to improved cycling facilities is intended to put Britain on a level-footing with countries known for higher levels of cycling like Germany, Denmark and the Netherlands.

Currently, only two percent of trips in the UK are made by bike, compared with 14 percent in Germany and almost a third in the Netherlands.

This is despite the fact that 43 percent of people own or have access to a bike in Britain, and 38 percent of people could just as easily cycle for short trips as use a car.

In the United Kingdom the National Cycle Network already offers 5,000 miles of continuous routes, including traffic-free and traffic-calmed sections, and minor roads. The Network carries an estimated 100 million journeys every year.

But there are wide variations in levels of cycling across the UK. For example, 47 percent of adults in Cambridge cycle at least once a week, compared with fewer than five percent in other areas.

Earlier this month thousands of cyclists took over London streets, which were closed off to cars for the Prudential RideLondon festival weekend, the UK's largest cycling festival. Cyclists enjoyed an eight-mile traffic-free route past many of London's most famous landmarks.

Transport Secretary Patrick McLoughlin said, "We have seen a significant growth in the number of cyclists in London over the last few years. But cycling shouldn't be confined to the capital. Today's announcement shows we are absolutely committed to boosting cycling in cities and the countryside across the whole of England. I want to help open up cycling to more people and these measures to make cycling safer on our roads are an important part of that."

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## Can Indonesia increase palm oil output without destroying its forest?

By Paige McClanahan, for *theguardian.com*

The world's biggest producer and consumer of palm oil plans to increase its production of the commodity to meet rising global demand. Indonesia claims it can reach its goal of producing 40m tonnes a year by 2020 without sacrificing sustainability, but campaigners have their doubts.

Demand for palm oil, which is used in products as varied as chocolate bars, chewing gum, lipstick and washing powder, has grown steadily over the past decade. According to data from the UN Food and Agricultural Organisation, total global production reached 50m tonnes in 2012, almost double the amount produced in 2002.



Palm oil accounted for 11% of Indonesia's export earnings last year, second only to oil and gas. Above: an access road under construction in forest being cleared for a palm oil plantation in Sumatra. Photograph: Chaideer Mahyuddin/AFP/Getty

Roughly half the global supply of palm oil comes from Indonesia, home to the world's third-largest swath of rainforest, after the Amazon and the Congo basin.

A Greenpeace report released last week claimed that palm oil production was the single biggest cause of deforestation in Indonesia between 2009 and 2011, accounting for about a quarter of all forest loss over that period. That means the destruction of critical habitat for endangered species such as the orangutan and the Sumatran tiger, as well as a major release of carbon into the atmosphere.

But from Indonesia's perspective, the economic upsides of palm oil are strong. It accounted for 11% of total export earnings last year, second only to oil and gas, and generated \$5.7bn in export taxes for the government. Officials insist the economic gains of palm oil are not just going to big multinationals: more than a third of Indonesia's palm oil production comes from smallholder farmers, according to Fadhil Hasan, executive director of the Indonesian Palm Oil Association.

But how to balance the economic benefits against the environmental losses? The government has taken steps to ensure sustainability, but activists say it has not gone far enough.

In May 2011, the government introduced a moratorium on the clearing of new forest. The two-year ban was extended this year, despite protests from some domestic industry groups. It will now be in place until at least 2015.

Activists say the moratorium, which bans the approval of new licences to cut primary forests, leaves much to be desired. "It's got a lot of loopholes to it," said Ashley Leiman, director of the Orangutan Foundation. "A lot of the land that was set aside was not land that you could have converted [to oil palm plantations] anyway ... and there was definitely a rush to give a lot of permits out beforehand."

But Rosediana Suharto, chair of the Indonesian Sustainable Palm Oil Commission, insists the moratorium has been effective, though she concedes that some level of deforestation is inevitable with palm oil production.

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## Kenya water discovery brings hope for drought relief in rural north

By Martin Plaut, for *theguardian.com*



A Kenya police reservist delivers clean water to a child at the Lotikipi borehole, after a gridmap Turkana groundwater survey and mapping project. Photograph: Unesco

Two vast underground aquifers, storing billions of litres of water, have been discovered in the poorest and least developed area of Kenya.

The finds, in Turkana county in the north west, were uncovered using new technology to interpret ground-penetrating radar from satellites. Professor Judy Wakhungu, appointed minister of environment, water and natural resources in April, described the find as extremely significant. "It is not too deep and ought not to be not too expensive to develop," she added.

Wakhungu said Kenya plans to use the technology to map the entire country: "We are excited to be able to provide a national map of the country's water resources."

The barren semi-desert Turkana region is home to about 700,000 people. Most live off their herds of camels, goats and sheep. Temperatures rarely fall below 30C and water is scarce. "Many people have to live on around 10 litres of water a day," said Brian McSorley, Oxfam's water expert in Nairobi. "This is half the minimum daily requirement."

The aquifers could change the lives of people in the region. One, close to the main town of Lodwar, is said to have a proven reserve of 10 billion cubic metres of fresh water. The other, the Lotikipi basin, further north, towards the Sudanese border, is even larger, holding at least 200 billion cubic metres of water.

These aquifers are being recharged from the surrounding plains and hills, an area of 21,000 sq km. The study indicates it is being replenished at a rate of 1.2 billion cubic metres a year – more than enough to supply the entire county.

The UN scientific and cultural organisation, Unesco, backed a France-based company, Radar Technologies, founded by Alain Gachet, which began the search for the water in November. Gachet, who cut his teeth as an exploration geologist in the oil industry, developed the Watex technology to interpret radar and oil exploration data in order to explore for water.

"We processed imagery from the pace shuttle," Gachet said. "This allowed us to build up a detailed surface map. Then we interpreted radar imagery from the Japanese space agency and deep seismic data from the oil industry. With this approach, we were able to peel back the surface of the earth like an onion."

Among his first customers was the UN refugee agency. At the height of the Darfur crisis, the technology helped supply the refugee camps that sprang up in the desolate regions of eastern Chad, as people streamed across the border to escape the war.

The technology produces detailed maps indicating where water has accumulated deep beneath the surface. Test wells are then drilled to validate the findings. This has been done in Turkana and water was found less than 50 metres from the surface. As drilling progressed to a depth of 330 metres, three layers of the aquifer were discovered.

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## Going Dutch: why the country is leading the way on sustainable business

By Oliver Balch, for *theguardian.com*



Dutch companies are frequently cited as amongst the most sustainable and progressive. Photograph: Art Kowalsky / Alamy/Alamy

Thursday is a big day in the corporate sustainability calendar. The latest Dow Jones Sustainability Index (DJSI) series is out.

The frontrunners remain unknown, yet if previous years are anything to go by, there's a good chance that a hatful of Dutch companies will be among them. Netherlands-based global brands such as Philips, Unilever, AkzoNobel, DSM and PostNL have emerged as DJSI stalwarts.

Home to less than 17 million people and with an economy less than a third the size of France's, this small European state continues to punch far above its weight in the sustainability stakes. So why is this?

On the face of it, all the pieces are in place for companies to embrace a progressive approach to business. In MVO Nederland (CSR Netherlands), the country boasts an active industry-led advocacy group. Public awareness is also high, with sustainability issues integrated into the school curriculum. A robust and active civil society, coupled with consistent business-friendly governments, helps too.

But the Netherlands is not the only nation to have a good framework for sustainability. Think of Sweden, or Germany, or even the UK. Nor does having the right conditions necessarily lead to achieving the right outcomes. Just because you can act sustainably doesn't mean you will. What's more, the conditions are changing in the Netherlands. Companies' purse strings are tight, just as everywhere else in Europe.

Keeping the sea at bay, together

For Ton Büchner, chief executive and chairman of paints and coatings firm AkzoNobel, the answers lie in the country's history and culture. Life, for a long time, was tough in the Netherlands. With around one fifth of the country situated below sea level, floods were commonplace. "People were standing up to their knees in mud and trying to build a society", he says. According to Büchner, this forced people to work together. For more than four centuries, the Dutch have been installing dykes and drains to reclaim land from the sea and keep the water at bay. "It takes a lot of people to keep your feet dry," he notes.

As a result, The Netherlands is relatively unique in practising a strong consensus-driven approach to decision-making. Dutch NGOs, politicians, academics and business people knew all about "multi-stakeholder" negotiation long before the sustainability field picked up on it. Back in the 1980s and 1990s, when the government began to develop long-term environmental strategies and targets, it did so in conjunction with business.

Such cross-sector co-operation has increased business buy-in as a result, according to Professor Jacqueline Cramer, director of the Utrecht Sustainability Institute and a former minister of the environment: "More than in other countries, the relationship between government and industry is very important in establishing the commitment of the

companies themselves."

This week, for instance, business participants in a network initiative called Sustainable Tuesdays are proposing a range of sustainability measures in an attempt to inform the annual budget. Chief executives from the country's largest eight companies, meanwhile, regularly meet under the umbrella of the [Dutch Sustainable Growth Coalition](#).

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## Atlantic hurricane season: so far, so calm as weather defies forecasts

By Tom Dart in Houston, for *the guardian*

So far, so calm: despite predictions that this year's Atlantic hurricane season would be unusually busy, the season has entered its second half and a hurricane is yet to form.

On 23 May, the National Oceanic and Atmospheric Administration (NOAA)



Braithwaite, Louisiana, inundated with flood waters in 2012. This year there have been seven named storms but no hurricanes. Photograph: David J Phillip/AP

said it was "forecasting an active or extremely active season this year", because it was expecting bad weather in west Africa that would move westwards; warmer-than-average water temperatures in the Atlantic Ocean and Caribbean Sea; and the absence of El Niño, the phenomenon that produces unusually warm water temperatures in the tropical Pacific Ocean and affects Atlantic weather patterns.

The federal agency said there was a 70% likelihood of 13 to 20 named storms producing seven to 11 hurricanes, of which three to six could be major. Even NOAA's revised outlook, issued on 8 August, anticipated three to five major hurricanes.

The hurricane season began on 1 June and ends on 30 November. So far this year there have been seven named storms, causing more than a dozen deaths in Mexico.

Dennis Feltgen, a spokesman for the National Hurricane Center, told the Guardian in an email that since records began in 1851, the first Atlantic hurricane of the year has formed after 7 September only 13 times. The all-time record latest is 8 October, which happened in 1905. An average year would have seen the development of three hurricanes by early September. Last month was the first time since 2002 that August passed without a hurricane.

If the first hurricane of 2013 gathers after 8am ET on Wednesday, it will be the latest debutant to form since the satellite tracking era began in the mid-1960s.

However, Feltgen warned that the quiet opening half of the season was no guarantee of a hurricane-free second period and that there is still ample time for forecasts to be proved right. "We are at mid-point of the six-month hurricane season," he said. "It is a mistake to believe that the second half of the season would resemble the first half. With half of the season to go through yet, no one should let their guard down."

He said that contributing factors to the absence of hurricanes so far are dry, stable and sinking air over the central and eastern tropical Atlantic Ocean, dust originating from the Sahara and wind shear (changes in wind speed and direction). These cause storms to dissipate.

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## Efficient Vehicles and Sustainability Initiatives in the U.S. Auto Industry

From [GlobalWarmingisReal.com](http://GlobalWarmingisReal.com)



U.S. automakers are producing an ever increasing line-up of more efficient vehicles. However, efficiency measures in the auto industry extend beyond the vehicles they produce. American car companies must compete with more than 36 new hybrid and electric vehicles (EVs) that have been or will be launched in 2013. Growing demand for highly efficient vehicles has compelled almost every brand to get into the EV market, which gives consumers an ever expanding list of vehicles to choose from.

In addition to expanded product lines, innovative sustainability measures are being adopted by automakers. As explained by Green Car Reports, the major automakers are doing more on the sustainability front when it comes to their EV production lines. They are reducing their waste, increasing their use of solar power while reducing their energy usage.

Automotive brands are increasingly seeing value in greening their operations and products as evidenced by Interbrand's 2013 Best Global Green Brands ranking, which counted four automotive brands in the top five spots. The ranking evaluates companies based on their environmental performance and the public's perception of their green credentials.

A Mintel study indicated that sales of hybrids and EVs were up 73 percent in 2012. They forecasted that the number of hybrid and EVs will reach 535,000 units by the end of 2013, which represents a 14 percent increase in sales over 2012. By 2017, Mintel predicts that sales of hybrids and EVs will reach 850,000 units, representing five percent of the total US car market.

According to forecasts from Pike research, more than 210,000 plug-in electric vehicles (PEVs) will be sold globally in 2013. By the end of 2013, about 400,000 PEVs will be on the road globally. They further predicted improved battery performance including greater reliability and charge acceptance from regenerative braking.

Edmunds.com projected that at least 43 new hybrids, PEVs, EVs, diesels and fuel cell electric vehicles are planned for introduction in the U.S. by the 2015 model year.

Aggressive national fuel economy standards for model years 2012 to 2025 have helped push automakers to provide more efficient vehicles. Declining price points from companies like GM and Nissan are also a factor driving the rapid adoption of EVs. The growth of charging station infrastructure is another factor supporting growth.

A late 2012 report released by Lux Research forecasts that the market for electric vehicle charging stations will rise from \$140 million in 2012 to \$1.15 billion by 2020. The market for charging equipment is expected to grow from about 120,000 units in 2012 to 1.3 million in 2020.

Here is a review of some fuel efficient vehicles along with the sustainability efforts of U.S. automakers General Motors, Ford and Tesla. These car companies are producing more efficient vehicles as well as exploring some innovative sustainability initiatives.

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## Beverage Distributor Big Geyser Goes Solar

*SustainableBusiness.com News*

We're proud that a personal friend took the initiative to install a major solar array at the company where he serves as CFO, Big Geyser.

Big Geyser is a beverage distributor based in Queens, New York, that carries products from well known companies such as Vitaminwater, Apple and Eve, and Honest Tea. It sells to thousands of retailers in the NY Metro area.

A 408-kilowatt (kW) solar system now graces the roof that will provide all the electricity the facility needs, with enough left over to charge future electric forklifts and delivery trucks.

"As long as the sun rises, this project yields an attractive and predictable return on our investment for at least the next 25 years," says Rich Richer, CFO of Big Geyser. "As a privately owned company, we can take the longer view and look for investments of this quality."



It's really exciting to watch our system work, says Richer. "We monitor our performance online for each of our five inverters and the entire solar system. If we under-produce during nighttime and cloudy days, the meter runs forward as we draw power from the grid. When we produce more energy than we need, the meter runs backward as we send power back into the grid. It works cumulatively so at any given time we could be ahead or behind - the idea being to balance supply and demand over the long term and 'break even'. We continue to reduce demand due to the cool roof and new projects like reflective window film. As a result we have reduced our overall demand and are running backward even though we run our business for 20 hours a day against supplying solar power for about 12 hours per day. We hope to put the excess to use with electric forklifts and electric-powered trucks."

"Big Geyser is to be commended for not just installing enough solar power to run its factory, but also for planning for the future needs of an electric vehicle-based delivery fleet," says Francis Murray Jr., CEO of NYSERDA.

After finishing a successful lighting retrofit, the company decided to pursue solar to further cut energy costs. They also got a cool roof as part of the package.

"We expect our cool roof to enhance solar output while reducing air conditioning kilowatt hour usage by keeping the roof very close to the ambient temperature during the cooling season," says Howard Ehrenshaft of Energy Conservation Group of America, who did the lighting retrofit and put together the solar package.

Installed by EmPower Solar, Big Geyser received funding assistance under the NY-Sun Initiative from the New York State Energy Research and Development Authority (NYSERDA).

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## 50 of the World's 500 Biggest Companies Undermine Progress on Climate Change

*SustainableBusiness.com News*

Over the past 20 years, many of the world's biggest corporations have committed to seriously address climate change and have followed that up with targets and initiatives.

Most companies are criticized for moving too slowly, but even that progress is being undermined by just 50 corporations which, it turns out, produce 75% of greenhouse gases of the 500 biggest publicly traded companies - the FTSE Global 500, reports the CDP (formerly Carbon Disclosure Project) and PwC.

These grand polluters - primarily in the energy, materials and utilities sectors, have increased emissions 1.65% over the past four years, the equivalent of adding over 8.5 million pickup trucks to the roads or supplying electricity to 6 million homes for a year, according to the US EPA. And the 10 biggest polluters have increased emissions 53% since 2009.

Some of those 50 grand polluters make the news for their sustainability efforts, such as Walmart, which has been touting a variety of important initiatives - but still, emissions creep up. Same for Federal Express. Perhaps this is because of Walmart's sheer size and FedEx's dependence on fuels.

At least 17 of the worst 50 are US companies, many of them in the oil industry: Exxon-Mobil, Chevron, ConocoPhillips, Apache, Devon Energy and Occidental Petroleum. Other companies include Carnival, Air Products & Chemicals, Dow Chemical, DuPont, Praxair, AT&T, American Electric Power, Duke Energy and Exelon.

These companies lead their respective industries on emissions: Exxon-Mobil, Walmart, Carnival, Bank of America, Bayer, Samsung and Verizon.

**Which companies are the "good guys"** - ranked at 99 or 100 (out of 100 points) for meaningful greenhouse gas reduction strategies, transparent disclosure or both?

The list includes a number of auto companies: Honda, Nissan, Volkswagen, BMW and Daimler. Among banks there's BNY Mellon, and in technology, Cisco Systems, Royal Philips, and Hewlett-Packard, among the early pioneers of corporate sustainability. Gas Natural SDG and Nestle are also on the list.

Among the companies that declined to send information for the report are Amazon.com and Apple.

One of the keys to corporate progress on climate change is where incentives are provided to top executives, notes CDP, which is shown

here by industry sector:

Another key conclusion of the report is that although many corporations are doing a much better job of measuring and reporting on emissions, they still leave out what could amount to 47% of total emissions.

While 72% of companies measure emissions associated with business travel, that equates to just 0.2% of the sample's indirect emissions. In the

financial sector, for example, just 6% disclose emissions associated with their investments, which make up the majority of their emissions. Bank of America is a good example - it touts its environmental progress while continuing to invest in coal.

Another recent study that evaluated only US companies comes to the same conclusions - a small minority of companies are responsible for the majority of pollution, be it air, water or greenhouse gas emissions.

CDP conducts this annual analysis for use by its 722 institutional investor-members, representing \$87 trillion in invested capital.

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## France Levies Taxes on Carbon and Nuclear Energy

*SustainableBusiness.com News*

While nuclear advocates point to France as a model for successfully relying on nuclear energy, under President Hollande's leadership, it is moving away from nuclear and toward renewable energy.

The government announced it will begin taxing carbon emissions from the use of fossil fuels and will also place a levy on nuclear energy to finance billions of dollars worth of energy efficiency and renewable projects.

A carbon tax on fossil fuel consumption (oil, diesel, coal, natural gas) will be phased in, raising \$5.4 billion by 2016, and a nuclear tax will be applied over the remaining lifetime of the country's 58 reactors. People that work in the fishing and transport industries are exempt from the carbon tax.

The goal is to raise the share of renewables to 23% by 2020 (up from 13% now) and cut energy consumption in half by 2050. Nuclear's share of the energy mix would drop 75% today to 50% by 2025, and use of fossil fuels would decline 30% by 2030. The transition is expected to cost 20 billion euros a year.

By the end of the year, President Hollande promises to pass a law that caps nuclear capacity and gives the government (which owns about 85% of Electricite de France (EDF)) the legal right to close reactors.

Hollande views growth of the renewable energy industry as an important way to tackle soaring unemployment in addition to supplying clean, safe energy. 100,000 people are employed by the industry, which will more than double by 2020 if production targets are met. He won the election for his focus on growth, not austerity.

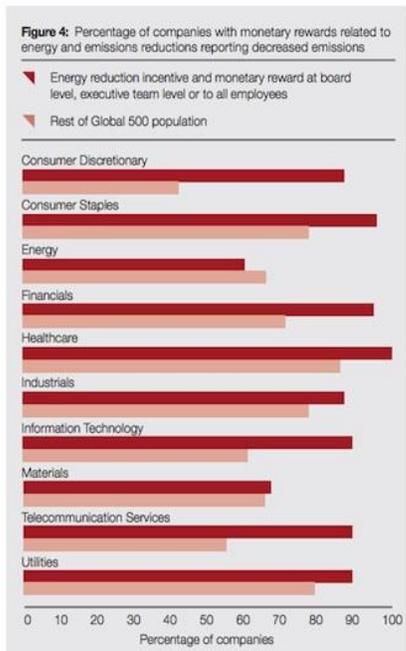
France has long postponed its first offshore wind farms, but is now calling for 25 gigawatts (GW) of wind, tidal and wave power by 2020 - it has the most potential for tidal power in Europe after the UK, about 4 GW.

Last week, the government released a \$267 million request for proposal for a pilot marine energy project of 80 megawatts.

Wind energy accounts for just 2% of France's power today, while solar generates less than 0.5%.

One of the simple energy efficiency measures France is taking is requiring commercial buildings to shut their lights off at night. This alone will save the energy it takes to power 750,000 homes!

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## Carbon footprint from food waste bigger than most countries'

By Sustainable Business News



Food waste isn't just a devastating misuse of natural resources, it's also a huge part of the world's carbon footprint, according to the United Nations Food and Agriculture Organization (FAO).

Every year, the world throws out about 1.3 billion tons of food -- a startling one-third of the food produced. And that

creates a greenhouse gas footprint bigger than all countries, except for China and the U.S.

How? Because of the immense amounts of energy, water and chemicals used for agriculture and food production. The food supply chain produces about 3.3 billion tons of carbon a year.

That means 30 percent of the world's farmland -- about 3.5 billion acres -- is wasted.

And not counting seafood, wasting all that food costs about \$750 billion a year, about the GDP of Switzerland, says FAO.

"All of us -- farmers and fishers; food processors and supermarkets; local and national governments; individual consumers -- must make changes at every link of the human food chain to prevent food wastage from happening in the first place, and re-use or recycle it when we can't," said FAO Director-General José Graziano da Silva. "We simply cannot allow one-third of all the food we produce to go to waste or be lost because of inappropriate practices, when 870 million people go hungry every day."

"Food wastage reduction would not only avoid pressure on scarce natural resources but also decrease the need to raise food production by 60 percent in order to meet the 2050 population demand," writes FAO in its report, "Food Wastage Footprint: Impacts on Natural Resources."

The UN study is the first to examine the impacts of global food waste from an environmental perspective, looking specifically at consequences for the climate, water and land use, and biodiversity.

### Where waste occurs

The majority of food waste (54 percent) happens during and after food harvesting, particularly while it's handled and stored. The rest occurs during the processing, distribution and consumption stages.

In developed economies, such as the U.S., where up to 40 percent of all food is wasted, the issue is one of consumers buying too much and throwing away what they don't need. Elsewhere, in emerging and developing nations, the waste comes from farming inefficiencies and a lack of proper storage, reports FAO.

Asia (China, Japan, Korea) is a regional hot spot for vegetable waste and rice, the cultivation of which is extremely carbon-intensive. Meat waste is a big issue in Latin America, which accounts for 80 percent of the world's meat waste. Fruit and vegetable waste is problematic in Asia, Latin America and Europe.

### How to solve the problem

The highest priority is to reduce crop losses through better farming practices, says FAO. Also important are re-use and recycling strategies that make it easier to donate surplus food to those that need it, and to divert foods not fit for human consumption to livestock.

Beyond these strategies, FAO recommends by-product recycling, anaerobic digestion and composting to recover energy and nutrients. These processes also minimize the amount of methane created by food rotting in landfills.

*This article originally appeared at Sustainable Business News. Food bank pumpkins image by U.S. Department of Agriculture via Flickr. To learn more about the food-energy-water nexus, don't miss our VERGE SF event Oct. 14-17.*

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## Hannaford supermarket eliminates HFCs; Whole Foods to follow

By Sustainable Business News



The first U.S. supermarket to address climate-forcing HFCs (hydrofluorocarbons) is in Maine in the tiny town of Turner.

Belgium-based Delhaize America, which owns the Hannaford supermarket chain, opened the first store that chills and freezes foods using carbon dioxide instead of super-greenhouse gas HFCs.

Carbon dioxide is a natural refrigerant used in Canada and Europe in moderate-to-cold climates.

Just using this system will cut the store's carbon footprint by 3.4 million pounds a year. Delhaize's goal is to lower greenhouse gas emissions 20 percent by 2020.

Besides eliminating HFCs, using carbon is more energy efficient and inexpensive, and leaks are easy to fix.

"We realized that refrigerant emissions could easily be 25 to 30 percent of the greenhouse gas emissions pie," says Harrison Horning, director of energy and facility services of Delhaize North America.

Whole Foods and Angelo Caputo's Fresh Markets also plan to begin using carbon refrigerants this year.

"Natural refrigerants are more energy efficient than HFCs in many applications. They are better for the environment, they are reliable, and there is absolutely no reason that U.S. supermarkets are not aggressively transitioning now. There are no more excuses; the time has come to phase out these harmful refrigerants," says the Environmental Investigation Agency.

HFCs were introduced to replace ozone-depleting chemicals under the Montreal Protocol. Although they don't harm the ozone layer, they are powerful greenhouse gases -- 11,700 times more powerful than carbon dioxide.

HFCs are commonly used in air conditioners, refrigerators, insulating foams, solvents and aerosol products. Alternatives are readily available.

When Hillary Clinton served as Secretary of State, she formed a coalition to address climate forcers such as HFCs, which are dramatically accelerating the pace of climate change. Most recently, President Obama made phasing out HFCs a priority in his climate change speech.

Last year, a consortium of more than 400 companies, including Unilever, Tesco, Coca-Cola and Walmart, agreed to use climate-friendly refrigerants and stop using HFCs, beginning in 2015.

*This article originally appeared at Sustainable Business News. Grocery store refrigerator image by Alex Barth via Flickr*

[<Source>](#)

## Climate change washes away partisanship for South Carolina tourism

By Frank Knapp Jr.



Tourism is a big multi-billion dollar business in South Carolina. Millions of tourists flock to its coast every year to enjoy beaches and historic treasures such as Charleston.

But this big tourism industry is primarily a small business industry. From Cherry Grove in the

north to Beaufort in the south, and all the small and large cities in between, the small businesses provide the tourism experience.

Regardless of the partisan interests of small businesses along the South Carolina coast, they have two things in common. First, they are dependent on our tourism economy for the success of their businesses. Second, rising sea levels due to climate change is a long-term common enemy that threatens the coastal tourism industry. As a result, many of these small businesses are calling for action and the fight to the public.

Their livelihoods are at stake. If the sea level rises six feet along the South Carolina coast by 2100, as NOAA predicts, most of the state's beautiful beaches will be washed away. Entire small business areas in Cherry Grove, Pawleys Island, Georgetown, Murrells Inlet and Folly Beach will be lost. Charleston, already experiencing flooding when rains come during high tide, will see up to one-third of its peninsula under water.

Unfortunately, it is difficult for tourists to grasp the serious threat. If they could, many would want to protect our coast and preserve it for future generations. That is why elevating the public's concern about a far-off, manmade natural disaster is essential.

Given the partisan gridlock in Congress, public demand is needed to force Congress to take action to reduce carbon pollution and transition the country to a clean energy economy. Public demand on climate change also is needed to encourage the president to follow through with his stated agenda to address carbon pollution.

That is why the South Carolina Small Business Chamber of Commerce and the American Sustainable Business Council started the sea level rise education project in the Palmetto state called SC BARS (South Carolina Businesses Acting on Rising Seas). It is designed to turn tourists visiting South Carolina into an army of advocates for protecting the coastal tourism economy. It does this by allowing the tourists to experience visually and viscerally what climate change-induced sea level rise actually means. Small businesses along the coast are asked to post signs and, if appropriate, put up blue tape indicating the high tide water mark projected for 2100 if no action is taken to stop carbon pollution.

The signs direct tourists to look for the blue tape in directly affected business. The signs also encourage visits to the website for information about sea level rise and gives the option of sending a letter to Congress and the president.

In spite of being a very politically conservative state, the response to the SC BARS effort has been positive with approximately half of the small business owners agreeing to put up the signage and blue tape to educate the public. Less than 10 percent of small businesses contacted flatly reject participation.

Lighthouse image by urbanlight via Shutterstock.

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## Climate change: UN makes high-risk attempt to break deadlock on talks

Secretary General Ban Ki-moon to invite world leaders to first summit of its kind since Copenhagen in 2009

By Fiona Harvey, environment correspondent, *The Guardian*,

The United Nations secretary general is to invite world leaders next week to an unprecedented summit on climate change, in the hope of breaking the long deadlock on global warming talks. The high-risk strategy will put heads of state and government together to talk about the issue for the first time since the Copenhagen summit in 2009 ended in scenes of farce and disarray.

Ban Ki-moon has decided he must convene the meeting because of the stalemate in the talks for the past four years, with international action dwindling even as greenhouse gas emissions continue to rise strongly, and scientific warnings over the consequences grow more strident.

He will tell world leaders next week that he expects them to attend crucial talks in 2014, ahead of a diplomatic push for a new global treaty on the climate, to culminate the following year. It is understood that he thinks one of the failures of the Copenhagen process was to bring in leaders only in the dying days of those negotiations, when diplomats had already failed to secure a deal.

By convening leaders a year before the crucial stage of the new round of global talks, he hopes to create an atmosphere in which leading nations such as the US, China and EU countries can agree the broad outlines of a new climate agreement, and then return to their officials and instruct them to hammer out the details.

The next crucial international climate meeting is scheduled for 2015 in Paris, which according to current plans is the deadline for a new global pact on emissions to be signed. Ban is understood to view climate change as one of the key defining issues of his tenure as secretary general, and is still smarting from the failure of the Copenhagen summit to produce a unified world view on the problem.

This is a gamble by the UN. The world's leading economies are currently signed up to targets to curb their greenhouse gas emissions by 2020, but at present there is no clear agreement on goals beyond that date. But scientific projections, to be revealed next week by the UN-convened body of the world's leading climate scientists, the Intergovernmental Panel on Climate Change, are expected to show that time is running out, as emissions are racing ahead of the ability of the world's natural systems to absorb their impact.

Under current emissions trends, the International Energy Agency, the World Bank and other respected bodies have warned that global warming could reach 6C, which would lead to widespread floods, droughts, famine and migration.

Ban's gamble was hailed by some diplomats as a potential game-changer. "We need to have the impetus behind this, we need to get over Copenhagen and get to a new level," said an official from one developed country.

But the history of climate talks makes clear that there is no guarantee of success. The first real international discussion of climate issues by heads of state and government came at Rio in 1992, when governments – including the US under George Bush – agreed that action to "avoid dangerous climate change" was urgent and necessary, and signed the first treaty on the subject, the UN Framework Convention on Climate Change. It took five years of tortuous negotiations to translate those hopes into concrete action, in the form of the Kyoto protocol of 1997.



UN general secretary Ban Ki-moon believes leaders should have been involved at an earlier stage in the 2009 climate change talks.  
Photograph: Seth Wenig/AP

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## Small Businesses Grew Sales of Green Products During Recession

### *SustainableBusiness.com News*

In the first major survey to look at the green economy from the perspective of small business owners, 75% say sales of green products actually rose during the recession (2008-2011).

The study includes owners of "microbusinesses" - those with 5 or fewer employees - which represent 88% of US businesses.

Among businesses that saw sales growth in green products, the greener the company's practices, the higher their sales, reports Green America, EcoVentures International and Association for Enterprise Opportunity, who collaborated on the survey. 79% "strongly agree" that offering green products and services gave their business a competitive advantage during that time.

Over 1,300 small business owners were surveyed on the environmental and social benefits attributes of their products and services as well as their adoption of green practices like lighting/ energy efficiency, waste and water management and use of renewable energy. Respondents were then segmented into three categories: Deep Green, Mid-Green and Light Green.

Deep Green businesses reported significantly stronger performance than their Light Green peers on nearly every dimension.

62% that offer green products or services say they do so because it's a "competitive requirement" in their industry.

Although businesses note greater competition for green-oriented customers, their greenest products tend to be profitable, often more profitable, than their less environmentally beneficial offerings.

Another study found that Americans generally bought fewer green products during the recession, because most people spent less overall. But Deep Green purchasers - who choose green products for most of their purchases - increased during that time to 9% of the consumer market.

And a third study conducted during the recession found that "sustainability has stood the test of time." Even during difficult economic times 69% of American adults bought green products or services and 48% of them said it's because they are better for the environment. 82% said they know which companies and brands have a strong history of sustainability and that's who they buy from.

Read the study, *The Big Green Opportunity for Small Green Business in the US*:

Website: [www.greenbusinessnetwork.org/green-your-business/big-green-opportunity-report.html](http://www.greenbusinessnetwork.org/green-your-business/big-green-opportunity-report.html)

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## The companies trying to crowdsource sustainable innovations

*Crowdsourcing ideas is one way to speed up innovation. But are companies trying to get external inspiration on the cheap?*

By **Tim Smedley**, *Guardian Professional*,

You know what it's like. You wait ages for a crowdsourced sustainable water innovation competition, and then two come along at once. Danish utility company Aarhus Water has an open call for ideas to redesign its Egaa wastewater treatment plant. And Unilever is running a competition to design the sustainable shower of the future.

Both competitions stem from the same frustration: a step change is needed in sustainable innovation, and it's not coming from the traditional marketplace. Rather than calling for designs for the whole process, the Aarhus Water competition (which closes on 4 October) is divided into four challenges - carbon harvesting, biogas production, energy consumption and smarter energy utilisation - that people can tackle separately without any specific knowledge of wastewater treatment plants (WWTP).

"The whole idea is to take a very complex problem, chop it up into lots of small encircled problems, and allow people from the outside to contribute", explains Mikkel Thomassen, director of the Danish company Smith Innovation, contracted by Aarhus Water to run the crowdsourcing phase. "We only have a limited number of firms working within the [WWTP] area -

although they are highly qualified, they do things in a certain way ... If you want to more fundamentally rethink how we do this kind of plant, we need inspiration from outside."

Thomassen expects entrants will have existing expertise due to the highly specific nature of the challenges, but the pool for that expertise can be considerably widened by crowdsourcing: "For example bio-gas or filter purification technologies - these are used in many different industries, the dairy industry, processing, and we hope to be able to persuade companies, researchers or individuals working in these sectors to put forward their ideas". A fifth call for entries simply called "surprise us" also allows for ideas from virtually anyone.

Thomassen admits, "An open innovation campaign is not very costly economically but there is a cost in a sense that you give up a lot of control - I don't know whether we will receive two ideas or 200."

Unilever meanwhile has teamed up with crowdsourcing community eYeka, offering €5,000 (£4,265) for the best sustainable shower design (competition closes on 8 September). Unilever is not a manufacturer of showers, but targets under its sustainable living plan call for a 50% reduction in its water use by 2020, taking responsibility for the whole lifecycle of products, which for Unilever includes shampoo. Michiel Leijnse, water and innovation brand director for Unilever, explains, "a typical shower in the UK uses 62 litres of water, in the US it's upwards of 100. We think there must be better, more efficient, ways of getting clean ... and we haven't found them within the mainstream manufacturers so far".

Unilever has really embraced crowdsourcing, having already announced an ongoing partnership with eYeka to develop ideas for Unilever brands. An open innovation section on the Unilever website also allows people to submit ideas for Unilever products or respond to a specific list of wants - at the time of going to press, examples included "toothpaste that amazes your mouth". What happens to these product ideas once submitted however, is less clear.

The specific ownership rights of crowdsourced ideas can also vary. In eYeka's terms and conditions, it reads: "winners whose submissions are selected as selection of the jury undertake to assign to the company the intellectual property rights in these submissions." Unilever says this is standard across such crowdsourcing platforms.

In the context of potentially designing the world's most sustainable shower, €5,000 seems little recompense. Asked if this is a potential flaw in the crowdsourcing

model, Leijnse says it's a fair concern, "but at the same time having an idea is one thing, bringing it to market is another ... if we can work with them it would lead to a different arrangement than if



Unilever has launched a competition to design the world's most sustainable shower, but is the €5,000 prize fair? Photograph: Bazuki Muhammad/REUTERS

they just had an idea and couldn't take it further." The volume of entries to the shower competition is also such that, he says: "I don't think it's putting people off".

The Aarhus Water competition doesn't involve a cash prize, but Thomassen insists that the winners "would have the rights of ownership and Aarhus Water would [only] have the right to use it in this particular building project." However he also argues that seeing a product or solution realised is an even bigger motivator than money. "In theory you could come up with some conflicts as you mention - should I give away my ideas for free ... But in reality these conflicts of interest are much more limited than is often assumed ... they receive the opportunity to be part of the ongoing building project, to have an idea realised in a specific project."

Also the urgent need for sustainability solutions may prove a bigger driver than in more commercial fields. The potential water savings to come from showers, given that they account for a third of current domestic water use in the west, is huge. Aarhus Water want to maximise the production of energy and reduce the energy consumption at Egaa, so that the net energy-production exceeds 150%. Existing technologies could achieve 75%, says Thomassen, and only theoretically.

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## Shame on you, Apple, Facebook and Amazon

*It is nothing short of a disgrace these three brands and 94 other major corporations refuse to divulge carbon emissions data to global NGO CDP, says Jo Confino*

By Jo Confino, *theguardian.com*,



Major corporations are keeping us in the dark on their carbon emissions.  
Photograph: Joe Klamar/AFP/Getty Images

There comes a time when naming and shaming is the only way to get some businesses to start taking their responsibilities seriously.

This is why CDP, the respected global NGO, has for the first time compiled and published a list of major companies around the world that are refusing to disclose details of their carbon emissions.

In the US, that includes household names such as Apple, Facebook, Amazon.com, Time Warner Cable, Comcast, Caterpillar and General Dynamics.

Shame on all of you and the other 90 of the 500 largest listed companies in the world that chose not to give CDP the data it requested.

Let's be clear, the CDP is not some go-it-alone organisation, but is collecting the data at the specific request of 722 institutional investors representing \$87tn in invested capital.

It is doing this work not for some academic or technical reason, but because the world is in acute danger from rising CO2 levels and it is doing its best to reverse this disastrous trend.

The information CDP collects sits on all Bloomberg financial terminals and is being used by a record number of investors to benchmark company performance and make investment decisions based on it.

As the CEO of Henderson Global Investors, which has almost £70bn under management, says: "We seek to ensure the companies we invest in achieve and maintain high standards of corporate responsibility, which includes the measurement and management of environmental impacts. CDP is a critical partner for us in fulfilling this responsibility."

I know it's a bit of a bore to read lists, but it's worth highlighting some more of the businesses that still seem to be living in an age when it was considered OK to hide behind a wall of secrecy.

Other US companies refusing to play ball include finance giant Berkshire Hathaway, US healthcare corporations Gilead Sciences and Express Scripts and energy and utility groups the Southern Company, Phillips 66, EOG Resources, Dominion Resources, NextEra Energy, National Oilwell Varco and Marathon Petroleum.

In total, more than a third of the companies that failed to respond were from the US, with only a handful from Europe, dubiously led by fashion companies Hermes International and Prada.

The second largest block of companies in terms of geography, a total of 17, that refused to divulge information came from China and Hong Kong with China Mobile and Bank of China being the companies with the

largest market capitalisation.

I approached several US companies to see what they would say in their defence. Caterpillar and General Dynamics failed to respond while Apple, Facebook and Phillips 66 all gave a similar reason - that they already publish their own data.

A spokesperson for Phillips 66 said the company "has chosen not to participate in the CDP as the company reports greenhouse gas (GHG) emissions publicly" while Facebook said it "already publicly shares data on our emissions, energy use, and energy sources on an annual basis. All our data is third-party verified by Cameron-Cole."

But CDP CEO Paul Simpson will have none of this: "There is absolutely no excuse," he says. "These companies clearly have made a decision that it is better not to respond and therefore there is something they are not happy to see revealed."

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## U.K. project to turn business waste into green roof material

By BusinessGreen Staff

East London businesses will have the opportunity to see how a truly circular economy could work, after planning permission for the United Kingdom's first industrial scale cradle to cradle demonstration project was granted this week.

Cradle to cradle business models involve the collection of waste materials that otherwise might go to landfill in order to make new products that can be recycled and reused themselves, saving resources, cutting greenhouse gas emissions and reducing costs.



The new demonstrator will turn by-products from tenants at the London Sustainable Industries Park (London SIP) in Dagenham, including a food grade plastic recycling business, a gasification plant and an anaerobic digestion plant, into aggregate material that can be used to help drainage on green roofs or on pathways in place of gravel.

The project forms part of a pan-European initiative called C2C BIZZ, which aims to accelerate the application of cradle to cradle (C2C) principles at business sites and in the wider built environment throughout Northwest Europe. According to the Institute for Sustainability, which secured planning permission for the new project, the pilot will be used to produce a toolkit for creating C2C business and innovation sites and provide guidance on finance models, operational best practices and technical advice for future sites.

Stella Okeahialam, program director at the institute, said cradle to cradle systems could help tackle the 434 million tonnes of waste produced every year in the U.K., while also generating economic benefits for participating businesses and communities.

"As global demand for resources and the cost of transporting and disposing of unwanted materials increases, a number of approaches such as C2C and circular economy encourage a transformation in the way waste is considered and managed," she said in a statement.

"The demonstrator provides a unique opportunity to show in practice how these approaches applied to industrial resources could not only reduce waste and help preserve finite resources, but can be commercially viable in the long term."

*This article originally appeared at Business Green.*

*Green roof image by Sukpaiboonwat via Shutterstock.*

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## Cities bypass slow government to lead the way on climate change

*Cities are where the greatest climate change challenges and opportunities lie, and where mayors are pioneering initiatives*

By **Mike Scott**, *Guardian Professional*,



"When it comes to climate change, cities are where the most exciting progress is being made," according to Michael Bloomberg, mayor of New York.  
Photograph: Jewel Samad/AFP/Getty Images

Efforts by national governments to tackle climate change and other sustainability challenges have been mixed at best over the past 20 years, but there is one level of government that has embraced the challenge with gusto – and success.

"National governments have

largely failed to act, while cities embody the spirit of innovation we need. When it comes to climate change, cities are where the most exciting progress is being made," said Michael Bloomberg, mayor of New York, speaking by videolink to the City Climate Leadership Awards in London this month. He added pointedly that, "mayors do not have the luxury of just talking about problems. They have to deliver results."

Partly, this is a matter of necessity – more than half the world's people live in cities, they consume two-thirds of the world's energy and generate 70% of carbon emissions. "If we want to win the war against climate change, it has to be won in cities," said Roland Busch, head of Cities and Infrastructure at Siemens, sponsors of the awards.

Many of the world's megacities are situated on the coast and their vulnerability to sea level rise and the effects of extreme weather events has been highlighted in recent years by disasters such as Superstorm Sandy, which devastated New York last year and Hurricane Katrina, which had a similar effect on New Orleans. But it's not just rising seas – each city has its own challenges, from the wildfires that threatened Melbourne in 2009 to the floods that deluged Bangkok in 2011, severely disrupting the entire Thai economy, to the choking smog that afflicts Beijing, New Delhi and Los Angeles.

But equally, the world's urban areas are where the opportunities lie – they generate more than 70% of global GDP and cities are growing faster than other parts of the economy. "If you want to provide infrastructure for people in the most cost-efficient and effective way, you do it in cities," said Busch.

Perhaps the fact that people in urban environments are "squished together" makes them more accepting of the need to take action, said Matthew Pencharz, an adviser on energy and environment to London's mayor Boris Johnson. While national politicians' pronouncements can sometimes seem too vague for people to get to grips with, "mayors have found a way to take action that is accountable to the population and brings them visible, tangible benefits that improve their quality of life."

Mayors have a lot of the right power, argues Rohit Aggarwala, special adviser to the C40 Cities Climate Leadership Group and former director of planning and sustainability in New York. "The politics align well and, in addition, many of the interest groups that are most opposed to climate action are simply not as prominent in cities."

The consultants McKinsey argue in a new report entitled How to make a city great, "that leaders who make important strides in improving their cities do three things really well: They achieve smart growth. They do more with less. And they win support for change."

These improvements do not need to cost a lot of money if they are imaginative enough – McKinsey reports that the former mayor of Bogotá, Antanas Mockus, "famously hired 420 mimes to make fun of traffic violators: this entertaining public ridicule reduced traffic fatalities by more

than 50%."

Robert Doyle, Lord Mayor of Melbourne, explained how his city has a plan to double the number of trees in the city by planting an extra 30,000 saplings, which he said would cut temperatures in the centre by 4°C, as well as making the city more liveable and sustainable.

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## Record number of rhinos killed in South Africa in 2013

*Total of 688 rhino deaths passes last year's record, with three months of the year still to go*

By **Adam Vaughan**, *The Guardian*



Some 688 rhinos have been killed for their horns in South Africa so far this year.  
Photograph: Roberto Schmidt/AFP/Getty Images

Nearly 700 rhinos have been killed in South Africa in 2013, making it the bloodiest year yet for rhino poaching.

Last year, a record 668 rhinos were poached for their horns, but that figure has already been eclipsed with the deaths of 688 rhinos with three months left of the year, figures from the South African government show. There are around 18,000 white and 4,000 black rhinos in the country.

The dramatic growth in rhino poaching in South Africa, up from just 13 in 2007, has largely been driven by demand in Asia, in particular Vietnam, where rhino horn is seen as a status symbol. A survey of 720 people in Hanoi and Ho Chi Minh City, published earlier this month, found that typical buyers were "educated, successful and powerful individuals" and use rhino horn as currency in networking.

Anti-poaching efforts are turning to technology, such as drones, as well as attempting to elevate the problem from a conservation to a national security issue. In the next fortnight, the US will crush its 6m tonne stockpile of seized ivory in a symbolic act of destruction to raise awareness of the problem.

Edna Molewa, South Africa's minister of water and environmental affairs, told an anti-poaching street parade on Sunday that the trade was also a threat to the country's tourism industry. "Because of the increase in rhino poaching since 2008, rhinos have been at the centre of the world's attention. This is because losing a rhino not only disturbs the ecological balance, but also harms the South African economy through the resulting harm it does to the tourism industry as a job creator, and poses a security threat as international poaching syndicates cross illegally into South Africa to rob this precious animal of its horn," she said.

Heather Sohl, WWF-UK's chief species adviser, said of the latest figures: "The scale of poaching we are now seeing is extremely worrying. 618 rhinos in South Africa have already been killed by poachers in 2013, so it's appalling to think how many may be lost to this illicit trade by the end of the year. Governments need to act with pace and in a way that fits the seriousness of the crime – this is no longer just an environment issue; illegal wildlife trade transcends national boundaries and undermines national security and economic development in some of the world's poorest countries."

Governments and the WWF will meet at the UN headquarters in New York on Thursday to discuss efforts to tackle the problem.

[<Source>](#)

## Misshapen fruit and vegetables: what is the business case?

A growing movement to save discarded fruit and vegetables shows that there is a business case for selling 'ugly' produce

[Check out our gallery of images from Ugly Fruits](#)

By Elisabeth Braw, *Guardian Professional*,



Ugly Fruits launched a campaign where it uses suggestive slogans to attract consumers to rejected fruit and vegetables. Photograph: Ugly Fruits

When Lea Brumsack and Tanja Krakowski prepare gourmet meals for their growing Berlin catering business, they go for ugly. Ugly fruit and vegetables, that is. After all, their company's mission is to save misshapen produce – by showing customers they're an attractive choice.

"We don't present the vegetables as waste, because they're not waste," Brumsack tells *Guardian Sustainable Business*. "It's good food that's even more interesting because it doesn't exist in the usual supermarket and restaurant range. These vegetables are more like pieces of art."

Worldwide, almost 40% of fruit and vegetables will go to waste before they even reach consumers, according to figures from the UN Food and Agricultural Organisation (FAO). In some parts of the world, that's because there are no efficient means of storing it. In Europe, the reasons are primarily cosmetic. The Soil Association calculates that in the UK, 20-40% of produce is rejected because it's misshapen.

That's a problem, and not just because it's wasteful. According to Wrap, the sustainability agency, each year 90,000 tonnes of produce in the UK alone is sent to landfill, where it rots and emits methane into the atmosphere. Wasted food also uses scarce water and land resources. Besides, a quickly growing world population needs the food. The FAO estimates that by 2050 global food production must increase by 70%.

Brumsack and Krakowski's business, Culinary Misfits, is part of a new trend to utilise the misshapen produce. Three other young Germans have hit international headlines with their campaign Ugly Fruits, which uses suggestive slogans to attract consumers to rejected greens.

"Not eating food that has been produced is unsustainable," observes co-founder Daniel Plath. "And it's a huge waste of energy in agriculture to grow food that's thrown away."

In the UK, Feeding the 5000 runs a national gleaning network, whose members harvest misshapen produce and donate it to charity. Earlier this summer, they rescued 11,000 cauliflowers from landfill. And in America, the Society of St Andrew, together with local farmers, run a growing operation saving wonky produce.

But, as Culinary Misfits shows, there's a business case for ugly veggies. Ugly Fruits' business plan, which envisages trendy shops selling exclusively misshapen fruit, has already attracted proposals from potential partners. They developed the concept after failed attempts to convince supermarket chains to sell ugly produce.

"They told us customers don't want ugly fruit, but that's because customers are not familiar with it," explains Moritz Glück, another co-

founder. "Of course people buy regular produce because that's what they see on ads and posters. But we're already getting emails asking when our first shop is opening."

According to a poll by the Institute of Mechanical Engineers, 45% of Brits say the appearance of fruit and vegetables doesn't matter. Some 26% would buy the cheapest option, and 10% say they would actively choose imperfect produce.

Indeed, when catering meals for corporations in the Berlin area, Brumsack and Krakowski find customers remarkably receptive. "In terms of taste, ugly vegetables are just as good as regular vegetables," explains Brumsack. "But the point is that you reach people through an aesthetic presentation, not by saying, 'you're so bad, you waste food'."

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## Why colleges should add green to their school colors

By Jonathan Bardelline

Just as the benefits of corporate sustainability initiatives go beyond simply doing "what's right" or saving money, colleges and universities are finding wide-ranging benefits from making sustainability core to their school brand.



"The most powerful component of a brand is the experience it provides for those who come in contact with it," said Boi-Yeanoh Adams, Waste Management's education program manager for public sector solutions, during a GreenBiz.com webcast Wednesday.

For companies, that mainly means the products and services they provide. For colleges and universities, that means everything about the student experience, from what classes are available to how waste at sporting events is handled.

"More and more college applicants are using a college's commitment to the environment as part of their decision-making process," Adams said.

Along with bringing in prospective students, a school can use its sustainability branding to position itself as an environmental thought leader, tap into engaged students and staff, and improve the quality of life on campus with natural lighting, better air quality and organic food, she said.

One major effort by the University of Notre Dame has been to make its football games more sustainable. Erin Hafner, programs manager for the university's Office of Sustainability, said that includes not just the game itself, but everything surrounding the game, such as pep rallies and concerts. One big target: garbage.

"When 150,000 visitors come to campus on a game day weekend, waste becomes an issue," Hafner said.

Before each game, student volunteers distribute recycling bags to tailgaters in campus parking lots, and those bags are later picked up by the school's recycling provider. Last year, 124 tons of waste were recycled through that bag service. Numerous recycling containers are elsewhere, Hafner said, and concession stands provide reusable cups to reduce waste.

"Fans are making sustainable choices and they don't even know it," she said.

Arizona Statue University campus image by kevin dooley via Flickr

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## How cloud technology can bring clean drinking water to India

By Kristine A. Wong

Imagine not having access to clean drinking water because you refused to vote for a particular politician, or didn't pay bribes to the driver delivering your supply. Even after doing both these things, you're still not



sure just exactly when the next delivery will arrive.

This is the case in India, where access to drinking water is not universal. As India increasingly urbanizes and water becomes even more scarce, solutions that raise access will be more important in the coming decades.

That's why the Piramal Foundation -- which addresses India's development challenges through social ventures -- funded Sarvajal, a company that uses cloud technology to provide water via filtration stations and solar-powered ATMs.

UNICEF reports that water-borne diseases such as cholera, gastroenteritis and diarrhea in India are responsible for \$600 million in medical bills and lost productivity per year, but it could get worse. The national government estimates that demand for clean water will rise 50 percent by 2031 if current delivery models stay the same. According to the World Bank, 220 million Indians will migrate to cities over the same 20-year period.

### The problem: Steady access to clean water

In rural areas, residents often have no other choice than to capture groundwater. "The water was brackish, there were no pipes, no tankers, and filters were too expensive," said Anand Shah, former head of the India-based Piramal Foundation, of the lack of access. "They'd sift it but would still have large amounts of kidney stones, joint pain, arthritis and gastrointestinal problems." Plus, the reverse osmosis process to desalinate and filter out impurities was inefficient.



In urban slums, the situation can be better, but not optimal. Although tankers arrive to dispense water for free, they're intermittent and unpredictable, Shah said. Residents invest large amounts of time pursuing the tanker, jostling to fill containers they carry home. And even if the driver has the best intentions, the country's

rough roads lead to unexpected roadblocks.

Through a monitoring device attached to each filtration unit, embedded sensors and an RFID reader, Sarvajal tracks water quality in real time. It follows user activity, how many times the water has been backwashed and rinsed, when filters need changing, how much water a station has dispensed and how many times the power went out.

Service and maintenance were costly, so a monitoring device was built in-house allowing the company to diagnose machines from one central location.

The company grew from one pilot location in 2007 to more than 200 filtration station-ATM combos in villages of at least 5,000 people each across India. One resident per village can purchase a franchise for about 30,000 Indian rupees, about \$500, and sell the filtered water for a penny

per liter, he said.

Users pre-pay for their water, and funds are loaded onto Sarvajal ATM cards.

### Selling, really?

Shah said he realizes that selling water in a country that has offered water as a public

resource could appear off the mark. But delivery via the tankers is unpredictable, and it takes families time to collect water from the tankers and filter it at home.

"We looked at every alternative out there, and even if a family buys the cheapest water filter, we've priced it still under what it would cost them per liter," he said. Bottled water costs 32 cents and water pouches 14 cents per liter on the street, and creates more waste than refilling reusable containers.

According to Shah, local franchise owners can earn a good living -- up to two to three times what they would make for unskilled labor. While Sarvajal still owns the water filtration equipment, it takes less than a year for the franchise owners to start returning profits, he says. Sarvajal, on the other hand, doesn't expect to profit for another five to 10 years.

Shah says Sarvajal launched as a for-profit company in part because a non-profit would have a harder time attracting technical talent.

### Scaling into urban areas -- with some help

Sarvajal has secured the go-ahead from the local government in the



metropolitan area around New Delhi to set up some 50 filtration station-ATM units -- areas without regular access to drinking water.

Because Sarvajal mostly had operated in more rural areas, it needed help. To that end, the company hired Frog Design, a

consultancy that engineers and designs products and services in energy, health care and social innovation.

Jan Chipchase, Frog's creative director of global insights, set up a team of staffers from India. They spent over a month in Delhi interviewing and observing how residents navigated securing drinking water. The group also spoke to water providers who had opened businesses related to supplying clean water.

Savda Ghevera, a resettled slum on the edge of Delhi, was the focus of the research. Frog wanted to find out the value of clean drinking water, how a delivery system would meet residents' needs and what might arise during the implementation of an alternative system. (The extended research was funded by the Institute of Money, Technology and Financial Inclusion at the University of California-Irvine).

"A water ATM allows stored value to convert to digital credit. As the world digitizes, we wanted to find out to what extent a low literate community was willing to invest in these types of technology," said Chipchase.

*Top image of flowing water by PhotoSky via Shutterstock. Other photos courtesy of Frog Design.*

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## News From India: First Net-Zero Energy Building, Renewables Volatile

### *SustainableBusiness.com News*

India is getting its first net-zero energy building - the Paryavaran Bhavan building in New Delhi.

It's expected to achieve LEED INDIA-Platinum and a five star rating for Integrated Habitat Assessment from the national government's Energy and Resource Institute. Managed by the Central Public Works Department of India, the project is spearheaded by the Indian Ministry of Environment and Forests.



A passive solar design brings light into most of the building as well as keeping heat out during the warmest months.

Solar PV provides all the electricity and solar thermal provides hot water for the building. A 930-kilowatt SunPower solar system graces the roof, installed with a five-degree tilt to optimize energy output (1.5 million kilowatt hours a year).

"For this urban project, with very limited rooftop space and high energy generation requirement, the

selection of high efficiency solar panels was the most critical aspect," says Ram Avatar of New Delhi-based Swadeshi Civil Infrastructure, which did the installation.

### **Motorcycle Maker Has Big Renewable Energy Plans**

India's policies on solar and wind have been volatile over the past year, but the Hero Group - the country's biggest motorcycle manufacturer - has big plans for the market.

The company says it will develop 1 gigawatt (GW) of renewable energy by 2017 through its new division, Hero Future Energies.

It recently completed its first wind farm (37.5 megawatts) and has a contract for its first solar plant (10 MW). The goal is to build 100 MW of wind and solar projects this year - it also has plans for small hydro.

"We are making a strategic move into the renewable energy sector in the wake of the significant power shortages being witnessed in the country," says Rahul Munjal, managing director of Hero Future Energies.

While it may sound strange for a motorcycle company to get into renewable energy development, Hero is involved in numerous industries, such as IT and financial services, real estate and education.

### **Renewable Energy in Flux**

Meanwhile, just as India's renewable energy industry has been trending up again, the Gujarat state government waived national clean energy targets for utilities - because a state utility claimed sourcing 7% of power from renewables is too costly.

"From a foreign investors' point of view this illustrates yet again that even if something is committed to law, it still isn't worth the paper it's written on," says Gerry O'Kane of CleanBiz.Asia. "The decision in Gujarat cannot help but make investors question the future of India's renewable energy policies."

Gujurat has the most renewable energy of any Indian state - over 1 GW - and has a target of 20% renewables by 2020. By letting utilities off the hook for buying renewables, developers won't be able to sell renewable energy unless it's cheaper than coal. And when one state breaks a policy, others tend to follow.

A recent report by HSBC, *Good Bye Winter, Hello Spring*, concludes that wind energy is cost competitive with new coal plants in India, and solar will likely be between 2016-18.

Last year, India withdrew subsidies for wind, plunging installations 42%. And this summer - to stabilize the grid - the government began requiring wind farms (10 MW or bigger) to accurately forecast their power generation in 15-minute blocks a day in advance, or face fines.

That's very challenging for wind farms and could cost \$4.2 million a year for a

100 MW plant, a spokesperson for Tata Power told *Bloomberg*. "Developers will see this as a further handicap" and penalties will "jeopardize" the industry's growth, the nation's second-biggest developer said. Not surprisingly, some of the biggest wind developers are reconsidering projects and turbine sales are down. Solar operators also have to give estimates but don't face fines because output is smaller and less volatile.

In the long run, this could be good for the industry, says V. Subramanian, CEO of the Indian Wind Energy Association, because transmission companies and grid operators will buy more wind if they have that data.

Demand for solar is light at the moment because subsidies have been delayed. The government approved a proposal to reinstate the onshore wind subsidy, which expired in March 2012.

Volatile generation led to the world's biggest blackout last year when half of India was without power for two days. Recently, the government announced it would spend \$7.9 billion to double transmission capacity in the next five to six years to connect solar and wind projects. There's almost 20 GW of wind and solar in India now.

[<Source>](#)

## India Passes Corporate Responsibility Law

### *SustainableBusiness.com News*

India is the first country to pass a corporate responsibility law - it requires larger companies to spend 2% of each year's profit on those kinds of initiatives.

The law kicks in for companies with a profit of at least \$80 million over the past three years.

It outlines 9 "Pillars" that can fulfill the requirement, one of which is "ensuring environmental sustainability," under which installing solar systems falls. This will likely incentivize more solar development because it's an area that provides businesses with a return in investment.

Demand for solar is light at the moment because the Ministry of New and Renewable Energy has delayed introducing subsidies for rooftop solar, reports CleanBiz.Asia.

India's biggest solar park:



The concept beyond the legislation is to ensure equitable, sustainable growth in India. It updates the Companies Act of 1956, the country's version of corporate law.

Some of the elements are quite progressive, according to *First Post Business*: Companies will be audited each year on these efforts and face

penalties if they don't comply.

And it establishes rules for auditors: companies must use a new auditor every five years and any given auditor can't serve more than two five-year terms; an auditor can't serve more than 20 companies; and auditors can be criminally liable if they knowingly or recklessly omit information in their reports.

As part of its rules on corporate governance, independent board members must constitute a third of the board and have term limits of five years. At least one board member must be female.

Corporations are required to disclose the difference in salaries between directors. And if companies shut down, they must pay employees two years of salary!

The law also gives more authority to the government's Serious Fraud Investigation Office, which investigates corporate fraud.

[<ReadMore>](#)

## Forthcoming Events

### Green Electronics 2013

4th to 6th November 2013

**Budapest, Hungary**

The International CARE Electronics Office is organizing the **Green Electronics 2013** workshop on Resource Efficiency in the Electric and Electronics Industry. It will take place from November 4 - 6, 2013 in Budapest, Hungary.

The European Commission and several member states have monitored the issue of critical raw materials and set different priority actions. But how did industry leaders respond to this threat? What are major sectors and players in the electric and electronic industry already doing to substitute and/or recover those critical materials? What are the trends in research and innovation? How can we collect more End-of-Life products? Are these raw materials still critical? Or has there been a fundamental change that led to declining prices recently?

These are some of the questions that will be discussed during the workshop! The workshop is expected to attract Senior business managers, product managers, design engineers and environmental experts from leading electr(on)ic and automotive companies as well as from enterprises active in the field of electricity generation and distribution from America, Asia and Europe, Management and engineering representatives from the recycling industry, component and material suppliers, chemical industry and financial institutes and also attendees from governments, public authorities, associations, leading universities and research organizations from all around the globe.

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### CCISA2013

#### International Workshop

on

#### Climate Change Impacts and Societal Adaptation

6<sup>th</sup> to 8<sup>th</sup> November, 2013

**Ajmer, Rajasthan (India)**

The international workshop “**Climate Change Impacts and Societal Adaptation**” is being organized at Department of Environmental Science Central University of Rajasthan in Ajmer, between 6-8 November 2013. This Workshop will bring together engineers, scientists, students, managers and other professionals from the climate impacts community. The workshop is being organized by Central University of Rajasthan (India) and Swedish Meteorological and Hydrological Institute (Sweden).

The CCISA2013 workshop aims to strengthen the understanding of climate change impacts and link scientific insights to policies for promoting sustainability. The workshop will look into the scientific, technical and social challenges as well as implications of climate change on sustainable development.

The themes of the workshop include Climate Variability and Change, Climate Change Impact Assessment, Uncertainty Analysis and Adaptation under climatic change.

[<ReadMore>](#)

### **ELECTRICAL AND ELECTRONIC EQUIPMENT AND THE ENVIRONMENT 2013**

**13<sup>th</sup> to 14<sup>th</sup> November 2013**

**London, UK**

The conference titled **Electrical and Electronic Equipment and the Environment 2013** is being organized by Era Technology. This conference is a regular event of the organizers and this is fifteenth conference.

The conference offers abundant networking opportunities. Meet prospective new clients at the exhibition over coffee and refreshments. Organizers have chosen Conference speakers carefully, ensuring that those attending are fully up-to-date with the ever changing face of environmental legislation and compliance.

Key players from across a wide spectrum of dominant international organizations, are expected to attend the conference. Topics covered will include REACH, WEEE, ecodesign, conflict minerals, sustainability etc.

[<ReadMore>](#)

### **Corporate Sustainability and Eco-innovations**

**18<sup>th</sup> to 19<sup>th</sup> November 2013**

**Warsaw, Mazowieckie, Poland**

The conference will take place on November 18-19, 2013 at the premises of the Kozminski University in Warsaw. It will bring together scholars from a variety of disciplinary and methodological perspectives interested in advancing research on corporate sustainability and eco-innovation. It is expected to provide a forum for business and academics to grapple with some of the most pressing problems facing businesses all over the world, and the new horizons coming from business to fill a wide range of expectations concerning sustainable development and eco-innovation.

The topics include eco-innovations: theory and practice, policy of eco – innovations, climate change management, corporate sustainability and financial markets, sustainability reporting and disclosure, sustainable strategies development and implementation, green entrepreneurship, sustainable growth, measurement of the “sustainable performance”.

[<ReadMore>](#)

*The Economic Times, Mumbai dated August 28, 2013*

Keeping with the growing need to save the environment, climate control technologies maintain temperature control and provide a cost effective system for consumers



# ENSURING ECLECTIC ENVIRONS

YASMIN TAJ

With smart and energy efficient offices and homes gaining immense momentum, climate control technologies are also becoming a crucial part of building sustainable structures. We are also facing growing environmental pressures with climate change and ozone protection and hence, there is an urgent need to create energy efficient buildings. Climate control technologies also known as HVAC (heating, ventilation, air conditioning and refrigeration) or HVAC (heating, ventilation, and air

conditioning) provide products and services for all areas of the climate control industry, including residential heating and cooling, commercial air conditioning, and commercial and industrial refrigeration. These technologies today enable homeowners and businesses to better manage their heating, air conditioning and refrigeration systems for improved control and lower energy costs. This segment also provides services that digitally control and remotely monitor refrigeration units in grocery stores and other food distribution outlets to enhance freshness and food safety.

### CLIMATE COMFORT

HVAC is the technology of indoor and vehicular environmental comfort. HVAC system design is a sub-discipline of mechanical engineering based on the principles of thermodynamics, fluid mechanics, and heat transfer. While, the invention of the components of HVAC systems went hand-in-hand with the industrial revolution, new methods of modernisation, higher efficiency, and system control are constantly introduced by companies and inventors worldwide.

The three central functions of heating, ventilating, and air-conditioning are interrelated, especially with the need to provide

thermal comfort and acceptable indoor air quality within reasonable installation, operation, and maintenance costs. HVAC systems can provide ventilation, reduce air infiltration, and maintain pressure relationships between spaces. The means of air delivery and removal from spaces is known as room air distribution.

The purpose of HVAC systems is to create acceptable indoor air quality, maintain temperature control, and to provide a system that is cost effective for consumers. HVAC systems stemmed from the industrial revolution and were created to promote higher efficiency heating and cooling systems. HVAC systems can also be used to regulate atmospheres based on humidity and temperature control as in an indoor aquarium. HVAC systems use room air distribution to deliver and remove air from different spaces.

According to Ashish Rakheja, Chairman, ACREX India, "HVAC/R is a necessity today for personal comfort, medical health, food preservation, water supply and work productivity. Homes, office buildings, industrial plants, airplanes, cars and computer technology all rely on complex HVAC/R systems to create and maintain safe, healthy and comfortable living and working environments. Many industrial, medical, technical and commercial processes also depend on sophisticated heating, cooling air

quality and ventilation systems."

### ENVIRONMENT FRIENDLY

Over the years, manufactures have tried to make HVAC systems more efficient and cost effective for consumers due to high energy costs and more consumer environmental awareness.

They have done this mainly with forced air systems that provide better heating and cooling for spaces with less energy requirements. This provides lower costs for homes and public buildings.

Rakheja points out that ventilating, cooling, and heating can provide much comfort to consumers and help reduce other problems like removing airborne bacteria, noxious chemicals associated with materials and finishing, cleaning products, and equipment that can reduce the air

quality and affect health of its occupants. "Provision of fresh air in HVAC system; better filtration media in AHUs; installing monitoring devices for CO2 levels, temperature, humidity, etc. are some of the widely used techniques that have been proved to be really useful in enhancing indoor air quality which is one of the core features of green buildings as well.

### THE INDIAN MARKET

India is seen as a growing market due to rapid urbanisation and changing lifestyle, both of which are positive signs for the construction industry, in general and the HVACR sector, in particular. To stand this market wisdom on its head, increased investments by global corporations has forced the country - and the sector - to pull itself up by its bootstraps and usher in innovation, self- and governmental regulations, embrace green technologies and assume responsibility towards reducing climate change risks.

This symbiotic relationship - perhaps born of necessity - is a sign of good health for the country and the Climate Control Technology market, and, in the long run, for the environment.

Climate control technologies or HVACR systems work in such a way as to reduce air components that are potentially unhealthy and provide more comfort where there was none before.



*The Times of India, Delhi dated August 28, 2013*

# Dilli Haat proposed over drain hits green hurdle

Richi Verma | TNN

New Delhi: Delhi Development Authority's (DDA) plan to smooth the way for building the third Dilli Haat over the Shahdara link drain has been thwarted by Delhi Urban Art Commission (DUAC). The commission has objected to a public notice issued by DDA on July 5 asking for feedback on the pro-

far-reaching adverse effects.

According to the notice, DDA proposes to change use of 27,000 sq m of the storm-water drain in Shahdara, east Delhi, from utility to commercial purposes. The notice mentions that the proposal is subject to a number of clearances from UT-TIPEC and the departments of environment, irrigation and flood control, tree-cutting, etc.

From Bisht



**HEALTH HAZARD:** DUAC opposes covering of the Shahdara drain

posal for changing land use, so that Delhi Tourism and Transportation Development Corporation can construct the new Dilli Haat after covering the drain. The commission said DDA needs clearance from various departments, including DUAC, before publishing the notice, and the change in land use should be avoided owing to

The minutes of the recent DUAC meeting list the objections. "First of all, the environmental impact assessment (EIA) of the area needs to be done. The Shahdara drain is an important drain in east Delhi and takes care of the normal water flow throughout the year and additional flow in the monsoon. Restricting the flow of the

drain may result in flooding of large residential areas, including cooperative societies, causing serious human and financial losses. Therefore, no the *nullah* should not be covered. An alternative site for the proposed haat should be found," said the commission.

DUAC has come up with an alternative plan. "DDA had proposed to connect the district centre in Mayur Vihar-I with the Akshardham area by landscaping along the *nullah*. That proposal should be revived. No cutting of trees should be done on the drain and afforestation is needed. Covering the *nullah* would disturb the natural process of treating the flowing waste water and would pose a health hazard in the area, particularly to the cooperative group housing societies," said the commission.

DUAC held that the crowding, and vehicular and noise pollution due to commercialization would compromise the quality of life for residents. Environmentalists had a reason to cheer with the DUAC intervention "We welcome the DUAC steps and hope that now DDA will seriously consider dropping its plans for covering of the drain," said Manoj Misra from Yamuna Jiye Abhiyan.

*The Economic Times, Mumbai dated August 28, 2013*

**ENVIRONMENT-FRIENDLY & ECONOMICAL**

# Clean Tech Startups Help Large Cos Trim Power Use

Energy conservation techniques provided by cos such as Light Pipe find favour with VCs as well

**SWATHIAKELLA**  
HYDERABAD

Several clean technology startups offering innovative ways to conserve electricity are signing marquee clients who are eager to trim their power bills and, in turn, receiving greater attention from venture capitalists.

"Everybody wants to cut down energy costs today," said Sekhar Nori, founder of five-year-old startup Skyshade Technologies, which has bagged a slew of large customers, including Mahindra & Mahindra, PepsiCo, ITC and TVS. The Hyderabad-based company's Light Pipe takes sunlight to dark and remote areas. The product helps companies bring down power bills by over a fifth, according to Nori, who expects revenue to more than double in the next two years to ₹25 crore.

Experts said rising demand for utilities, such as power and water, is creating a huge opportunity for such young ventures. "These solutions will fit well in the gap between demand and supply," said Abhishek Vastava, an investment manager at the Ventureeast Tenet fund that has so far invested over \$30 million in clean technology startups in India, including low-cost ATM maker Vortex and Bharat Lighting & Power.

Food and beverage maker PepsiCo, which aims to reduce fossil fuel use, is turning to renewable energy and energy efficiency products from

startups. "Our energy use per unit of production has decreased by 17.7%," said Vivek Bharati, executive director of agriculture and corporate affairs in PepsiCo India.

Viswanath Attaluri, chief operating officer at consultancy Capital Fortunes, estimates the energy efficiency market to grow 10% at an annual rate.

Sensing this demand, Dileep Patel, a real estate entrepreneur in Mumbai, turned to the clean technology sector. He co-founded EcoPower along with son Siddharth. The six-year-old company, which has customers like Larsen & Toubro and Reliance industries, expects to earn revenue of ₹4 crore in the next fiscal.

Sateesh Andra, a managing partner at Ventureeast, said the market for clean technology solutions is still nascent with a lot of headroom for growth. In Hyderabad, Vivek Subramanian, co-founder of Fourth Partner Energy, is building solar energy solutions. He teamed up with other co-founders—Vikas Saluguti and Saif Dhorajiwala—to pool in seed capital of ₹1 crore to set up the company that uses a pay-per-use model for the solar energy it generates.

With several public sector and private banks, including ICICI and Andhra bank, as its clients, the company, which was set up in 2010, earned revenue of ₹4 crore in the 2013 fiscal. Technology firms, such as Wipro and Microsoft, are also

## Green Might

Hyderabad-based Light Pipe takes sunlight to dark and remote areas

EcoPower, founded six years ago, has customers like Larsen & Toubro and Reliance industries, and expects to earn revenue of ₹4 crore in the next fiscal

Food and beverage maker PepsiCo, which aims to reduce fossil fuel use, is turning to renewable energy and energy efficiency products from startups



moving towards renewable energy. "Renewable energy contributes to one-fifth of our energy consumption," said Narayan P S, vice-president and head of sustainability at Wipro. Energy efficiency measures have helped the company reduce energy costs by 4-5% annually over the past two years.

At Microsoft, data centre cooling systems account for about 40% of the energy bill. "Due to an initiative we took, our energy consumption for the cooling systems has reduced by 400 kilowatts per month," said Ajit Kumar Varma, manager—real estate and facilities—at Microsoft India.

Arun Shenoy founder of Mumbai-based Green India Building Systems and Services, said the benefits of using energy efficiency products are usually apparent immediately. The Mumbai-based company, founded in 2010, uses technology to reduce power consumption by air-conditioning systems on large campuses.

Shenoy teamed up with co-founder Mandar Karpekar to set up the company with a seed capital of ₹65 lakh. By fiscal 2016, the company expects to clock revenues of ₹300 crore. "We have worked out company and project-specific solutions," said Shenoy.

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The Times of India, Delhi Dated August 31, 2013

# DoT for running towers on renewable energy

Pankaj Doval | TNN

New Delhi: Concerned over the widespread usage of diesel by over six lakh telecom towers in the country, the telecom department is working on running towers on renewable energy, starting with non-grid areas.

Telecom companies are estimated to be the second-biggest consumers of diesel in the country, behind only the railways. Apart from leading to high carbon emissions, diesel usage by telecom towers is also a big drain on the exchequer as the loss to the government on account of the cheaper fuel is pegged at over Rs 4,500 crore.

The Department of Telecom (DoT) has initiated projects in non-grid areas in around 20 states where they power the towers using green energy sources like solar panels and wind energy. The tests have been found to have "worked out well" and there are now plans to actively spread them to more regions, sources said.

Average fuel consumption by a single telecom tower is estimated at 8,760 litre diesel annually, assuming 8 hours of operation by diesel generator sets. The total diesel usage by the telecom tower apparatus



'GREEN TELECOM'

spread across the country is pegged at 5.12 billion litres a year. Also, the total carbon emission on account of diesel usage by the telecom towers is estimated to be around 10Mt of Carbon-dioxide (CO2).

The sources said that the Ministry of New and Renewable Energy (MNRE) has been roped in for the exercise and the government has initially started the project with state-run BSNL. "The idea is to see whether it is a sustainable model that can also be replicated. Also, we wanted to understand how reliable it will be and how it functions," a source said.

The government now plans

to involve private operators in the exercise as the DoT has already said that the usage of diesel by telecom towers has to be curbed in line with Trai's recommendations on initiating 'green telecom', which envisages that at least 50% of all rural towers and 33% of urban towers be powered by Renewable Energy Technologies (RET) by 2015.

Rajan Mathews, director general of industry lobby group Cellular Operators Association of India (COAI), said that the industry is also doing its bit to shift to cleaner sources of energy. "We are also committed to this initiative and so far we have managed to convert 5,000 towers to greener fuel. We have a target of converting around 40,000-50,000 towers on greener fuel in the coming time," Mathews said.

However, he also added that the government should ensure that there is stable power supply to the telecom towers set-up, considering that "heavy investments" will have to be made for setting up green fuel infrastructure. "We have to provide cellular service on a 24x7 basis, and there cannot be disruptions. If there are frequent power outages, we have no option but to use diesel," Mathews said.

The Times of India, Delhi dated September 01, 2013

# Deconcretization threat to greens on

TIMES NEWS NETWORK

New Delhi: Trees in many parts of Delhi continue to be in a precarious condition despite the National Green Tribunal pulling up agencies for shoddy deconcretization.

On Saturday, Suhas Borker, founder member of Green Circle

against the civic body, after which the trees had been deconcretized. "This is symptomatic of an utterly callous mindset of the agencies. We also saw that some soil was laid near the roots but deep inside there is concrete. This is how they are trying to hide the damage done to the trees," says Borker.

According to activist Padmavati Dwivedi, a tree in Sarvodaya Enclave was found to be completely choked with cement when they were conducting a tree census. The tree was later de-tiled by the corporation. But Dwivedi found that the tree has been cemented again, and this time there is hardly any space left around it. "In spite of all the hue and cry raised by activists and NGT, look at the blatant disregard for law. Why are we tormenting the trees?" she said.



Yogesh Kumar

ENVIRONMENTAL HAZARD

of Delhi, found four trees with their roots completely exposed in South Extension Part II. Contractors, who were widening the road, dug out the soil around the trees and left them without support.

These are the same trees which were completely concretized a year ago when South Delhi corporation was making a pavement. Members of the Green Circle had then filed a police complaint

The situation is particularly bad at Delhi Cantonment near Gopinath Bazaar. "Several trees have been deconcretized and left exposed. In Gujranwala, they are making a storm-water drain in A Block. While digging, they cut the roots of the trees. If there is a heavy downpour, these trees can easily fall. Trees are in a very bad shape in parts of Dhola Kuan and RK Puram too," says Rajeev Lochan, a tree activist.

*The Economic Times,  
Mumbai dated September  
02, 2013*

## GLOBAL SCIENCE



# The Pollution Cocktail Isn't Good for You



**Hari Pulakkat**

**New study says combined effect of many pollutants at safe levels can be harmful in long run**

Over the last decade, biological research has thrown up so many surprises that conventional medical wisdom is turned repeatedly on its head. One such instance happened last week, when the French National Institute of Health and Medical Research published a paper saying safe levels of pollution are not really safe in the long term. It is not that there is anything wrong with the limits set by regulators. It is that the combined effect of many pollutants at safe levels can be harmful in the long run.

This finding, which does not seem startling when stated, actually has the potential to revolutionise toxicology, or the science of toxic chemicals. A safe dose is a basic concept in toxicology, based on which regulators set limits of exposure. If there is no safe dose, all our current toxicity regulations have to be discarded. Setting new norms wouldn't be easy either, because no one would know what limits to set for each pollutant, and a zero limit is an impossible target to achieve for many pollutants.

This would worry all those who want to remain healthy and take the trouble to maintain a healthy lifestyle. There seems to be no real way of completely avoiding pollution in this world. As scientists have found out now, pollutants can enter our body in low doses — even if we wash and peel and cook our food — through what we eat and cause many metabolic issues. We also know now that air pollution can clog our arteries in the

long run. So it doesn't matter if you eat healthy, exercise well, sleep soundly and avoid stress, your environment can give you Type II diabetes or heart disease.

For some time, a few toxicologists have been arguing against the concept of a safe dose of a pollutant. Frederic von Saal, professor at the University of Missouri, has been campaigning against this concept when applied to endocrine disruptors. These are chemicals that mimic natural hormones and thus disrupt their function. Von Saal has published research that shows toxic effects, particularly to foetuses, at extraordinarily low doses of exposure of some endocrine disruptors. The most common is Bisphenol A, or BPA, one of the most widely used chemicals in the world. There is no way anybody can avoid BPA exposure at the moment.

### Virtual Models

Von Saal's work is controversial, and some toxicologists do not accept his thesis. But now it turns out that his ideas can be extended to other pollutants as well. If seemingly harmless drugs can combine in the body to produce deadly effects, there is no reason to suppose that pollutants cannot have similar effects. We are surrounded by automobile and coal plant exhausts, pesticides, plastics, arsenic and lead in water, nanoparticles and probably hundreds of thousands of other chemicals that we do not see or know about. It is a riot of pollutants.

Every year, chemists synthesise hundreds of new chemicals that did not exist before. Of course they are in low doses, but they are manufactured in large volumes when found to be useful.

Currently there is no regulation that requires each of these chemicals to be tested for human health impact before release into the environment. Such studies are also impractical and will slow down progress, if not create an impossible situation for the chemical industry. Virtual testing can make a difference, when adopted at some point over the decade. Till our virtual models improve, we could clean up the obvious pollutants. A country with sick people has no future.

*(This column looks at global science from an Indian perspective.)*

The Times of India, Delhi dated September 02, 2013

# NCR plan revised, building restrictions in forests to go

## Move Threatens Eco-Sensitive Aravalis, River Beds In 4 State

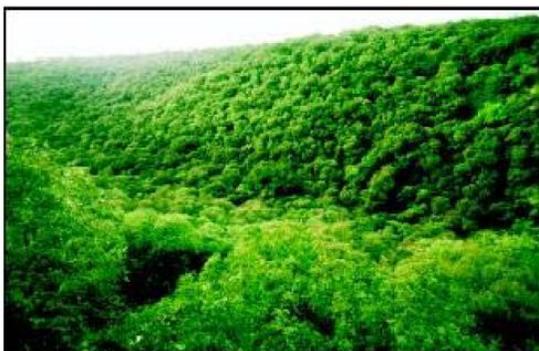
Dipak Kumar Dash | TNN

New Delhi: In a move that could deal a body blow to threatened forests and water bodies in the National Capital Region, the Haryana government has successfully got restrictions on construction activity in 'conservation zones' deleted from the revised NCR regional plan, which is in the final stages of getting notified.

If the change is notified, all four state governments in the NCR will get a much freer hand in allowing constructions in eco-sensitive zones such as the Aravalis and the Yamuna river bed. Although mandatory clearances would still be required, the earlier clause that restricted constructions in these zones to just 0.5% of the owned land — only 20 sq m in an acre — has been jettisoned.

The dropping of the restriction clause came to light after an RTI application allowed green activists to access files related to NCR plans. The original regional plan for NCR 2021 has a clause that restricts constructions for "regional recreational activities" in natural conservation zones.

Documents obtained by S S Oberoi of Mission Gurgaon Development under RTI show that the proposal to do away with this restriction was moved by the Haryana government in the 61st planning committee meeting held at NCR



**GREEN SCORE:** The design behind this move is to allow a mega tourism complex at the Mangar forest off the Gurgaon-Faridabad road

Planning Board on June 4, 2013. According to its minutes, "Financial commissioner and principal secretary, town and country planning department, government of Haryana suggested that natural conservation zone [para 17.5.3 (iv)] relating to regional/ recreational activities, restricted constructions of 0.5% may be deleted."

"The design behind this move is clearly to allow a mega tourism complex at the Mangar forest off the Gurgaon-Faridabad road, which is considered sacred by the locals. Questions were raised by the environment ministry and NCRPB on why the draft Mangar development plan did not identify the forest as a conservation zone. Now, the Haryana government has found another way of building the complex.

They will get all their other pending projects cleared after the amended NCR plan comes into force," Oberoi alleged.

Environment analyst Chetan Agrawal said that the change will have serious repercussion on the ecology of the entire NCR. "This blanket shift in planning norms will come as an advantage to all the state government to allow unlimited construction in eco-sensitive zones. The provision of identifying and protecting the eco-sensitive areas has been there since 2005 when the 2021 plan was prepared. But this has been ignored in the successive master plans by member states," he said.

Agrawal added that the change goes against the thrust of NCRPB, which has called for better planned development

for sustainability and conservation of eco-sensitive areas. Constructions in natural conservation zones will threaten the catchment areas of major Aravali lakes such as Damdama and Dhauj.

The amended regional plan has been approved by the NCRPB apex committee which includes the Union urban development minister and chief ministers of Delhi, Haryana, Uttar Pradesh and Rajasthan. The board invited public objections to the draft revised plan which ended on Friday.

Ironically, the draft plan notes with concern that green areas in NCR have declined from 4.3% in 1999 to 3.3% in 2012, a drop of 23%. The document says more areas should be brought under green belts.

The first comparative satellite-based study of change in land use in NCR had shown that between 1999 and 2012, the region lost 32,769 hectares of green areas and 1,464 hectares of water bodies. While Uttar Pradesh recorded the maximum loss at 17,386 hectares, Haryana lost 8,716 hectares.

NCRPB's nod for planning by states has become crucial after the Noida Extension episode where housing projects were stalled simply because the board had not approved the UP government's plan. The Allahabad High Court had cited this as the reason why it had put a stay on the construction

The Times of India, Delhi dated September 03, 2013

# Birds take flight as realty boom jolts Okhla sanctuary

## Highrises, Malls, Traffic Along The Park Drive Away Winged Visitors Besides Replacing Trees In Buffer Zone & Degrading Rich Wetlands

Jayashree Nandi | TNN

Okhla Bird Sanctuary is in danger. At least 10 realty projects within a kilometre radius of its Noida boundary might just sound its death knell. Highrises, flyovers, malls and heavy traffic on road on both sides of the ailing sanctuary have not just driven away the winged visitors, but also destroyed the microhabitat that could have been an excellent groundwater recharge system as well as the city's lung.

The projects have come up on the potential eco-sensitive zone (ESZ) of the sanctuary without environmental clearance or the wildlife board's permission, exposing the collusion between realty giants and the government. When TOI visited the sanctuary, it found a strip of small trees



Photos: Prem Bhatt



on the Noida side, which could hardly protect the fragile habitat of the sanctuary from the pollution caused by the projects that have encroached upon the eco-sensitive zone occupying 10km radius, as defined by the Supreme Court. The Delhi side is absolutely bare. The boundary

wall towards the Jamia Nagar side in Delhi has been broken up in places to dump waste. Uttar Pradesh is one of the many states that have not notified the ESZ around its national parks and sanctuaries, leading to degradation of the Okhla sanctuary's rich wetland ecosystem. Data with the Noida Authority shows there are 53 projects in various stages of construction within the ESZ.

Birder Nikhil Devasar, a regular at the sanctuary, says over 150 species no longer visit the park. "The sanctuary is a shadow of its former self. Mayawati's palace on the boundary has replaced thousands of trees. Now, realty projects have completely taken over the buffer zone," he says. Nikhil recalls spotting more than 50,000 ducks six to seven years ago; now there are less than 5,000. While the staff doesn't share the number of birds electrocuted by the high-tension power lines across the park, it admits the wires have obstructed their pathway. Species like Redcrested Pochards, Ferruginous Pochards, Bar-headed Geese, Greater Flamingos and Oriental Hobbies are said to be missing.

"The bird park is the common target. We had to stop Noida Authority from constructing a building here a few years ago. The officials want to adorn the area with exotic tree species. We explain to them that the sanctuary has to be wild, not necessarily beautiful," says a staff member. Despite restricted entry, cars and bikes can be seen roaring through the area.

"Wetlands are crucial for areas in need of a groundwater recharge system, such as the NCR, as they absorb flood water. They are also a source of livelihood. The encroachments points to a conspiracy between the state government and the environment ministry. An independent probe is needed," says Himanshu Thakkar of South Asia Network on Dams, Rivers and People.

Activists and bodies like Bombay Natural History Society (BNHS) had suggested that the sanctuary be classified as a Ramsar site to allow for international scrutiny, but neither of the two states paid heed. Ramki Sreenivasan, conservationist and birder, says wetlands across the country are neglected as they are often on prime property unlike forests. "The UP government could create an authority on the lines of the lake development authority in Bangalore for protection of wetlands."

**SOME RARE BIRDS SEEN HERE**

- Oriental Pygmy Goose, Black-billed, Blue-tailed Be-ender, Greater Scaup, Common Golden Eye, Yellow-billed Woodpecker, Alexandrine Parakeet, Spotted Red Shank, Scimitar Wren, Egyptian Vulture, Bristle-billed Woodpecker, Large-headed Woodpecker, Black Francolin, Demise die Crane

**More than 320 bird species** sighted, of which 20 are common resident water species, 44 common resident woodland species and 43 migratory ones. According to birders, only 150 species can now be seen here

About 10 species of threatened birds have been sighted, including critically endangered and nearly threatened species

**WHAT ARE WETLANDS?**

According to Ramsar Convention, wetlands are areas where water is the primary factor controlling the environment and the associated plant and animal life

Land falling within 1.0 km of the boundaries of national parks and sanctuaries forms the eco-fragile zone. Eco-sensitive zones are needed to protect biodiversity, strengthen the buffers as well as provide corridors within the protected area network. They also check the adverse effects of industrialisation and unplanned development

**WHY OKHLA BIRD SANCTUARY SHOULD BE A RAMSAR SITE**

Wetlands are not just of international importance for Ramsar Convention to help in their conservation. It is enough for a state to be a contracting party for establishing the legislative and management framework for protection. It has been instrumental in conserving wetlands abroad

**Was formed due to creation of Okhla barrage and is among the country's 466 important bird areas**

*The Economic Times, Delhi  
dated September 04, 2013*

# Adani Port Jumps Green Light, Fined ₹200 Crore

**OUR BUREAU  
NEW DELHI**

The environment ministry has slapped a ₹200-crore fine on the Adani Group's Mundra Port and Special Economic Zone for damaging mangroves, creeks and the local environment at the project site. The company's shares fell 6.4%.

The penalty was recommended by a committee headed by Sunita Narain, director general of Centre for Science and Environment, set up by the environment ministry. The report was submitted to environment minister Jayanthi Natarajan in April. No immediate comment was available from the Adani group. Officials said a part of the project could face suspension after a more detailed investigation into the alleged violation of environmental clearance norms. The money from the fine will go into an environment restoration fund for the area.

The committee reported that the Adani Group violated environmental norms in the country's largest private port in Mundra and special trade zone that it runs in the Kutch district.

The five-member committee had visited the site, where it found widespread destruction of mangroves—75 hectares of mangroves have been lost in Bocha Island, which was declared as a conservation zone under the envi-

ronmental clearance conditions.

"The company has not taken precautions to guard against blocking of creeks because of construction activities; satellite imagery shows signs of deterioration and loss of creeks near the proposed North Port. It has not taken stipulated measures to ensure that the channels that bring large volumes of seawater for use in the thermal power plant and then discharge as well as the storage tank is lined so that there is no chance of salinity contamination in groundwater," the report stated.

The committee charged the company with being less than serious about reporting on compliance with the conditions set at the time of clearance. "The committee has found that there have been instances to circumvent statutory procedures by using different agencies, at the centre and state, for obtaining clearances for the same project. The public hearing procedure, which is a critical part of project clearance and helps to understand and mitigate the concerns of local people, has also been bypassed on one pretext or another," said Narain.

This is not the first time that Adani's Mundra project has run into trouble. In December 2010, the ministry issued notice to Mundra project for violating the Coastal Regulation Zone notification and not meeting the conditions of the environmental clearance. The ministry had said that it would cancel the environmental clearance for the West and North port and the township project, as well as dismantle all reclamations carried out in the mangrove area. The ministry also suggested that Mundra foot the bill for afforestation of an extra 1000 hectares in and around the project site.

## Green Sees Red

**Fine imposed by:  
Sunita Narain-  
headed committee set up by  
environment ministry**



**Reasons: Damaging mangroves, creeks and the local environment at the project site**

**Inspect: Part of the project could face suspension after a more detailed investigation**



**What report says?**

**No precautions taken to guard against blocking of creeks because of construction**

**Signs of deterioration and loss of creeks near proposed North Port**

**No steps to ensure that channels that bring seawater and then discharge as well as storage tank is lined so that there is no chance of salinity contamination**

**Flashback**

**Dec 2010**

**Ministry issues notice to Mundra project for violating Coastal Regulation notification and not meeting green clearance norms**

**Ministry says it would cancel nod for West and North port and the township project, as well as dismantle all reclamations carried out in mangrove area**

**Feb 2011**

**Ministry directs Adani not to undertake any further construction**



*The Times of India, Delhi  
dated September 04, 2013*



# Meteor hit may have led to dawn of civilization

It Caused Abrupt Climate Change 12,900 Years Ago, Stirring Far-Reaching Effects On Animals & Humans

Washington: A cataclysmic meteor impact in Canada about 12,900 years ago may have been the trigger for the dawn of civilization on Earth, researchers, including an Indian-origin scientist, have found.

For the first time, a dramatic climate shift that has long fascinated scientists has been linked to the impact in Quebec, Canada of an asteroid or comet by Dartmouth College researchers and their colleagues.

The event took place about 12,900 years ago, at the beginning of the Younger Dryas period, and marks an abrupt global change to a colder, dryer climate, with far-reaching effects on

both animals and humans, the scientists say.

In North America the big animals, including mastodons, camels, giant ground sloths, and saber-toothed cats, all vanished, researchers said. Their human hunters, known as the Clovis people, set aside their heavy-duty spears and turned to a hunter-gatherer subsistence diet of roots, berries, and smaller game.

"The Younger Dryas cooling is a very intriguing event that impacted human history in a profound manner," said Mukul Sharma, a professor in the department of earth sciences and one of the authors of the study. "Environmental stresses

may also have caused Natufians in the Near East to settle down for the first time and pursue agriculture," said Sharma.

That these powerful environmental changes occurred is not in dispute, but there has been controversy over why they happened. The classical view of the Younger Dryas cooling interlude has been that a surge of meltwater from the North American ice sheet was behind it all.

However, Sharma and his colleagues have discovered conclusive evidence linking an extraterrestrial impact with this environmental transformation.

The report focuses on spherules, droplets of solidified mol-

ten rock expelled by the impact.

The spherules in question were recovered from Younger Dryas boundary layers at sites in Pennsylvania and New Jersey, the layers having been deposited at the beginning of the period.

The geochemistry and mineralogy profiles of the spherules are identical to rock found in southern Quebec, where Sharma and his colleagues say the impact took place.

"What is exciting in our paper is that we have for the first time narrowed down the region where a Younger Dryas impact did take place, even though we have not yet found its crater," said Sharma. ■



DEEP IMPACT

*The Times of India, Lucknow dated September 05, 2013*

# ‘UK keen on green projects in UP’

TIMES NEWS NETWORK

**Lucknow:** Highlighting the UK government’s keenness to work in the clean energy sector in India, junior minister in UK government’s department of energy and climate change Baroness Verma has said the country would particularly like to take up more collaborative ventures in UP.

Verma, who is also a member of the House of Lords, visited Tanda village of Jagdishpur block in Amethi on Wednesday with Dr RK Pachauri, director general of The Energy and Resources Institute (TERI) on Wednesday. The village is a TERI intervention site. They inaugurated a solar micro-grid connection (SMG) for provision of

household lighting and forced draft improved biomass cooking stoves for 20 households at the village.

India and the UK are working together on an innovative project to provide improved cooking stoves and economic opportunities to thousands of

## TERI INITIATIVE

women, Verma said.

“How people use energy and how it changes their lives is interesting. During my visit to the village I saw how the programme is driven by locals,” she said. The team visited the village as part of the department of international development (DFID) and TERI’s ‘clean energy access partnership’ initiative.

Making a mention of the petroleum ministry’s recent suggestion to shut down petrol pumps during the night, Pachauri said, “Why is this being suggested? This is because India is finding it burdensome to meet the energy demand. We can use more and more of renewable energy resources which we have in abundance.”

In 2008, TERI initiated ‘Lighting a Billion Lives (LaBL)’ campaign. Under it, close to 100,000 solar lanterns are already in use, benefiting nearly 1.3 million lives across the country. UP is one of the key states for both the

lighting and cooking initiatives of TERI. Under LaBL, close to 400 villages have been covered under the state, touching more than 330,000 lives. Similarly, the initiative on cooking stoves has reached out to close to 2131 households in the state. The projects focus on women and children who are primarily impacted by indoor air pollution from traditional cooking stoves and kerosene-based lamps for lighting. “It is impressive how women have taken the lead in Tanda in this area,” said the UK minister.



# ‘Run, Don’t Walk’: The School that Gets Pupils to Generate Electricity

Special floor tiles produce sustainable energy when pupils pound them

**RICHARD GARNER**

In a reversal of normal classroom rules, students have been encouraged to run and jump around a corridor at a Kent school. It’s because the corridor has been laid with special kinetic tiles and every footstep on them creates sustainable energy.

“The students really enjoyed trying to give them a right bashing — running around and jumping up and down on them, said Matthew Baxter, headmaster of the 1,200-pupil Simon Langton Boys’ Grammar School in Canterbury.

Over the period of a year, the energy expected to be generated from the 12m of tiles is expected to be enough to fully charge 853 mobile phones; power one mobile for two-and-a-half years; keep a light bulb illuminated for more than two months or power an electric car to drive seven miles.

The tiles are the brainchild of Laurence Kemball-Cook, a former pupil at the school, who is now chief executive officer of his own company, Pavegen Systems. “Imagine if children running, playing and walking in all schools in the UK could help power the lights in their school corridors or the applications in their classrooms.”

The tiles are on the route pupils take to

their design and technology lessons and will hopefully concentrate their minds on issues such as promoting sustainable energy as they approach the classroom. “What we’re doing here is something quite different and quite creative and innovative,” said Baxter.

“We want to create the mathematicians, scientists and engineers of the future — not just teach the national curriculum and exam syllabuses. That’s not the kind of approach we want.”

“Our students spend about a third of their time going outside and beyond the curriculum, looking at the kind of research they might be able to do in universities and beyond.”

**During busy times at the school, the tiles are expected to generate a peak of about 100 watts of power**

Students who enroll at the school are encouraged to see their first year as the start of a 10-year course which ends with a university degree. The tiles were originally piloted at the school and in the Science Museum — and also trialled at the Paris marathon and the Olympic Games — before their installation at Simon Langton. During busy times at the school they are expected to generate a peak of about 100 watts of power.

They are not Laurence Kemball-Cook’s only invention — he is also renowned for developing a dance floor which can be used at music festivals. It allows the dancers to charge their mobile phones while on the dance floor.

**The Independent**

*The Economic Times, Delhi dated September 06, 2013*



*The Times of India, Lucknow dated September 06, 2013*

# STP and water recycling made mandatory

TIMES NEWS NETWORK

Lucknow: UP Housing and Development Board has decided to make installation of sewer treatment plant and water-recycling project mandatory in all future housing projects on and above 2 acre land. The recycled water may be used for multiple purposes like irrigation of parks, watering garden plants, toilet systems, cleaning of vehicles, etc.

Earlier, a lot of potable water was wasted in all this. Once water recycling technique is implemented, wastage of water will be controlled. M.K.S. Sundaram, Housing Commissioner said, "The growing population has resulted in growing demand for water. Since water resources are limited, people have started exploiting groundwater which is dangerous for

future." In the first phase, the technology would be adopted in Vrindavan Yojna on Rae Bareilly Road, Avadh Vihar Yojna on Sultanpur Road, Siddhartha Vihar and Mandola Vihar Yojna of Ghaziabad. Officials said the system would help create awareness among people about conserving water. For example, in sector 10C of Vrindavan Yojna number 2, a sewage treatment plant is being developed on 16.67 acre land of capacity 75 MLD to treat sewage discharge flowing from Yojna number 2, 3 and 4 of the project.

The board said the state government was focusing on providing affordable housing to people. "Accordingly, construction of EWS (economically weaker section) and LIG (lower income group) units is our top priority", said the commissioner. The board has set a target to build about 8,000 flats

## Registrations begin

The housing board has recently started registration process for five housing projects in Lucknow and Ghaziabad namely Everest and Arawali Enclave in Vrindavan Yojna, Mandakini, Bhagirathi, Alaknanda, Nandini and Gangotri Enclave in Avadh Vihar Yojna on Sultanpur Road in Lucknow.

(4,000 units each under EWS and LIG) for economically weaker sections in this year.

Normally, housing projects don't provide community halls or lawns to the EWS and LIG people for arranging family functions/friends gathering. For the first time, housing board has decided to make 'Baradaris' (lawns with 1-2 room sets) in its projects for

these people. The Baradaris would have seating arrangement for around 200 people and the users may hire it on minimum maintenance expenses along with electricity charges.

Additional housing commissioner, Rudra Pratap Singh said, "In the first phase, the Baradaris would be built for EWS and LIG in Vrindavan and Avadh Vihar Yojna of Lucknow and Siddhartha Vihar Yojna of Ghaziabad. The second phase would cover all other affordable housing projects in the state."

In the current financial year, the board has launched registration of 12 new housing schemes offering 5,091 units across the state until last month. Districts in which these projects are being built include Lucknow, Saharanpur, Kanpur, Ghaziabad, Moradabad, Kangra and Chandauli.

*The Times of India, Delhi dated September 09, 2013*

# Man charged with polluting Yamuna

TIMES NEWS NETWORK

New Delhi: A trial court has charged the owner of a dyeing unit in Sitapuri with releasing untreated effluents in drains leading to the Yamuna, 13 years after a complaint was filed against him.

Additional chief metropolitan magistrate Devendra

## DYE UNIT OWNER

Kumar Sharma charged the owner of the unit in Old Delhi under various provisions of the Water Act while holding that prima facie it was established that he was discharging untreated effluent in drains in violation of SC guidelines and the Water Act.

"...this court is of the opinion that there is suffi-

cient material on record for framing of charge under sections 24, 25 and 26 (Prohibition on use of stream for disposal of polluting matter and prior consent to establish or operate any such industry)... of Water Act," the court said.

The order came on a complaint filed 13 years ago by Delhi Pollution Control Committee against Siyaram Dyeing run by accused Shyam Sunder Saini. DPCC counsel M S Jitender Gauba told the court that after the SC ban on release of untreated waste in Yamuna, a vigilance squad formed by the Delhi government inspected the unit.

The unit was also found operating without the DPCC's consent. An order to close the unit was passed and a complaint was made.

# Stay on tree cutting in Mangar

New Delhi: The National Green Tribunal has temporarily stayed cutting of trees in Mangar village, Aravali hills, on Friday. It was hearing a plea for withdrawing permission given by authorities for non-forestry activities.

A bench headed by Justice S N Hussain issued notices and sought replies of the ministry of environment and forests, Haryana government, directorate of town and country planning, Faridabad, and the Haryana

forest department by September 19 on non-forest activities in the area.

"Till further orders let there be an interim order restraining respondents from undertaking any non-forestry activities including cutting trees in the areas covered under this application," the bench said. The order came on the plea of Haryana Welfare Society which opposed construction of walls and fences around one acre of forest area for agricultural purposes. **TNN**

The Economic Times, Delhi dated September 10, 2013

# SC Pulls Up Govt for Failure to Set up Green Regulator

**SAMANWAYA RAUTRAY & URMIA GOSWAMI**  
NEW DELHI

The Supreme Court admonished the government for failing to set up an independent environmental regulator, which the prime minister promised to set up in 2011. The court has asked the environment ministry, which currently has all regulatory powers, to give an explanation in four weeks.

"You want to retain all power with the ministry (of environment and forests). You should think of yourself as a policy-making ministry, confine yourself to making policy. The MoEF fears that this will strip it of any discretionary powers," Justice Patnaik said in a not-so-veiled dig at the ministry.

The matter was raised by amicus curiae Harish Salve who told the court the environment ministry had failed to set up a regulator despite being directed to do so in the 2011 Lafarge judgement. "No one has challenged that judgement; no one has come in for review," Salve said.

"We are of the view that under Section 3(3) of the Environment Protection Act, 1986, the central government should appoint a national regulator for appraising, projects, enforcing environmental conditions for approvals and to impose penalties on polluters," the Lafarge judgement states.

During the course of the Lafarge hearings, Attorney General GE Vahanvati told the court that the ministry would set up an independent regulator for professional appraisal of projects. In 2011, the environment ministry circulated a draft proposal outlining the contours of the proposed regulator; the National Environment Assessment and Monitoring Authority (NEAMA), for inter-ministerial comments before putting it up for Cabinet approval.

What made the government's situation more embarrassing was the fact that in July 2011, prime minister Manmohan Singh had announced his administration's intention to establish an independent regulator. "Even the

prime minister said that he would put in place a national (green) regulator," Justice AK Patnaik, who was heading a three-judge special forest bench, observed. "Where's the regulator?" he asked Solicitor General Mohan Parasaran.

The prime minister had said that the proposed regulator "could lead to a complete change in the process of granting environmental clearances" as it would be "staffed by dedicated professionals, it will work on a full-time basis to evolve better and more objective standards of scrutiny".

Officials said changes in the ministry in mid-2011 delayed the proposal, and the situation "was further complicated by the paucity of funds". Parasaran acknowledged that the government should have implemented the judgement within six months and filed a compliance report. The Solicitor General sought to stem off the criticism by drawing attention to the National Green Tribunal, which was set up in 2010 and "has since been functioning more vigorously".

Salve contested the government's position saying the green tribunal was an appellate body and could not frame rules and regulations the way an independent regulator could.

Between 2009 and mid 2011, the environment ministry held a series of consultations to work out the structure of the proposed regulator. This was one of the priorities listed by former environment minister Jairam Ramesh soon after he took office. Work on the proposed regulator began as early as August 2009, when the prime minister stressed on the need to set up such a body.

The proposed NEAMA as outlined in the inter-ministerial note was to be set up by a notification under Section 3.3 of the Environment Protection Act, 1986, with appropriate changes to the Environment Impact Assessment notification, 2006, and the Coastal Regulatory Zone, 2011.

The new system intended to separate the functions of the appraising and monitoring from that of approval — the NEAMA would be in



**We are of the view that under Section 3(3) of the Environment Protection Act, 1986, the central government should appoint a national regulator for appraising, projects, enforcing environmental conditions for approvals and to impose penalties on polluters**

**SC JUDGEMENT**

charge of appraisal and monitoring, the ministry would continue to be the approval granting authority.

# CSR won't count employee benefits

## Cos Asked To Set Aside 2% Of Avg Net Profits Of Last 3 Yrs As Seed Capital

**Lubna Kably & Pankaj Doval** | TNN

Mumbai/New Delhi: Companies which were hoping to fulfill their corporate social responsibility (CSR) obligations, introduced by the recently enacted Companies Act, 2013, through the easy route of donations or activities that would exclusively benefit their employees and families are in for a rude shock.

The ministry of corporate affairs (MCA), which has released draft rules for the Companies Act, 2013 on Monday for public comments by early October, has asked corporate houses to set up a corpus, which will have 2% of the average net profits for the preceding three years as the seed capital. Every year, any income earned on the corpus and surplus arising out of CSR activities will be added to increase the size of the kitty and ensure that companies don't add these earnings to their bottomlines.

The Companies Act, 2013, has called upon companies having a net-worth of Rs 500 crore or more; or a turnover of Rs 1,000 crore or more; or a net profit of Rs 5 crore or more to have a CSR spend of at least 2% of their average net profits of past three years.

While providing an indicative list of activities that are eligible for the CSR spend, the

### SOCIAL CALL

- ▶ "Net Profit" means net profit before tax and shall not include profits arising from branches outside India
- ▶ Activities that may be considered as CSR spend include eradicating extreme hunger and poverty, promotion of education, promoting gender equality and empowering women, reducing child mortality and improving maternal health, environmental sustainability, and social business projects
- ▶ Contribution to PM's National Relief Fund or any other fund set up by the central or the state governments for socio-economic development and relief will be counted as CSR
- ▶ Tax treatment of CSR to be in accordance with the IT Act as may be notified by CBDT



- ▶ Only CSR activities undertaken within India will be taken into consideration
- ▶ If company fails to spend the 2% on CSR, it has to provide reasons for the same
- ▶ Companies may conduct CSR programmes through trusts & societies not set up by itself

draft has proposed that contributions to the Prime Minister's National Relief Fund and other Central or state government funds will continue to be eligible for CSR activities. The rules require that "CSR activities may generally be conducted as projects or programmes (that do not include normal business activities)." CSR committees of each corporate entity covered by these provisions are required to specify the projects and programmes that will be undertaken. In addition, the chapter on guiding principles contained in the draft rules, emphasize the need to adopt business process and strategies.

The bottomline outlined in the guiding principles is: CSR is not charity or mere donations.

"At the same time, the MCA has not set down the ratio, if any, which a company could follow for making donations vis-à-vis engaging in CSR activities. This was earlier in the pipeline," says a industry source close to the developments. The draft rules also specify that only activities that are not exclusively for the benefit of employees of the company or their family members will be considered as CSR activities. In other words, if a company provides elementary education for children of its plantation workers, such ex-

penditure would not be eligible CSR spend.

Some of the draft rules will make it easier for companies to meet their CSR obligations. Companies are permitted to collaborate or pool resources with other companies for undertaking CSR activities. Companies can also engage in CSR activities through external agencies — such as NGOs. However, in such cases, the NGO must have an established track record of at least three years of carrying on activities in those areas.

CSR programmes by a company may also focus on integrating business models with social and environmental

priorities. For instance, a company that has set up a vocational training centre can sell the products made by such centre. "It may be possible to utilize manufacturing by-products for making items such as soaps," illustrates a CSR consultant. The only caveat in this case is that the profits if any, will not be part of the business profits of the company.

Several companies have set up foundations that engage in CSR activities. When the Companies Act came into being, there was apprehension that activities of the foundation would not count towards CSR spend. Companies can now via the foundations set up by them engage in CSR activities. A monitoring mechanism will need to be in place. The draft rules specify that the tax treatment of CSR spend will be in accordance with the IT Act, and as may be notified by the CBDT. The list of activities eligible for CSR was specified in the Schedule to the Companies Act. These include eradicating hunger and poverty; promotion of education, women empowerment; reducing child mortality and improving maternal health; environmental sustainability; employment enhancing vocational skills or contributions to central or state government set up funds, including the PM National Relief Fund.

The Times of India, Delhi dated September 10, 2013

*Deccan Chronicle, Hyderabad  
dated September 11, 2013*

## Collection centres for pollution-free immersion

DC CORRESPONDENT  
HYDERABAD, SEPT. 10

With an aim at deterring pollutants being dumped into the highly-polluted Hussainsagar lake during the Ganesh festival, special puja material collection centres have been set up for immersion of Ganesh idols.

Devotees with small clay or Plaster of Paris Ganesha idols can hand them over at these centres for immersion.

The HMDA's Buddha Purnima Wing, as part of the "Clean Hussainsagar" drive, has established four centres on the fringes of Tank Bund where citizens performing immersion rituals at the water body can hand over the remains without polluting the lake.

R.P. Khajuria, member of the Buddha Purnima project, said that small Ganesh idols could be handed over at these centres other than puja material like flowers, pictures, food, bottles and plastic covers. Several

freshwater tubs will be installed and as per rituals, the idols will be immersed and taken out after a brief while. Clay idols which melt quickly will either be given to the citizens or kept back.

Idols made of Plaster-of-Paris, too, will be handed over to the party if interested.

The material will later be segregated with plastic covers being taken to the Greater Hyderabad

Municipality Corporation dumping yard while the rest will be dumped in the Sanjeevaiah Park. Such material will be deposited in a huge pit to decompose and after a certain period, will be used as fertilisers.

*The Times of India, Delhi  
dated September 12, 2013*



# 1/3rd of world's food is wasted

It Costs Global Economy \$750Bn/Yr, While 870M People Go Hungry Daily: UN

Kounteya Sinha | TNN

London: One-third of food produced worldwide is wasted annually while 870 million people go hungry daily, a Food and Agriculture Organization (FAO) report said on Wednesday. The wastage costs global economy around \$750 billion and does not include fish and seafood wasted.

"We simply cannot allow one-third of all the food we produce go waste or be lost because of inappropriate practices, when 870 million people go hungry every day," said the report released in Rome. It estimated that 1.3 billion tonne food was wasted annually.

"It is expected that in less than 37 years, another two billion people will be added to the global population. How on earth will we feed ourselves in the future?" the report said.

Food produced but not eaten annually added 3.3 billion tonnes of greenhouse gases to the atmosphere. "Produced but uneaten food occupies 30% of the world's farmland," said the report, the first to

### CHEW ON THIS

Around **1.3 billion tonnes** of food wasted every year

Food that is produced but not eaten guzzles up a volume of water equivalent to the annual flow of Russia's Volga river

► In the industrialized world, much of the waste comes from consumers buying too much and throwing away what they do not eat. In developing countries, it is mainly the result of inefficient farming and a lack of proper storage facilities



**1.4 billion tonnes** of land or 28% of the world's agricultural area is used annually to produce food that is lost or wasted

► Carbon footprint of wasted food is equivalent to 3.3 billion tonnes of carbon dioxide per year; if it were a country, wasted food would be the world's third biggest emitter after China and the US

analyze impact of global food wastage from an environmental perspective. It has looked specifically at its consequences for the climate, water, land use and biodiversity.

Other key findings include that annually food produced, but not eaten guzzles up a volume of water equivalent to the annual flow of Russia's

Volga River or three times the volume of Lake Geneva.

Similarly, 1.4 billion hectares of land — 28% of the world's agricultural area — is used annually to produce food lost or wasted. "All of us — farmers and fishers, food processors and supermarkets, local and national governments, individual con-

sumers — must make changes at every link of the human food chain to prevent food wastage from happening in the first place, and re-use or recycle it when we can't," said FAO director-general Jose Graziano da Silva.

Around 54% of the world's food wastage occurs upstream during production, post-har-

vest handling and storage, said the study. Forty-six percent of it happens downstream, at the processing, distribution and consumption stages.

As a general trend, developing countries suffer more food losses during agricultural production. Several world food wastage "hot-spots" stand out in the study. Wastage of cereals in Asia is a significant problem, with major impacts on carbon emission and water and land use.

Rice wastage is particularly noticeable, given its high methane emissions combined with a large level of wastage.

Fruit loss contributes significantly to water waste in Asia, where mainly China has been responsible for staggering amount of food wastage.

Similarly, large volumes of vegetable wastage in industrialized Asia, Europe and South and South East Asia translates into a large carbon footprint.

A British parliamentary panel recently described food wastage as a monumental global problem and said 30-50% of it was being wasted.

*The Times of India, Delhi  
dated September 12, 2013*

# VK waste division helps ragpickers

## RWA Initiative Reduces Dump, Collectors Prepare Manure Out Of Garbage

Risha Chittlangia | TNN

New Delhi: Till a few months ago, the garbage dump near a park in B4 Vasant Kunj used to overflow with waste. Residents used to avoid the park as the stench was unbearable. But a small initiative by residents has not only transformed the area but also helped ragpickers earn a decent livelihood.

In March, the residents welfare association provided each participating household a pair of different colour dustbins to segregate waste. "We asked them to segregate dry and wet waste. The ragpickers, engaged by the RWA, were asked to collect the waste from every house in different trolleys," said Anjana Dutta, the RWA president.

Close to 60% households in this upscale colony are participating in the initiative, and the RWA is optimistic that by the end of the year all houses will be part of it. "We are aggressively promoting it. Through this we can achieve dual targets: do our bit for the environment and help rehabilitate ragpickers," said Aparna Verma, its secretary.

This simple exercise has made a big difference. The load at the dump has come down considerably and residents say it doesn't stink even if corporation trucks don't come for a week. With the help of Society for Promotion of Youth and Masses (SPYM),



**THE PROJECT**

Residents are given bins of two different colours to segregate dry and wet waste at source

Dry waste includes paper, cardboard, bottles and plastic bags. It's sold in market by ragpickers

The biodegradable waste is used to prepare manure through vermicomposting & natural composting

Ragpickers, roped in for door-to-door collection of garbage, separately collect biodegradable and dry waste

The NGO is helping ragpickers set up a nursery in the residential society in which they will grow chillies, aubergines, tomatoes and mint

### KNOW YOUR WASTE'S WORTH

With municipal corporations having failed to ensure segregation of waste at source, residents of Vasant Kunj, along with an NGO, started a unique project for effective utilization of local waste

Ragpickers earn **Rs 80 per month per household** for collecting waste

Number of households participating in this project: **85-90** (SPYM started this project in B4 colony of Vasant Kunj which has close to 170-180 houses)

### BENEFITS OF THIS INITIATIVE

Less than **45-50%** of total waste generated per day is dumped at the dhalao

The dhalao **doesn't stink** as it doesn't have putrefying waste

Residents get **four potted vegetable plants**. They can buy manure from the nursery at low cost

This helps ragpickers stay away from drugs and crime

Ragpickers trained in gardening

Earthworms reared for sale

Income of ragpickers has almost doubled



an NGO which works for rehabilitation of drug addicts, residents are now preparing manure through vermicomposting and have set up a small nursery—managed by ragpickers—where they are growing chillies, aubergines, tomatoes and mint in pots. These plants will be given to residents taking part in the initiative.

Rajesh Kumar, executive director, SPYM, said through this initiative, ragpickers didn't have to spend hours segregating waste and are able to get good money by selling dry waste. They are also given skill-based training.

For Ramzan (35), a ragpicker, life has changed completely in the last few months. Earlier, he used to spend al-

most the entire day segregating waste. "Now I have a team involved in waste collection and management. Our income has increased and we have learnt something new like vermicomposting. We also grow worms here," he said.

For long, various civil society groups have been trying to bring ragpickers into mainstream. But due to stringent

rules and civic agencies' half-hearted approach towards waste segregation, it could never be done. Kumar said a majority of ragpickers, mostly boys, are often victims of drug abuse and get involved in petty crimes.

The initiative has got support from other RWAs in Vasant Kunj which are ready to replicate the model.

*The Economic Times, Delhi  
dated September 13, 2013*

# Centre, Wind Firms Team Up Against States



**SHREYA JAI**  
NEW DELHI

The central government has teamed up with wind energy producers in their regulatory battle against states that are not meeting their obligation to fulfil a part of their energy needs from renewable sources.

The ministry for new and renewable energy has asked the Appellate Tribunal for Electricity to allow it to be a party, or 'implead' in the case filed by wind energy producers against all 28 state regulators, the Forum of Regulators and the central electricity regulatory commission (CERC).

"We have impleaded MNRE as a participant in this case because it seems to be the only way to enforce RPO (renewable purchase obligation) on the states, who are not meeting their targets year on year," said Alok Srivastava, joint secretary in the ministry.

He said the ministry had written to all the state power utilities, power distribution companies several times to comply by their renewable purchase obligations. "We now wish to take a stricter route," he said.

The ministry has written to the tribunal and the existing petitioners in this case, Indian Wind Energy Association and Indian Wind Turbine manufacturers Association (IWTMA) to include them as one of the petitioners.

The two associations submitted to the tribunal in January that all the state commissions had failed to implement the RPO regulation.

"State commissions across the country, in discharge of their obligations under Electricity Act, 2003 have notified the Renewable Purchase Obligations Regulations. However, most of the state commissions are failing to discharge their obligations under the Act in true letter and spirit," said the submission to APTEL. RPO, launched in 2010, makes it obligatory for distribution companies, open-access consumers and captive power producers to meet part of their energy needs through green energy. The obligation to buy solar power for all states, ranges from 0.25% to 1.90% of their requirement. The obligation to buy renewable power from other sources is in a

larger band of 2.5% to 10%.

In the three years since this regulation was introduced, none of the states have fulfilled their obligations. Last year, only solar power-rich states such as Gujarat and Rajasthan were the only ones to achieve their solar RPO targets. "The wind power producers have also not been paid by utilities for months. In Tamil Nadu alone, the payment is delayed by 15 months," IWTMA secretary general DV Giri told ET. The petitioners also expressed their concerns over state commissions' move to relax the targets by either permitting the obligated entities to carry forward their obligation or relinquish the liability all together for certain years.

The Times of India, Delhi dated September 13, 2013

The Times of India, Delhi dated September 14, 2013

# 50 of world's top 500 firms worst polluters: Study

## Behind 73% Of Greenhouse Emissions

TIMES NEWS NETWORK

New Delhi: Fifty of the 500 biggest listed companies in the world account for emission of 73% of 3.6 billion metric tonnes of greenhouse gases (GHG), says a report that was released on Thursday. And, these emitters primarily operate in energy, materials and utilities sectors across the globe.

Alarming, the companies' emission had risen by 1.65% to 2.54 billion metric tonnes over the past four years, contrary to popular perception that the intervening global recession had reduced carbon footprints of large corporations.

The finding is the part of CDP — formerly known as Carbon Disclosure Project — Global 500 Climate Change Report 2013. CDP, an international NGO that works with market forces, including 722 institutional investors, has co-written the report with global services firm PricewaterhouseCoopers (PwC).

The report's timing assumes significance as experts from across the globe are lending finishing touches to the Intergovernmental Panel on Climate Change (IPCC) fifth assessment report that will strengthen the scientific case for climate change action in coming years. The assessment report is likely to come out later this month.

Since emission of greenhouse gases significantly contribute to global warming, the CDP report may give handle to emerging economies like India, Brazil and Argentina to seek substantial action for re-

ducing emission for developed countries, including the US, Japan and EU nations



ducing emission for developed countries, including the US, Japan and European Union nations.

The analysis is based on the climate and energy data of 389 companies listed on the FTSE Global 500 Equity Index — collected by CDP at the request of 722 institutional investors representing \$87 trillion in invested capital.

Malcolm Preston, global head, sustainability and climate change, at PwC, said, "I raises questions for some organizations about whether they are focused on sustaining growth in the long term or just doing enough to recover growth until the next issue arises. "With the initial IPCC report only weeks away, corporate emissions are still rising. Either business action increases, or the risk is regulation over takes them," he added.

# Climate debate hots up even as globe cools

As sceptics pounce on new data that shows 'global cooling', experts say such a dip is but a blip

Subodh Varma | TIMES INSIGHT GROUP

Ever since data released earlier this year showed that in the past 15 years, global average temperatures had not risen as fast they had earlier, there has been much hue and cry. Climate change sceptics naturally seized upon this to declare that they had been proved right. Last month, leaked portions of the forthcoming IPCC report, too, were reported by Western media outlets to contain this perplexing fact. So, has global warming really 'paused'? Has the 'apocalypse' been averted, as a leading London-based weekly put it?

First, the facts: it is true that average increase in temperature since 1998 is lower than the previous 20 years or more. But it is also true that the nine warmest years on record have all been in this very 15-year period. The sole exception is 1998 itself, the warmest year on record, itself caused by a historic El Niño event.

But this is not the full story. In this same 15-year period carbon dioxide levels in the atmosphere reached

392.6 parts per million (ppm), the highest in 800,000 years; Arctic sea ice melted to its lowest ever summer extent — about 18% lower than the previous lowest in 2007; global sea levels reached a record high, continuing the average 3.2mm per year rise; extreme events and more intense water cycles of rain continued. Clearly, all other indicators of climate change are present in abundance. Even global temperatures are rising, but not as rapidly as earlier.

Scientific research has explained this strange event. The four main reasons for a slight slowing down in the warming process are: rise in sea heat, El Niño, aerosols, and what is called the 'solar minimum'. These have not been fully included in the IPCC report.

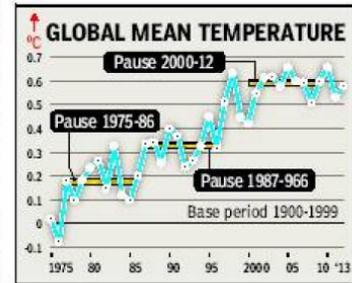
But before going into that here is another

fact for context: it is not the first time that there has been such a 'pause'. There have been two earlier periods when a similar slowdown in warming took place — from 1977 to 1996, and from 1987 to 1996. Both these periods were followed by big jumps in temperatures. Climate change is a complex process and this variability is inherent to it.

According to the US National Oceanic and Atmospheric Administration (NOAA), "the ocean in the upper 2,300 feet of the ocean remained near record high levels in 2012. Overall increases from 2011 to 2012 occurred between depths of 2,300 to 6,600 feet and even in the deep ocean". About 30% of the heat was dumped into the ocean below the 2,300 feet depth as per re-

search by Kevin Trenberth, a scientist at the University Corporation for Atmospheric Research in the US.

Trenberth also found a link between global warming and El Niño, the warming of water in the South Pacific. "A global temperature increase occurs in the latter stages of an El Niño event as heat comes out of the ocean and warm-



Source: US NOAA

the atmosphere," he writes.

It appears that a series of small volcanic explosions in the past decade and a half have also contributed to the warming slowdown by injecting small particles of dust and ash (called aerosols) in the upper reaches of the atmosphere. This layer acts as a shield preventing more of the sun's rays from coming earthwards.

Besides, during this period of slowed warming the heat coming to Earth from the Sun was less because the Sun was passing through its cyclical low, as James Hansen, a leading climate change scientist has pointed out. This solar minimum has lasted from 2005 to 2010 and the sun is now on an upswing. So, the 'pause' is only a passing phase. As Trenberth writes, "global warming has not gone away".

The Times of India, Delhi dated September 16, 2013

# Japan switches off nuclear power

## Shuts Down Its Last Reactor Amid Public Concerns Over Fukushima Disaster

Japan on Sunday began switching off its last operating nuclear reactor for an inspection, with no date scheduled for a restart amid strong public hostility towards atomic power.

The move will leave the world's third largest economy without atomic energy for the second time since the Fukushima nuclear crisis in March 2011.

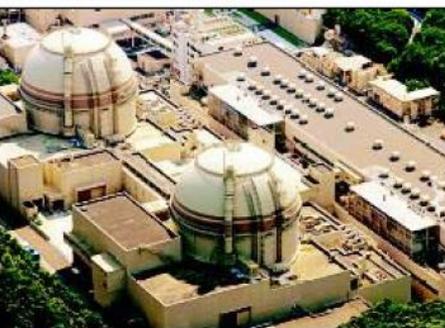
Nuclear power supplied about one-third of the resource-poor nation's electricity before a tsunami knocked out cooling systems and sparked meltdowns at Fukushima, causing tens of thousands to flee homes.

Prime Minister Shinzo Abe has openly supported a return to the widespread use of atomic energy, but the public remains largely opposed on safety grounds.

Kansai Electric Power (KEPCO) on Sunday started gradually to take offline the No. 4 reactor at its Ohi nuclear

### ENERGY CRISIS

Japan, the world's third largest economy, will go without atomic energy for the second time since the Fukushima nuclear crisis erupted after the tsunami in March 2011



**FULL STOP:** Reactor 4 of the nuclear power plant in Ohi will stop generating electricity in the early hours of Monday

It will be nuclear power-free for the third time in more than four decades

Post-Fukushima, the public mood turned against nuclear power

Since the disaster, Japan has been forced to import huge amounts of coal, liquid natural gas and other fuels

The government blames these imports for the huge trade deficits. Japan posted a trade deficit in 2011 for the first time in 31 years, and another deficit of 82 trillion yen (\$82.4 billion) in 2012

The average household electricity bill has risen by 30% since Fukushima

Even if nuclear plants are allowed to restart, many will soon reach their 40-yr operating limits, raising the issue of whether and how they will be replaced

Before the accident, 50 nuclear reactors supplied about 30% of Japan's power

plant in the western prefecture of Fukui. "The work started at 4.40pm," said a company spokesman. "The

reactor will come to a complete stop early tomorrow (Monday)," he said. Japan previously was without any

nuclear energy in May 2012, when all of the country's 50 commercial reactors stopped for checkups in the wake of

the disaster. Utilities were unable to restart them immediately due to public opposition. It was the first time in more than four decades that Japan had been without nuclear power.

Government officials and utilities voiced concern at the time that Japan could face major blackouts without nuclear power, particularly in the western region that relied heavily on nuclear energy.

Their fears proved unfounded but the government last year gave Kansai Electric approval to restart No. 3 and No. 4 reactors at the Ohi plant, arguing that nuclear energy was necessary to meet increased electricity demand during the winter. The reactors were reactivated in July 2012 and resumed full commercial operation the following month, but the No. 3 reactor was shut down earlier this month for a scheduled inspection. The nation's other reactors have remained idle. **AFP**

Deccan Chronicle, Hyderabad dated September 17, 2013

The Economic Times, Delhi dated September 18, 2013

### OZONE LAYER DAY OBSERVED

**Hyderabad:** Experts in the city stressed on the need to find replacements for ozone-depleting gases on International Ozone Layer Day, which was observed on Monday. The theme for this year is 'A Healthy Atmosphere, the Future We Want'. Experts said the gases like CFC 11, 12, 113, 114, 115 should be replaced by HFCs, hydrocarbons, ammonia and water. They also pointed out to a 1.8°C increase in temperature of the environment. They sought alternative technologies for refrigeration and air-conditioning as these use gases which deplete the ozone layer.

# Delay in Climate Policy Would Triple Short-Term Mitigation Costs: Study

URMIA GOSWAMI  
NEW DELHI

Delaying action to tackle climate change raises the cost of reducing emissions and makes it tougher to garner political will and public support for the purpose, a study has shown. In the study published on Tuesday in Environmental Research Letters, scientists from Potsdam Institute for Climate Research, University of Melbourne, Technische Universität Berlin, and the Mercator Research Institute warn that delaying climate policy would triple short-term mitigation costs.

"The transitional economic repercussions that would result if the switch towards a climate-friendly economy is delayed, are comparable to the costs of the financial crisis the world just experienced," said lead author of the study Gunnar Luderer

of Potsdam Institute.

The study, Economic Mitigation Challenges: How Further Delay Closes the Door for Achieving Climate Targets, states that countries must begin to comprehensively reduce emissions if the target of limiting temperature rise to 2 degrees is to be met. It is not comprehensive emission reduction policy alone that is required. The availability of low-emission technologies is the other crucial factor that affects costs and decision on climate policy.

The scientists peg a 7% reduction in global economic growth if countries delay adopting a climate regime that comprehensively reduces emissions and full availability of technology till 2030. On the other hand, a global agreement on an effective climate regime by 2015 could limit reduction in economic growth to 2%.

Delaying emission reduction would

mean a shorter time span to achieve the internationally agreed target of limiting global warming to 2 degrees above pre-industrial levels. This would make emission reduction efforts more expensive.

"Our study quantifies the short-term costs of tiptoeing when confronted with the climate challenge. Economists tend to look at how things balance out in the long-term, but decision-makers understandably worry about additional burdens for the people and businesses they are responsible for right now. So increased short-term costs due to delaying climate policy might deter decision-makers from starting the transformation. The initial costs of climate policies thus can be more relevant than the total costs," Luderer said.

The study analyses a number of cost dimensions, including climate policy effects on energy prices.

The Times of India, Delhi dated September 18, 2013

**A battery that generates electricity from sewage**

A novel new battery that uses "wired microbes" to generate electricity from dissolved organic matter found in waste-water and sewage has been developed. Engineers at Stanford University have devised a new way to generate electricity from sewage using naturally-occurring "wired microbes" as mini power plants, producing electricity as they digest plant and animal waste. Study Co-authors Yi Cu, Craig Criddle and Xing Xie, hope their microbial battery will be used in places such as sewage treatment plants, or to break down organic pollutants in the "dead zones" of lakes and coastal waters where fertiliser runoff and other organic waste can deplete oxygen levels and suffocate marine life.

# Solid particles from outside add to pollution in Delhi air

Jayashree Nandi & Shreya Roy Chowdhury | TNN

New Delhi: Delhi's not the only culprit. A recent study by Indian Institute of Technology, Delhi, has found that the city's emissions, though considerable, are not alone responsible for the sudden peaks in particulate matter (PM 10) levels in it. Far-off sources in north India or even beyond India (within Asia) may be contributing as much as 24% of PM 10. And on days when PM 10 concentration is very high here, only about 11% of it may have been contributed by polluting sources within Delhi.

The study, published online in the Atmospheric Research Pollution Journal, has used a chemical transport model to interpret Delhi's PM 10 levels from June 2010 values to assess how much of it was caused due to emissions within the capital. The data was mapped on four geopolitical domains—Asia, India, north India and Delhi.

The team found that contribution from sources in Delhi alone was about 11% to 41% and a major proportion (59% to 89%) was from sources outside Delhi. While this may seem like a wide range, it was found that, on days when PM 10 concentrations were low in Delhi, the contribution from sources within Delhi was higher (41.5%). But on days when PM 10 concentration was very high (over 500 micrograms per cubic metre), the contribution from Delhi was only about 11%, from north India and



**TRAVELLING FAR**

**PM 10**  
Particulate matter up to 10 micrometres in size

**LONG-RANGE TRANSPORT (LRT):**  
Pollutants emitted cross geopolitical boundaries or migrate across several geographic zones. This type of pollution is designated 'transboundary'. PM 10 can be transported in the atmosphere for 1000s of kilometres

ACCEPTABLE PM 10 LEVEL: 100 micrograms per cubic metre PM 10 levels in early September at 5.50pm:			CONTRIBUTION TO DELHI'S PM 10 LEVELS (range)	
0.03 Civil Lines	869 Anand Vihar	80 Mandir Marg	LRT (from outside India)	20-24%
152 Punjabi Bagh	210 RK Puram	136 IGI Airport	LRT (from India and north India)	34.7-69.2%
			LRT in Delhi	11-41%
			Four geographical domains used for the model Delhi >> North India >> India >> Asia	

surrounding areas about 69.2%, and from outside India about 19.6%.

The study, however, doesn't focus on specific ar-

han, professor at Centre for Atmospheric Sciences, IIT Delhi, who co-authored the study with PhD scholar Medhavi Gupta.

**Far-off sources in north India or even beyond India (within Asia) may be contributing as much as 24% of PM 10. And on days when PM 10 concentration is very high here, only about 11% of it may have been contributed by polluting sources within Delhi**

reas outside Delhi affecting its air quality. "We will assess the sources in another study. These are likely to be areas with large thermal power plants and big polluting industries," says Manju Mo-

"Sudden peaks in PM 10 levels cannot be due to domestic sources. The peaks are a result of pollutants traveling from a long distance. It may take up to a couple of days for polluting par-

ticles from outside to reach Delhi," adds Mohan.

Experts say the findings indicate that we need strict pollution norms for the entire region. "Delhi is already contributing to a huge amount of air pollution which needs to be mitigated. Along with that, we need similar strict norms for all cities and towns. That is why we are talking of an air pollution action plan for NCR and not just for Delhi. Even towns like Meerut should have the same norms," says Anumita Roy, Executive Director-Research and Advocacy, Centre for Science and Environment.

toi.reporter@timesgroup.com

## For a Danish restaurant, throwaway food is the new takeaway

A restaurant serving dishes made from food about to be thrown away by supermarkets and other companies opened its doors in Copenhagen on Tuesday.

"We had all worked in kitchens or supermarkets and seen how much food was thrown away, and we wanted to do something about it," said Sophie Sales, a co-founder of "Rub og Stub", which translates as "lock, stock, and barrel". Denmark is already home to an active community of "freegans", people who eat discarded edible food to reduce waste.



**SAY NO TO WASTAGE:** The eatery serves dishes cooked from food about to be thrown away by supermarkets

But unlike activists, Rub og Stub won't go rummaging through trash to find its ingredients, and the restaurant doesn't accept food that's been found through so-called "dumpster diving". Instead, they're trying to get to the food before grocery stores and other retailers throw it out. "We had hoped to secure some permanent deals before the opening, but it was hard because this is such a new concept," said Sales.

The central Copenhagen restaurant, which is run by volunteers and will give all profits to three charities in

Sierra Leone, had to buy some ingredients for the launch. "Potential suppliers (donors) found it hard to believe that it's realistic and that we would really open," she said. So far, major donations have come from two supermarket chains owned by Denmark grocery retailer, Coop Danmark.

"It's been everything from lamb chops and duck breast, to big bags of grapes and dairy products," Sales said. Most products are given away because they're nearing their expiry date. For supermarkets, the food "wouldn't be worth putting on the

shelves since they could only keep it there for two or three days". "If we get it on the last day before it expires, we can either put it in the freezer or use it on the same day," she said.

Rub og Stub doesn't accept food that's already been prepared elsewhere, and because of its sourcing methods, the menu changes every day. On Tuesday, it was serving meat patties known as "frikadeller", with red cabbage. The menu also included a veggie version of a Danish dish, pasta salad, and apple muffins with marzipan and nougat ice cream. AFP

*The Economic Times, Delhi dated September 19, 2013*

## Green Nod Deferred for Projects in Eight Industrial Clusters

These include Ghaziabad, Singrauli, Panipat, Vapi, Indore, Ludhiana

**URMIA GOSWAMI**  
NEW DELHI

The environment ministry has decided to impose a moratorium on clearances for all projects in eight industrial clusters, including the Singrauli coalfields, as environmental pollution in these areas exceeds norms.

These clusters under moratorium are Ghaziabad in Uttar Pradesh, Panipat in Haryana, Singrauli in Uttar Pradesh and Madhya Pradesh, Vapi in Gujarat, Indore in Madhya Pradesh, Jharsuguda in Odisha, Ludhiana in Punjab and Patancheru-Ballaram in Andhra Pradesh.

In 2010, the ministry had announced a moratorium on environmental clearance in 43 critically polluted areas or industrial clusters as identified by the Central Pollution Control

Board. During the moratorium, state pollution control boards and governments were asked to develop time-bound action plans for improving the environmental quality in these areas. The plans were reviewed by the Central Pollution Control Board, and once it was ascertained that steps required to address environmental quality were being implemented effectively, the moratorium on clearances in these areas was lifted. The ministry lifted the moratorium on 26 of these clusters between October 2010 and July 2011.

Environmental parameters in these eight clusters have either shown no improvement or have deteriorated between 2011, when the moratorium was lifted, and 2013, when the Central Pollution Control Board reassessed the environ-

mental quality conditions in all 43 industrial clusters.

The Comprehensive Environmental Pollution Index continues to be critically high (above 80) in Ghaziabad, Panipat, Singrauli and Vapi. While in the remaining four clusters there has been an increasing trend in the environmental pollution. The previous round of moratorium on clearances imposed in these eight clusters was lifted by 2011.

The moratorium will not apply to projects of public importance or national security. The ministry has also decided to allow modernisation of existing project as long as it doesn't increase in the cluster's pollution load. Infrastructure like highways, aerial ropeways, effluent treatment and solid waste management facilities have also been exempted.

*The Times of India, Delhi dated September 19, 2013*

## BASIC nations demand aid to phase out refrigerant gas

Vishwa Mohan | TNN

New Delhi: The US and other developed nations may want India to toe their line in phasing out hydrofluorocarbons (HFC) — the climate-damaging refrigerant gas — but they won't find it easy to push New Delhi to junk its refusal to do so without viable alternatives.

India is banking on the support of three other powerful nations — Brazil, South Africa and China — for endorsement of its position. The BASIC group of nations, comprising Brazil, South Africa, India and China, on Monday signed a joint statement underlining their demand for alternatives. They also sought financial support from developed countries for switching to tested environment-friendly technology.

The statement was signed by representatives of the four countries following a meeting at the Brazilian city of Foz de



India wants viable alternatives to HFC (hydrofluorocarbons) before phasing it out

Iguacu. India was represented by Union environment secretary V Rajagopalan.

It was also stated in the joint statement that the HFC issue be dealt with at a multilateral forum, based on the provisions of the United Nations Framework Convention on Climate Change

(UNFCCC) and its Kyoto Protocol.

Officials explained that BASIC's decision won't contradict what was decided in the recent G-20 summit. The developing countries have started switching to HFC from the ozone-depleting hydrochlorofluorocarbons (HCFC) under provisions of the Montreal Protocol.

Although HFC is not considered an ozone-depleting gas, it does contribute to global warming. The developed world wants India to move directly from HCFC to new technology which may not contribute to global warming. They also want HFC to be brought under the purview of the Montreal Protocol.

The HFC is listed as a greenhouse gas under the Kyoto Protocol which is only binding on industrialized countries. The Montreal Protocol is applied to all countries.

*For the full report, log on to [www.timesofindia.com](http://www.timesofindia.com)*

The Economic Times, Delhi dated September 19, 2013

# MoEF Penalty on Adani Group Against Green Laws

**MYSTERY MOVES** Experts say environmental laws don't give the ministry the powers to levy a fine. No explanation was given how the penalty of ₹200 crore was arrived at

**M RAJSHEKHAR**  
NEW DELHI

By slapping a ₹200-crore penalty on the Adani Group for environmental violations, the ministry of environment and forests may be breaking its own laws, say environmental lawyers.

According to Delhi-based environmental lawyer Ritwick Dutta, the two laws that define the penal framework for such violations — the Environment Protection Act (EPA) and the Environment Impact Assessment (EIA) — don't give the ministry the powers to levy a fine. "They empower the ministry to start criminal prosecution in a court and to cancel an environmental clearance," he says. "There is nothing in the laws giving the ministry any power to levy such a penalty."

An email questionnaire sent on September 14 to environment minister Jayanthi Natarajan remained unanswered till the time of going to press. But the idea of replacing criminal action with a fine in environmental governance — an idea that has irked several environmentalists, who feel this promotes a culture of non-compliance — came from a committee set

up by the ministry.

This committee, headed by environmentalist Sunita Narain, was set up in September 2012 to investigate persistent complaints of environmental violations by Mundra Ports and SEZ, an Adani group company in Gujarat. In its report submitted this April, it listed environmental violations and considered both legal proceedings and cancellation of clearances, but finally decided against them as they are "procedural, and would only lead to delay without any gains to the environment and the people".

"The committee is cognizant of the fact that large-scale development has already been undertaken and it is not possible or prudent at this stage to halt or cease its operations," it said in its report. "Therefore, the committee has decided to recommend a different course of action, which is both intended to be an effective deterrent and also suggests the way for future remedial action to improve the environment."

Dutta is critical of such reading of the law. "If the law has prescribed a particular way to address a situation, then that is what has to be followed," he says, adding that if the

ministry wants to try alternative approaches, it has to first amend the law. Adds anti-dam activist Himanshu Thakur: "Other companies can now do the same thing, and get off by paying a fine if they get caught."

The Sunita Narain Committee recommended, among other things, that the company set up an 'environment restoration fund',

with a corpus of 1% of the project cost or ₹200 crore, whichever is higher. On September 3, a ministry official confirmed the ₹200-crore penalty and added that other action might follow.

However, the ministry is yet to issue a formal notification. "We have not received any communication (from the ministry) on the said subject as of date," Devendra Amin, spokesperson, senior vice-president (corporate communication), Adani Group, replied to an ET questionnaire on the issue.

The report does not explain how this ₹200 crore figure was arrived at. In response to questions on how this figure was arrived at and why the committee overrode the laws, Narain emailed: "Your main question is about the penalty and that

has been explained in the report. I would suggest that you could use the report and the explanations given there in your article."

The report says: "... It is practically difficult to assign tangible and intangible costs to non-compliance and violations. However, the inability to quantify these costs should not deter us from setting precedence for the future."

According to Anand Yagnik, a lawyer in the Ahmedabad High Court who is fighting a case on Adani SEZ's slack of environmental clearance, any number has to be backed by a rationale to be credible. "It has to have a logical relationship between the damage and how to undo the damage," he says. "This report is completely bogus as it doesn't indicate a line of its own rationality."

"If the damage is done, remediation is the only sensible option," says Shyam Divan, a Supreme Court lawyer and co-author of 'Environmental Law and Policy in India'. "If the project has moved ahead considerably and if third-party rights have been created, then all you can do is hope for a deterrent outcome."

According to the committee's re-

port, the violations were committed over a long period, beginning from the port's construction in the nineties. In 2012-13, Mundra Ports and SEZ posted a net profit of ₹1,754 crore — about nine times the fine recommended by the committee and that levied by the ministry.

Yagnik says India needs a credible policy to ensure deterrence instead of leaving it to ad-hoc committees. While the courts and the National Green Tribunal can levy financial penalties, the ministry does not have statutory powers to do so.

The Environment Protection Act (EPA), which sets standards for the quality of the environment, prescribes criminal proceedings and imprisonment up to five years, besides a nominal fine of up to ₹1 lakh, for people who were "directly in charge of" the company at the time of the violations.

The Environment Impact Assessment (EIA), which lays down the environmental clearance process that companies have to follow, says that "deliberate concealment and/or submission of false or misleading information or data... shall make the applicant liable for rejection, and cancellation of prior environmental clearance granted on that basis."



## Sunita Narain Panel's Allegation Against Mundra Ports & SEZ

- ▶ Bypassed laws, misrepresented and hid facts
- ▶ De-linked port and SEZ projects for faster clearance
- ▶ May have begun construction before environmental clearance
- ▶ Built airstrip at the SEZ before getting environmental clearance
- ▶ No compliance with conditions accompanying a clearance
- ▶ Cut mangroves, blocked creeks, disposed fly ash carelessly
- ▶ Ground water turning saline due to company's carelessness
- ▶ May have broken coastal laws by building too close to the coast
- ▶ Avoided public hearings "on one pretext or another"

The Times of India, Delhi dated September 19, 2013

The Times of India, Delhi dated September 20, 2013

# IIM-L to launch first-of-its-kind diploma on sustainable mgmt

TIMES NEWS NETWORK

Lucknow: The Indian Institute of Management, Lucknow, will introduce a new postgraduate diploma programme in sustainable management this year. The two-year programme will be taught at IIM-L's Noida campus and will be chaired by Prof Sushel Kumar, who currently heads the institute's Centre for Business Sustainability.

An institute spokesperson said admissions to the course will begin along with the remaining PG programmes after the CAT results are declared this year. Students who wish to apply for the sustainability management programme will, however, also have to write a separate statement of purpose explaining their reason for the choice of course. The final fee structure for PGP-SM, though, is expected to be along the lines of the existing courses, will be released by the end of the month.

An official release issued by the institute on Wednesday said this is the first time any IIM in the country has introduced a



course in sustainability management. It said business paradigm in India has changed dramatically in the last two decades, and focus is now shifting to environmental degradation, global warming, climate change and socio-economic implications of increasing corporate power. Nations, as a result, are forcing businesses to mould their business strategies to align with sustainable development objectives of the country as well as of the globe.

The decision to introduce the course at IIM-L's Noida campus was taken keeping in mind that most management institutes in India are criticised for not contributing enough to the field of business sustainability and associated public policy processes.

The full-time residential pro-

gramme, the first of its kind at Noida will admit students on the basis of their CAT scores, group discussion and personal interview. The programme has 45 seats and will primarily focus on environmental, social and economic sustainability aspects, change management preparation, critical perspectives on policy and institutions, cross-sector collaborations and creating systemic linkages between environmental, social and economic issues.

PGP-SM graduates, the official release said, will be instilled with the ability to think in a holistic way about different aspects of sustainability challenges in the business environment using a dynamic systems framework. They would be equipped with management and leadership skills to formulate and solve problems at the appropriate scale and ability to recognise the interconnectedness of economic performance of businesses with coupled social and environmental systems. They would also be able to produce policy relevant results.

# Corpn staff fined for tree mayhem

TIMES NEWS NETWORK

New Delhi: National Green Tribunal has imposed a fine of Rs 50,000 on South Delhi Municipal Corporation (SDMC) for causing damage to two trees while 'deconcretizing' them in Chittaranjan Park. The amount will be recovered from all officials, including seniors,

ports how the work was in violation of the NGT order that said no damage should be caused to the trees and their roots should not be left exposed.

The respondents in the case, including SDMC, filed replies in which it was stated that officials had taken help of drilling machines to break the concrete. They also blamed a heavy downpour on August 17. The forest department's report highlighted that "deconcretization using machines exposed the shallow root system which resulted in falling of tree".

NGT observed that "the direction of the tribunal has been violated by SDMC, to say the least, with impunity". The bench, that took into consideration the TOI report and photographs, said, "SDMC failed to discharge its statutory function in accordance with the law as well as flouted the orders of the tribunal, particularly (the one) dated August 8, 2013."

However, it appreciated that the corporation had deconcretized over 1,050 tree bases in the colony. The tribunal sought compliance reports from all authorities regarding deconcretization work and listed the matter for hearing on October 8.



Two peepal trees fell in CR Park

who were involved in the work. The corporation has also been directed to plant 20 trees to make up for the two trees which fell and inform the tribunal about this with evidence.

TOI had on August 18 reported about two large peepal trees toppling over as concrete at their base was removed using heavy machinery. It was highlighted in subsequent re-

The Economic Times, Delhi dated September 20, 2013

# Earth can Support Life for 1.75 Billion Years

Here is the good news: Scientists have calculated planet's leave-by date, and have identified other worlds where life may develop

JAMIE MERRILL

The end of the world is coming—but not for a while yet. That's according to a new study indicating that we have 1.75 billion years left until Mother Earth gives up the ghost.

Researchers from the University of East Anglia's School of Environmental Sciences analysed other planets outside our galaxy in an attempt to work out how long it will be before our planet becomes uninhabitable.

The study, published on Thursday in the journal *Astrobiology*, examined seven planets, including Earth, to determine how their "habitable zones" will change as their stars get hotter and brighter over time.

The key factors in determining a planet's habitability are whether it is the correct distance from its star to have liquid surface water and a temperature less than 50C.

"Within around 1.75 billion years, conditions for human life will become impossible as the sun grows in size, temperatures soar and the world's oceans evaporate," Andrew Rushby, who led the study, told *The Independent*.

The research didn't specifically account for man-made climate change or the "possibility that we'll all be wiped out by an asteroid or a nuclear



war", he said. Climate change may well decimate humanity before the concept of habitable zones become relevant.

"Of course, conditions for humans and other complex life will become impossible much sooner—and this is being accelerated by anthropogenic climate change," he said.

"Humans would be in trouble with

even a small increase in temperature, and near the end only microbes in niche environments would be able to endure the heat."

Even if some humans did manage to survive for another 1.75 billion years, the end would not come instantly. "Even if you were alive at 99.9% of the way through our habitable zone, you still wouldn't have to worry about it,"

Rushby said. "Life isn't going to be extinguished at the flick of a switch."

Instead, as the sun gets older, it will get hotter and temperatures on Earth will soar over the course of "perhaps one million years" as we enter a "hot zone" and seas evaporate, leaving the planet lifeless except for some forms of microscopic life. "The optimist in me hopes we'll still be around to see this," said Rushby. "Or that we'll have migrated to Mars or developed the technology to spread out across the galaxy. But that's getting into the realms of science fiction."

The study has also allowed Rushby and his team to make predictions about what stage life might be at in other parts of the galaxy: "There's no point in studying a planet for signs of life if it's only been habitable for a million years. That sounds like a long time, but in terms of geology and biology it isn't. The most interesting planets in the search for alien life are ones that have been habitable for billions of years.

"Anatomically, modern humans have only been around for the last 200,000 years—so you can see it takes a really long time for intelligent life to develop.

"Of course, much of evolution is down to luck, so this isn't concrete, but we know that complex, intelligent

species like humans could not emerge after only a few million years because it took us 75% of the entire habitable lifetime of this planet to evolve. "We think it will probably be a similar story elsewhere."

In particular, the report points to the examples of Kepler-22b and Gliese-581d which have been habitable for up to 6 and 54.7 billion years respectively.

"As it stands, we don't have the technology to explore these planets to discover if there is alien life, but I'd certainly mention Kepler-22b and Gliese-581d as planets that we should keep an eye on over the next two or three hundred years of human existence as our technology develops," said Rushby.

The Independent

# No report on plastic bag ban

## Corporations Asked To File Action-Taken Reports In 15 Days

Jayashree Nandi | TNS

New Delhi: If you are wondering what happened to the ban on plastic bags in the city, here is a clue. The municipal corporations of Delhi probably never took any action to implement the plastic waste rules of 2011 which regulate the use, collection, segregation and disposal of plastic bags.

The corporation has not submitted a single action-taken report since 2011 when the law was made. The Central Pollution Control Board has recently asked for the annual action taken report from Delhi Pollution Control Committee but the latter has not received any information from the corporation on how the rules have been implemented.

Since plastic waste management is being pursued by the Supreme Court, which had recently observed that India is sitting on a plastic waste time bomb, 'action taken' reports from each state are crucial in

### TOXIC BURDEN

Delhi accounts for about 689.5 tonnes of it a day

According to Central Pollution Control Board, India generates 56 lakh tonnes of plastic waste annually

Delhi accounts for about 2.5 lakh tonnes

The ban on manufacture, sale and use of most types of plastic bags in the capital came into force on November 23, 2012

understanding whether we are all able to deal with the toxic burden of plastic waste.

In a letter to the corporation commissioners, DPCC chairman Sanjiv Kumar, who is also the environment secretary, has asked corporations to submit the annual action tak-

en reports for 2011-12 and 2012-13 within 15 days. He has also urged corporations to submit reports in successive years by July 31 of each year.

DPCC had issued letters to the Municipal Corporation of Delhi (before trifurcation) on July 1 and March 1 of 2011, and February 13, November 15 and August 7 of 2012. It also issued letters to each corporation after trifurcation on January 16 and June 10, 2013. Matters related to manufacturing and storage are currently *subjudice* as the matter is being heard in the Delhi high court but other aspects of plastic waste management have been completely ignored. On June 3, 2011, North Delhi Municipal Corporation filed a reply to DPCC's letters but that is "not complete", according to DPCC.

CPCB has urged DPCC to submit the annual report on implementation of the Act by September 30, 2013.

The Act made many changes in the way plastic bags are

being regulated. One of the main provisions is that no carry bags shall be made available free of cost to consumers. "The municipal authority may determine the minimum price for plastic carry bags," it says.

But in Delhi people don't just get it for free; they are often handed more than one plastic carry bag by shopkeepers. "Some vendors keep urging you to take a plastic bag even if you choose not to. They are shocked if you refuse it," said Tapas Sen, of GreenPark.

Some of the other provisions of the Act stipulate that foodstuffs will not be allowed to be packed in recycled plastics or compostable plastics, recycled carry bags will conform to BIS specifications and plastic carry bags will either be white or have pigments and colorants which are in conformity with the bar prescribed by the Bureau of Indian Standards. Also, plastic bags will not be less than 40-microns in thickness.

The Times of India, Delhi dated September 20, 2013

# Water woes mount, no solution in

## 20% Shortage, Distribution Losses, Faulty Billing And A Polluted River

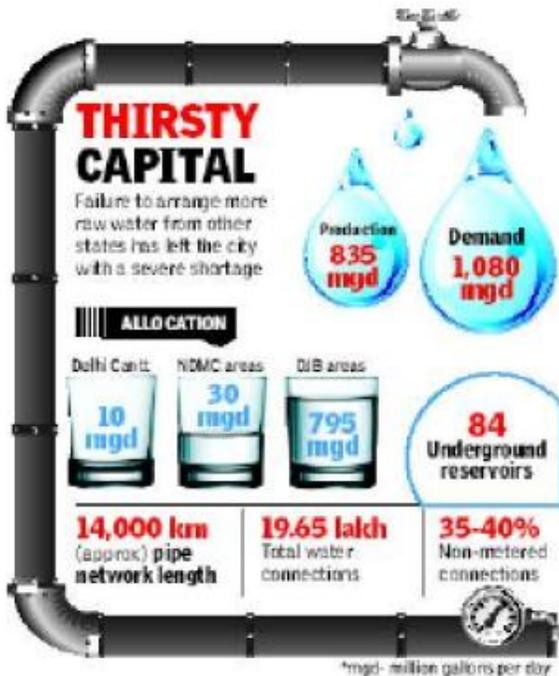
Neha Lalchandani | TNS

New Delhi: The water department has been under the chief minister's direct control for the past 15 years. As chairperson of Delhi Jal Board, Sheila Dixit has been responsible for not only the water supply in the city but also the Yamuna, failure to clean which has become a major embarrassment for the government.

At present, Delhi produces around 845 million gallons per day (mgd) of water—at least 300 mgd short of the actual demand. The CM's biggest challenge in her current term, and maybe the state's biggest failure, has been to get Haryana to release 80 mgd from the Munak canal. While the Congress government in Haryana remains adamant, three completed treatment plants in Delhi await water while many thousands of Delhiites get no water or barely once a day.

The government's most controversial step has been to introduce public-private partnership in water distribution. Delhi's supply is marked by leaking pipelines and massive wastage, and the government was keen to bring in private players to streamline distribution and billing. The biggest advantage of this model, DJB has claimed, is that the pilot areas will get 24x7 water supply.

"Delhi's water supply system is old and the city has been expanding continuously. It is a nightmarish task to keep up with the growing demand, especially since Delhi is dependent largely on neighbouring states for raw water. We need the private sector to streamline processes and curtail losses and this will only mean more water per capita," said a DJB official.



tem is old and the city has been expanding continuously. It is a nightmarish task to keep up with the growing demand, especially since Delhi is dependent largely on neighbouring states for raw water. We need the private sector to streamline processes and curtail losses and this will only mean more water per capita," said a DJB official.

The step, critics say, indicates the government's inability

to provide basic facilities to the people. Water is necessary and, on principle, should be the government's responsibility, they say.

To enhance supply, DJB is recycling 45 mgd water at its treatment plants. It has also signed a memorandum of understanding with the Singapore government for a new treatment plant that will make sewage fit to be mixed with raw water upstream of

the river and then further treated to potable levels. Distribution, however, remains a huge challenge. While underground reservoirs have improved conditions for consumers, there is a wide disparity in the quantity supplied to various parts of the city. This ranges from about 50 litres per capita per day to around 250 lpcd or even more in certain NDMC areas.

To deal with pollution in the Yamuna, DJB has initiated the interceptor sewage system. This will intercept sewage from Delhi's main drains, treat and then release it into the river. While this scheme has been questioned for its effectiveness, thousands of crores spent on cleaning the Yamuna without any results.

"There have been court orders on the Yamuna, directing the Delhi government and various civic agencies to take steps to prevent untreated sewage from entering the river. Despite that, several sewage treatment plants continue to work at half their capacity since they do not receive sufficient input. Several areas are also yet to be connected to the sewerage," said Vinod Jain, director of the NGO Tapas.

To end its extremely chaotic billing system, DJB has recently launched an online revenue management system.

Although people are still getting inflated bills, officials say the problem will be dealt with completely by the end of 2013. Hand-held meter readers will replace the manual entry system.

DJB has also been put in charge of managing the city's ground water but the government has so far failed to bring in the ground water bill that would put a price tag on groundwater extraction. DJB is clearing requests for bore wells without maintaining a record of how many exist in the city. New bores are being sanctioned only for community use and this has helped to reduce extraction and slow down the rate of ground water depletion. It is also streamlining the process for rainwater harvesting. The water utility has been providing incentives and assistance to individuals and agencies which carry out rain water harvesting.

The agency has, however, failed to clamp down on the tanker mafia. The mafia is dependent on illegal extraction of water and has been found to collude with staff to siphon off DJB supply and sell it. These tankers are tolerated since they cater to a large market in the city that would otherwise become DJB's responsibility.



Deccan Chronicle, Hyderabad dated September 21, 2013

The Economic Times, Delhi dated September 20, 2013

## Industrial cluster on outskirts banned

DC CORRESPONDENT HYDERABAD, SEP. 20

The ministry of forest and environment has re-imposed the ban on project approvals in the Patancheru-Bollarum industrial cluster as environmental pollution levels have exceeded limits.

This has put a spanner in the expansion plans of several industrial units. The ban has been imposed in eight industrial clusters in the country, including Patancheru-Bollarum, based on the results of a survey which was conducted by the Central Pollution Control Board (CPCB) in 43 identified "Critically Polluted Areas".

According to director of ministry of forest and environment, B.P. Rastogi, the CEPI scores in 2013 in the Patancheru-Bollarum industrial sector was 76.05. "The CEPI score has increased in Patancheru-Bollarum as compared to 2011. Due to this we re-imposed the moratorium," he said.

Industrial clusters with CEPI scores above 70 are considered to be critically

● The ban has been imposed on Patancheru-Bollarum industrial cluster for exceeding environmental pollution limits

● This has put a spanner in the expansion plans of several industrial units.

polluted while those between 60 and 70 are severely polluted areas.

The moratorium on the Visakhapatnam industrial cluster has been lifted as the CEPI score has seen a decreasing trend.

However, eight clusters including Patancheru-Bollarum failed to show any improvement and the comprehensive environmental pollution index has been on the rise, around 80. The ban is not applicable to projects of public importance like solid waste management facilities or national security and for modernization of existing projects.

Meanwhile the state government has lifted the permanent ban on the expansion of polluting industries in the bulk drug sector in Ranga Reddy, Mahabubnagar and Nalgonda districts.

## 12 Cos Designated as 'Business Partners' for UN Climate Summit

URMIA GOSWAMI NEW DELHI

Businesses will play an important role at the UN sponsored climate change negotiations to be held in November in the Poland. Breaking away from practice, the Polish government is designating companies helping with organising the climate summit as "business partners".

The LN Mittal-promoted Arceor Mittal is among the 12 companies designated as "business partners". Other "partner" companies include Alstom Power, Polska Grupa Energetyczna, BMW, Emirates, Europross Polska, General Motors, Lotos SA, Polish Airlines.

The year-end UN sponsored climate change negotiations are central to working out a global plan to address climate change and its impacts. Nearly 10,000 participants, including ministers and government representatives from the 190-odd countries and member-states, representatives of non-governmental organisations, business and media, are expected to attend the Warsaw meet.

In yet another break, the Polish government plans to organise a business day during the preparation meeting being held in the first week of October, ahead of the November summit. The preparation meeting, known as pre-COP (Conference of Parties), is usually attended by ministers and senior negotiators. The Polish government also plans to organise round table discussions for business representatives and government delegates at the Warsaw meet.

In return for the help in organising the climate summit, these companies will be granted a title of "partner" for supporting the Polish government. The companies will also have the right to include information on their role in the process of organising the summit in their materials. Poland sees value in partnership with big companies although some environmental groups are suspicious about the involvement of carbon-intensive companies in the global event that seeks to combat global warming.

"Past experience shows that such a model of cooperation works. On one hand, companies have the opportunity to promote their activities on an international



BRAINSTORMING SESSION

scale, on the other — we, as the organizers — get professional support for high-level organization of the meeting. In addition, the support of our partners will allow us to reduce the costs of organizing the conference from public sources," Poland's environment minister Marcin Korolec said.

Business is appreciative of what it describes as the Polish government's effort to "balance economic development and climate protection" but environmental groups are concerned about the space being given to carbon intensive industries. The Polish government's close association with coal and steel industries has long been a red flag for environmentalists, climate change scientists, and civil society organisations.

"Polluting industry sponsorship of the Warsaw COP will undermine the efforts to raise ambition to reduce emissions in keeping with science. It will compromise the political will required to save poor in developing countries from the adverse effects of climate change. This is a crucial COP as it being held ahead of the UN Secretary General's Summit on Climate Change," said Sanjay Vashist, director, Climate Action Network South Asia.

The Polish government maintains that co-operation with partners at organizing large international meetings is nothing new. Companies have partnered with government during the Polish Presidency of the Council of the European Union in 2011 and during the climate conference in Poznań in 2008. Though not common practice to involve businesses as partners, but host governments are free to enter into any such arrangements.

The Economic Times, Delhi dated September 23, 2013

## After record low in 2012, Arctic ice shows growth

Justin Gillis

Sea ice in the Arctic Ocean underwent a sharp recovery this year from the record-low levels of 2012, with 50% more ice surviving the summer melt season, scientists have said. It is the largest one-year increase in Arctic ice since satellite tracking began in 1978.

The experts added, however, that much of the ice remains thin and slushy, a far cry from the thick Arctic pack ice of the past. Because thin ice is subject to rapid future melting, the scientists said this year's recovery was unlikely to portend any change in the relentless long-term decline of Arctic sea ice.

"I'm not at all surprised there was a jump upward — we've never set two record lows in a row," said Nasa scientist Walt Meier. "I would say I'm a little surprised the jump is as big as it is." Last year's ice extent was so low that this year's recovery looks larger by comparison, Meier said.

The main reason for this year's record growth, the scientist added, was that the region was colder and cloudier through the spring and summer than in the recent past. "We had cool conditions, cooler than the long-term average, and yet it is still going to be the sixth-lowest ice minimum on record," he said. NY TIMES SERVICE

The Times of India, Delhi dated September 21, 2013

## Bhel to build world's biggest solar plant

New Delhi: On a day US president Barack Obama announced major steps to chok use of coal for producing electricity, the UPA government on Friday unveiled its biggest green dream of building the world's biggest solar power project with a capacity of 4,000 mw.

The project will be built on 23,000 acres of land belonging to Sambhar Salts, a subsidiary of central enterprise Hindustan Salts Ltd under the department of heavy industries some 75 km from Jaipur: TNN

The Times of India, Delhi  
dated September 23, 2013

# SC ban on Goa mining: Green belt goes in the red

**S**upreme Court's ban on mining in Goa has had a domino effect on multiple trading activities, and the economic crisis gripping the state could take a turn for the worse, say **Covind Kamat Maad and Murari Shetye**

**Panaji:** While the mining ban in Goa has helped change the red belt into a green belt, its impact on the socio-economic structure of the state has left a deep scar. Worst hit economically by the no-go is eastern Goa region. All the mines are concentrated in the hills of Sahyadri in Bicholim, Sattari, Quepem, Sanguem and Dhartendora.

One year down the line, people living in this iron ore-rich belt are bearing the brunt of closure of mining leases. This despite the state government, facing an economic crisis of its own, introducing financial packages to reduce their economic hardships. The state earned about Rs 900 crore annually as royalty from the mining industry at its peak, but this has dried up. The state has had to let go of this revenue although it has affected some of its plans for development.

Areas like Velguem and Pale in Bicholim taluka, Usgao in Ponda taluka and several villages in Sanguem and Quepem talukas are in throes of an economic crisis,

## RIPPLE EFFECT

### PEOPLE AFFECTED BY MINING SUSPENSION

Truck owners | Truck drivers and cleaners | Barge owners | Barge workers | Workers in workshops/repair units in mining belt | Restaurants and their employees in mining belt | Real estate – flats remaining vacant | Employees in mining companies – from mines and administration

**42m tonnes** of iron ore exported (2011-12)

### IMPORTERS

Mainly China, along with Japan, South Korea, Taiwan



### WHEN SUSPENDED?

**Sept 10, 2012**  
Goa govt suspends all mining leases

**Sept 12, 2012**  
Minister for environment and forests Jayanthi Natrajan announces suspension of clearances of Goa mines



**No. of leases** | 118 mining leases in operation over the last five years

**Mining areas** | Several villages in Bicholim, Sattari, Dharmabandora,

Quepem, Sanguem  
**Season for mining** | October to May

**Revenue earned by the state** | Around Rs 900 crore from royalty

have to kill myself if mining does not resume as I am sitting over a loan liability of Rs 20 lakh to a bank."

All Goa Truck Owners' Association president Nilkant Gawas said, "If mining remains halted, the truck owners will have to look out for alternative livelihoods." Some truck owners did get respite after the government announced a relief scheme for them. But it wasn't enough.

Goa also had 350 barges transporting ore that remained anchored after the

of Quepem and Sanguem were badly affected. "As it was largely a mining-driven economy, the blanket ban has led to a situation where the flow of money has got curtailed. This has had a cascading effect on all trading activities," said Curchorem-based chartered accountant Pradeep Kakodkar. People directly or indirectly dependent on mining also include earthmoving machinery owners, mechanics, workshop operators, welders, shops dealing in spare parts and truck tyres, and petrol pump dealers.

Audhoo Timblo, a leading mine owner, said, "Just for the sake of correction of minor pollution, they have virtually killed the mining sector. In the name of environment, NGOs have killed the livelihoods of people. They are not from the mining belt. They are sitting in AC towers in Mapusa and Panaji. Goa is in deep crisis economically."

Goa also saw its VAT collection dip by Rs 250 crore in 2012-13. Goa chief secretary B Vjayan said VAT collection, projected at Rs 2,250 crore for the last financial year, had reduced to Rs 2,000 crore. The government also highlighted this in a repre-

sentation to the Prime Minister seeking a special financial package of Rs 3,000 crore to help Goa contain loss of revenue due to the ban on mining.

Prices of real estate that saw an unusual rise in the last few years in Curchorem, in south Goa's mining belt, largely owing to high levels of prosperity generated through the mining trade, fell following the closure of the mines and the resultant crisis. Prices of apartments also reduced drastically.

A 100 sq m 2BHK flat which cost Rs 34 lakh two years ago is now going for less than Rs 26 lakh. Analysts say reduced demand for housing has led to reduction in prices by at least 20-25%. Moreover, close to 200 flats are lying vacant in Curchorem alone, awaiting buyers, said sources in the construction industry.

"The mine owners have accumulated sufficient wealth from mining and some of them have invested in other countries. They should willingly accept the responsibility of taking care of the affected people until the mining activities resume," said Sanjay Dessai, an associate professor.

## Estimates of outstanding loans from the Goa mining industry were pegged at Rs 1,700 crore, a figure that led the govt to ask banks to go easy on loan repayments

perhaps the worst since 1850s when mining began in Goa.

Many have lost jobs and have no alternative but wait in the hope that there will be a turnaround. The worst-hit are truck owners who are unable to repay bank loans to buy the vehicles. Saif Gajendra Usgaonkar, who owns two trucks and looks after a family of eight, "I'll

ban began. These had around 3,500 people employed who too lost their jobs once the ban came into effect. Estimates of outstanding loans from the mining industry were pegged at Rs 1,700 crore, a figure that led the government to ask banks to go easy on the mining industry stakeholders in loan repayments.

South Goa's mining belt

The Economic Times, Delhi dated September 24, 2013

# New B-School Buzz: Sustainability Management

IIM-L plans two-year programme; others incorporate topic in regular courses

DEVINA SENGUPTA & SREERADH DASU MUMBAI

IIM Lucknow is all set to roll out a two-year programme on sustainable management in response to the demand for managers well versed in sustainability.

"India Inc is looking for more managers who can tackle environmental problems, social and human rights issues, developmental economics and corporate social responsibility," says Sushil Kumar, chairman centre for business sustainability.

Managers are now required to enter a business environment wherein

companies display a greater commitment to corporate social responsibility (CSR). Under the new Companies Act, 2013, profitable companies with a sizeable business have to spend, every year, at least 2% of three-year average profit on CSR projects.

The cut-off for IIM-L's programme will be the same as the regular management programme in terms of CAT scores, says Kumar. The first batch of 45 students will graduate in 2016 (2014-2016). For the course structure, IIM-L has consulted global universities like Kelly School Of Business, IMD Business School, Switzerland and Copenhagen Business School, where sustainable management is a two-year programme. It has also exchanged notes with University of Toronto, which plans to start a similar programme in 2014.

Till date, sustainable management and related aspects have been part of the regular business management programme or covered under the one-year executive MBA. But the



course has now seen an increase in demand, given the greater awareness about sustainability and environmental issues. Also, job opportunities in CSR and sustainability are now greater, says PD Jose, associate

professor, corporate strategy and policy area for IIM-B.

The increased awareness is reflected in the BSE's recent launch of two indices called, 'Greenex' and 'Carbonex', evaluating several green operational parameters including carbon performance, says Disha Kamdar, senior associate dean-academic programmes at Indian School of Business. The institute, which started with a course in green technology in 2008, is offering three courses this year, including total quality management and lean production, sustainable business operations: value creation and environmental considerations.

Environment and development ranks among the first two courses taught in IIM Calcutta. The oldest IIM has now started an elective called Sustainability Marketing for the executive MBA batch and faculty for the course has been roped in from German B-school ESMT. Courses on corporate environmental sustainability and corporate citi-

zenship are gaining in popularity among students.

IIM Kozhikode, on its part, teaches environment management, social transformation in India.

However, not everyone is convinced about the need for an exclusive two-year MBA programme of sustainability. "One needs to be very cautious in launching such programmes. For one, it is not very clear whether a large cohort of students will find suitable career opportunities immediately," says IIM-B's Jose.

Further, it should be a part of every module, says professor Anuj Sinha, the coordinator of the Centre for Development and Environment Policy, who teaches an elective course on Sustainable Development at IIM-C. "It is like the issue of 'gender' - it is not a separate discipline, but is essentially about something fundamental - the relationship of human beings to nature," he says.

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The Times of India, Delhi dated September 24, 2013

# Popular eateries under green lens

DPCC Compiling Data On Licences Obtained

Jayashree Nandil/TNN

New Delhi: The National Green Tribunal's closure order to 34 restaurants in Hauz Khas Village has cast the spotlight on a thousand others which may also be discharging untreated waste water and grease into city sewers.

The Delhi Pollution Control Committee has no count of how many restaurants have obtained its consent. "We are in process of compiling the data," said an official. But restaurant owners and trader associations say few restaurants have taken consent or installed effluent treatment plants.

Every restaurant needs a "consent to establish" and a "consent to operate" from DPCC. "The consent to operate involves some paperwork and effluent parameters are tested. Restaurants need to pay a fee to DPCC for the analysis and often for monitoring of effluents for the next five years. DPCC issues a licence after that," says Prakul Kumar, secretary general, National Restaurant Association of India.

As per DPCC rules, any restaurant with fewer than 36 seats has to have a grease trap and one with more than 36 seats needs to install an effluent treatment plant. "I am not sure how many restaurants in Delhi have taken consent from DPCC but our association has been telling all members to comply," Kumar said. NRAI has approached MoEF and DPCC to raise the size criterion for ETPs from 36-seater restaurants to 100-seater ones.

"DPCC's permission is a



NOT THE SOLE OFFENDER: Several restaurants in the capital are flouting pollution norms, say trader associations

must and we know that. Many of our restaurants are on the first floor where installing an ETP is difficult. We are quite worried and want to make sure we comply with all requirements. The plan of constructing ETPs is also linked to the Khan Market redevelopment plan," said Sanjiv Mehra, president of Khan Market Traders

**The association has approached MoEF and DPCC to raise the size criterion for ETPs from 36-seater restaurants to 100-seater ones**

Association.

Aseem Grover, a restaurant owner in Khan Market and member of KMTA, added that DPCC staff has briefed them and NDMC is trying to integrate these aspects in the Khan Market redevelopment plan. "Most of the restaurants here have grease traps and ETPs

and our larger plan is to make the sewer lines bigger and increase their carrying capacity," he said.

"We mainly have fast food joints here, so they don't need ETPs. Most have grease traps," said Pramod Sharma of Sarojini Nagar Market Association.

Scientists and water experts said that discharging untreated waste water can have a serious impact on both sewers and lake or river water. "Grease has a clogging effect in sewers. Food waste will further block them. Some restaurants also discharge chemicals which can have a harmful effect. So there can be no question of discharging water without treating it," AK Gosain, professor of civil engineering, IIT Delhi, said. Discharge from restaurants also has a lot of organic matter which increases the biochemical oxygen demand in water. It also releases nitrogen which can be very bad for lakes, AK Mittal, associate professor, IIT Delhi, said.

Deccan Chronicle, Hyderabad dated September 24, 2013

# Rains dilute lake pollutants

DC CORRESPONDENT HYDERABAD, SEPT. 24

**Vizag not polluted**

The AP Pollution Control Board's report, released on Tuesday, stated that the heavy downpour during the time of immersion of Ganesh idols (on September 18) led to an increase in the water level in Hussainsagar. This also resulted in dilution of its pollutants.

The baseline concentration of Chemical Oxygen Demand in Hussainsagar on an average is 90mg/L. But an additional 50mg/L of COD was added due to the immersion of Ganesh idols. The presence of heavy metal concentrations is insignificant, about 0.1mg/L.

The Biochemical Oxygen Demand (BOD), Dissolved Oxygen, Total Dissolved Solids and pH values also remained normal, with a point increase or decrease.

The report also stated that at the midpoint of the lake, near the Buddha statue, the water quality had not shown any negative impact on these parameters due to immersion of idols. The water quality is

● Meanwhile, amidst furore by environmentalists, NGOs and green warriors, the ministry of environment and forests, has declared that Vizag is not a critically polluted area. The MoEF also lifted a moratorium it had imposed in 2009 on the industrial expansion in Vizag along with nine other industrial clusters across the country.

being constantly monitored by the APPCB for further assessment.

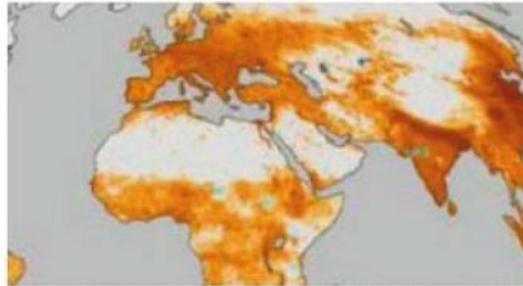
On the eve of Ganesh Chaturthi every year, APPCB conducts water quality monitoring of the Hussainsagar to find out the effects of immersion. This year, the immersion of the idols took place on September 18. "We collected samples before, during and after the Ganesh idol immersion. We will also collect samples after 30 days of the immersion," said Prasanna Kumar, a social scientist at the APPCB.

*Deccan Chronicle, Hyderabad dated September 25, 2013*

# India among 'deadliest' on world pollution map

Washington, Sept. 24: India has emerged as one of the most polluted countries in the world, according to a new atmospheric pollution model jointly designed by earth scientist Jason West of the University of North Carolina and US space agency Nasa.

Information from the model described the deadly effects of PM2.5, or particulate matter, emitted from car exhausts and other industrial units. This fine 'dust' in the atmosphere is the primary reason behind some 2.1 million deaths per year, worldwide. Experts have also linked PM2.5 with asthma, lung disease and even heart attacks, due to



The pollution map by Nasa and Jason West shows India, East Asia and Western Europe as most polluted.

lack of sufficient oxygen. India figures prominently on the 'pollution map' with the country almost entirely enveloped in the darkest colouration — indicating death rates as high as 1,000 deaths per 1,000 square

kilometers. Other polluted regions of the world include, vast regions in Europe, Southeast Asia and most of Japan. These regions are also heavily urbanised areas. — Agencies

# Spinning CDs to clean sewage water

© Wavebreak Media LTD/Wavebreak

Washington: Wondering what to do with your obsolete audio CDs? Researchers have come up with a practical application: they can be used to break down sewage.

"Optical disks are cheap, readily available, and very commonly used," said Din Ping Tsai, a physicist at National Taiwan University. Close to 20 billion disks are already manufactured annually, the researchers noted.

Tsai and his colleagues used the large surface area of optical disks as a platform to grow tiny, upright zinc oxide nanorods about a thousandth the width of a human hair.



## USING E-WASTE TO CLEAN UP

Zinc oxide is an inexpensive semiconductor that can function as a photocatalyst, breaking apart organic molecules like the pollutants in sewage when illuminated with UV light.

As the disks are durable and

able to spin quickly, contaminated water that drips onto the device spreads out in a thin film that light can easily pass through, speeding up the degradation. The team's complete water treatment device is approximately one cubic foot in volume. The device also consists of a UV light source and a system that recirculates the water to further break down the pollutants.

The team tested the reactor with a solution of methyl orange dye. After treating a half-litre solution for 60 minutes, they found that over 95% of the contaminants had been broken down. ■

*The Times of India, Delhi dated September 25, 2013*



*The Times of India, Delhi dated September 25, 2013*

# 'Idea wasn't to close restaurants'

## GREEN NORMS

<b>DPCC'S SUBMISSIONS</b>	<b>POLICY ON RESTAURANTS, HOTELS AND DHARAS</b>
<ul style="list-style-type: none"> <li>▶ There are over <b>20,000 restaurants</b> in Delhi</li> <li>▶ <b>122</b> hotels have been show-caused</li> <li>▶ <b>32</b> have got closure notice</li> <li>▶ One closure notice issued in 5-star category to The Suryaa Hotel</li> <li>▶ Closure notice issued to Chelmsford Club and National Sports Club of India</li> </ul>	<ul style="list-style-type: none"> <li>▶ The policy is based on the ministry of environment and forests <b>2009 notification</b> on effluent standards</li> <li>▶ After the policy came in force, DPCC had given a deadline of <b>Jan 2013</b> for everyone to take its consent</li> </ul>
<b>What does the policy say about restaurants with over 36 seats?</b>	<ol style="list-style-type: none"> <li><b>1</b> They should have an effluent treatment plant, including a proper oil and grease trap and must comply with MoEF standards regarding discharge into public sewers</li> <li><b>2</b> The 2009 MoEF notification says if restaurants are connected with municipal sewerage system leading to a common sewage treatment plant, they must have proper oil and grease traps and comply with waste standards stipulated by MoEF</li> </ol>

Jayashree Nandi | TNN

New Delhi: The National Green Tribunal made it clear on Tuesday that the "idea was not to close down restaurants" but to strike a balance, making sure that the establishments follow regulations and do not discharge untreated wastewater into sewers.

The courtroom was packed with restaurant owners who kept pleading with the bench to allow them to reopen their restaurants. The bench reserved its decision for Wednesday and assured restaurant owners that they will "speed up" the process

via an "early hearing".

While many restaurant owners were emotional and said the crackdown had hurt their trade and the livelihoods of their employees, the bench asked them to formally submit applications required to include them as party respondents in the case.

The member secretary of Delhi Pollution Control Committee, Sandeep Mishra, who was summoned by the bench in the previous hearing, made a detailed submission on the status of enforcement of the policy for restaurants and hotels. He said approximately 20,000 restaurants were run-

ning in the city out of which only 122 had been given show cause notices and 32 served closure orders. Strangely DPCC did not have data on how many restaurants had obtained its mandatory consent. DPCC's policy for restaurants and hotels was released in October 2012.

The bench said its interim order of closing all restaurants will remain in force and directed DPCC to inspect the eateries during the day to ascertain which of them have installed ETPs. "In some of these restaurants, meals cost up to Rs 5,000. For an ETP they have to pay barely Rs 1-2 lakh,"

Mishra observed. He also argued that the excuse that restaurants don't have space doesn't hold because ETPs can now be improvised and made to fit in a small space.

On Tuesday, all the restaurant owners who were present said they had either made purchase orders for ETPs or were planning on installing one. Two of them had already applied for DPCC's consent for operation on Monday.

The bench also directed that South Delhi Municipal Corporation, Commissioner of Police and Delhi Jal Board be made party respondents in the case.

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