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## Business Sustainability News

## International

### Climate change is a 'big business opportunity for the UK'

By Damian Carrington, for *guardian.co.uk*



A double rainbow over fields of crops in Hoxne, Suffolk.  
Photograph: Graham Turner for the Guardian

Climate change is a big business opportunity for the UK as it and countries around the world are increasingly hit by extreme weather, according to a government report published on Monday. The UK's first national adaptation plan sets out the risks to the UK, from floods to water shortages to higher food prices, as well as the economic opportunities.

"The UK is already one of the global leaders in this industry of the future and this market [for climate adaptation] is expected to grow by 5% or more year on year," said environment secretary Owen Paterson. "As the world's climate changes, Britain's expertise in areas such as weather forecasting, flood modelling, infrastructure and insurance are already coming to the fore to prepare us for the kinds of events we might see more often." The adaptation sector is currently valued at about £66bn a year, according to the Department for Environment, Food and Rural Affairs (Defra).

"Our agriculture continues to innovate, using advanced breeding techniques to produce new crops that can thrive even when the weather seems to be against us. Looking ahead, genetic modification has the potential to make further crop improvements," said Paterson. "Managing our natural resources in innovative ways, is backed by the kind of world class science and engineering skills that we can be proud equip the UK to succeed in the global race."

The report cites the example of the 2011 floods that devastated Thailand, which is now developing its flood and water management. "This is a high-value business opportunity (approx £1.9bn)," the report said. "The government promotes and supports UK companies to access these opportunities."

The report also lists the many risks posed to the UK by climate change and lists scores of planning and development actions that need to be taken to ensure the energy, water, health, travel and business sectors are able to function in the future. The greatest risks identified are from increased flooding and also water shortages, as rainfall is expected to become more intense as the climate warms.

"The cost of expected annual damage to residential properties alone from tidal and river flooding in England and Wales is projected to increase from £640m at present to over £1.1bn by the 2020s," said the report, which also sets out the flood risk to power plants, roads and railways, schools, emergency services and hospitals.

The government cut flood defence spending by over 25% year on year in 2010 but has now pledge to restore and increase funding from 2015. Today's report highlights the effect on mental health of flooding, which are frequently both emotionally and financially traumatic. Sewer overflows are also identified as a risk: beaches have already become more polluted after recent wet weather washed more untreated sewage into the sea.

The converse of intensifying rain is periods of drought, and the report states that by the 2050s between 27 million and 59 million people in the UK could be living in areas affected by water shortages. The report emphasises the use of water efficient toilets and taps.

The report identifies a wide range of other risks, such as increased food poisoning in warmer weather. It says information is lacking on the impact of more severe and frequent heatwaves on cities and the impact of greater UV sunlight exposure on cancer rates. Another risk is to Wi-Fi internet access and other communications because higher temperatures can reduce the range of wireless communications, rainstorms can impact the reliability of the signal, and drier summers and wetter winters may cause greater subsidence, damaging masts and underground cables.

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## Fracking: some inconvenient truths

By Richard Seymour, for [guardian.co.uk](http://guardian.co.uk)

It's mouth-watering. There may well be more natural gas stuck in our shale rock than we ever thought possible – a whole decade's worth. This is excellent news, in a way, because in addition to the money (and don't belittle the money), this gives the UK an energy resource that can ensure it against sudden spikes in import energy prices – like whenever we start a war.



Anti-fracking protesters make their point at the G8 summit in Northern Ireland. Photograph: Rex Features/Press Eye Ltd

There is just one small problem. Hydrochloric acid. Well, there are actually quite a few chemicals involved, but this one eats through bones. Essentially, fracking involves drilling into shale rock deep underground, injecting high-pressure solution

into the rock in order to create fractures and unleash all that bounteous natural gas. In this solution is included a mixture of toxic chemicals and carcinogens.

In itself, no one objects to shale rocks being subjected to such an assault. The problem is that they don't simply stay where they are, but begin to pollute the nearby environment. Some might reassuringly argue that the chemicals comprise only a small amount of the liquid. As the bland press releases and blurbs insist, over 99% of the fluid is water and sand. But the problem is, even if this statistic is correct – there would be no way of knowing, since it isn't regulated – you have to use a lot of it per frack, and you need to frack a few times in order to fully exploit the gas reserves. A single frack can require anything from 180-580 cubic metres of the toxic chemical mix. And most of the chemicals are not subsequently removed but rather tend to disappear into nearby groundwater, along with some of the gases. Methane, for example, has been found in dramatically elevated concentrations in nearby drinking water.

This has led to some shocking phenomena, as George Monbiot has pointed out: The documentary [Gasland](#) shows people turning their taps on and setting light to the water. In some cases, gas bubbling up from underground fractures has caused explosions in the basements of people's homes. There are many health and environmental implications of fracking, but flammable tap water appears to be an indubitably serious drawback.

This is not a new kind of problem. Every time a new natural resource is located, there are a series of potential social and environmental costs which can call into question the benefit of actually exploiting the resource. The "resource curse" hypothesis describes how the combined effects can potentially be more harmful, even in simple economic terms, than good.

The standard response to such dilemmas is to call for regulation and restrictions on production, which can be useful. However, it may just be that at a given moment the costs are too high to proceed with exploiting the resource. This perhaps raises another type of question: how should we value resources?

There are presently two simple, yet obviously unsatisfactory, ways of doing so. The first is pricing, which simply tells you how much you can sell a good for relative to the costs of production, and therefore whether you can turn a profit. The second is GDP, which is stimulated by all sorts of misfortunes from burglaries to natural disasters due to the economic activity entailed. Neither form of information is adequate.

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## Tips:

Paper has become the most essential in our lives. Be it stationery, packaging, magazines and newspaper, everywhere paper is being used. We have discussed in earlier issues that manufacturing paper involves lot of water and tree products, and these are to be conserved. The trees are being cut to fulfill needs of timber, firewood, paper etc. Therefore we should make every effort to conserve forests and water.

- Read newspapers and magazines online this will save you money as well as result in savings of paper.
- Copy only those materials that you need unnecessary printing will waste toner as well as paper.
- While taking printout as far as possible print double sided.
- Print single-spaced drafts of documents and double-spaced copies for final versions only.
- Often it is seen people take print out and then make corrections before they take final print out, instead use the "Print Preview" function to view documents before printing.
- Ensure to reuse paper that has been printed on one side, as scratch or note paper.
- Edit documents on screen rather than printing copies.
- Save files and e-mail messages electronically in computer, pen drive, rewritable CD/ DVD, external hard disc etc. Don't print hard copies of everything.
- Ask your credit card provider to send their bills electronically by mail rather than asking for hard copies through post or courier.
- Banks have started green channels about a year ago under this the amount can be deposited, withdrawn or transferred from our account by swiping ATM cum debit card. This saves us from the trouble of filling cumbersome filling of forms on one hand and on the other it saves paper. Above all it is much faster
- Do not destroy paper as the same can be recycled and reused. By burning paper we also pollute the environment.



## China's environmental future: The power of the people

By Elizabeth C. Economy

**China faces** a deep and enduring environmental crisis. Less than 1 percent of the country's 500 largest cities meet World Health Organization clean-air criteria. More than one-quarter of China's land is either desert or facing desertification. At least ten provinces are below the World Bank's water poverty level, and up to 40 percent of China's rivers are reported to be seriously polluted (20 percent are so polluted that the water is too toxic for human contact). In conjunction with ongoing crises—Beijing being enveloped in smog; more than 16,000 dead, diseased pigs floating down Shanghai's Huangpu River; reports of toxic cadmium-laced rice being sold in Guangdong Province—it's no wonder there are serious questions about the effectiveness of the Chinese government's efforts to balance economic growth and environmental protection.

China's leaders say they recognize the challenge at hand. In a 2011 editorial, Environment Minister Zhou Shengxian said the "depletion, deterioration, and exhaustion of resources and the worsening ecological environment have become bottlenecks and grave impediments to the nation's economic and social development." And former Premier Wen Jiabao acknowledged in March 2012 that the government had failed to meet most of the environmental targets in China's 11th five-year plan, including reductions in energy intensity, nitrogen and sulfur dioxide, and water-pollution measures. Leaders are well aware that the state of the environment is a leading cause of social unrest, as well as one of the most important contributors to a range of public-health issues ranging from respiratory disease to cancer and developmental delays and deficiencies. And it hurts the economy: a study by the Chinese Academy for Environmental Planning (CAEP) estimated the cost of pollution spills, deteriorating soil, vanishing wetlands, and other environmental issues at 3.9 percent of Chinese GDP in 2008.

Yet Beijing's response to these challenges is far from sufficient. Investment in environmental protection continues to hover around 1.3 percent of GDP, but according to a 2007 CAEP report, roughly half of this money is lost through local corruption or the allocation of environmental funds to nonenvironment-related projects.<sup>1</sup> 1. Chinese Academy for Environmental Planning (2007) as cited in Stephen Chen, "Pollution-reduction efforts inflated due to outdated rules, study says," *South China Morning Post*, scmp.com, February 16, 2007. And despite official policy, one recent academic study found that local officials are rewarded more for investing in infrastructure than for making environmental protection an explicit priority. Year after year, the government sets impressive targets for pollution reduction, launches massive campaigns to divert or clean up rivers and reforest degraded land, invests in renewable energy and technologies, and undertakes experiments with eco-cities. And year after year, there is the same poor outcome: the environment deteriorates.

**Well-informed and highly engaged activists are pushing China's government to do more.**

Fortunately, the Chinese people are pushing the government to do more. They have recognized that these environmental problems are systemic and, through their activism, are laying the foundation to transform China's environmental protection.

As a first step, the Chinese people appear to recognize that good environmental policy depends upon open and accurate environmental data. Nongovernmental organizations such as the Institute for Public and Environmental Affairs are pressing Chinese cities to adhere to regulations requiring them to publish pollution statistics. One Chinese lawyer is pushing for the Ministry of Environmental Protection to release the results of its soil pollution survey, which it has deemed a "state secret." The media is producing eye-opening, in-depth investigative reports on environmental problems such as water pollution. And in 2012, Beijing and other cities were forced to reveal levels of hazardous particulate material air pollution after the United States embassy and consulates tweeted data and ignited an Internet firestorm among the Chinese public, which demanded that the government provide the statistics.

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## Tidal power from Pentland firth 'could provide half of Scotland's electricity'

By Damian Carrington, for *guardian.co.uk*

The world's best site for tidal power, the Pentland firth, could provide half of Scotland's electricity, according to the first robust estimate of its potential. The tidal streams, which surge through the firth at five metres per second, could bring large amounts of renewable energy in reach within a decade if enough government support is available, said the Oxford University engineer behind the new study.



From Anglesey to the Severn estuary to Portland Bill, the UK has the greatest potential for generating predictable,

clean energy from tidal channels. Turbines are already operating at Strangford Loch in Northern Ireland and prototypes are being tested in the Menai Straits off Anglesey.

But the Pentland firth is the greatest resource. "It is almost certainly the best site for tidal stream power in the world," said Thomas Adcock, at Oxford University, who led the new work published in the journal *Proceedings of the Royal Society A*. The water flow is rapid there because the tide shifting from the Atlantic into the North Sea is forced through a narrow eight-mile channel.

The engineers developed new models to find the technical and economic "sweet spot" between the extremes of bringing water in the firth to a standstill and having a free flow. They calculated that underwater turbines strung across the entire width of the firth could generate a maximum 1.9GW of energy, averaged across the fortnightly tidal cycle. That is equivalent to 16.5 terawatt hours of electricity a year, almost half Scotland's entire annual electricity consumption in 2011. As Scotland already produces 14.6Twh a year of renewable energy, a fully exploited Pentland would bring Scotland close to meeting its aim of 100% renewable electricity by 2020.

However, Adcock's estimate of 1.9GW is far lower than the Scottish government's published estimate of 14GW, making suggestions of huge exports of electricity seem unlikely. Adcock said those behind the high estimate were "in a minority of one" in the academic community: "We are happy our number is very robust."

Four licences have been issued by the crown estate to different companies to develop tidal power in the Pentland firth. But Adcock said the potential of the channel could be compromised by piecemeal development, because early projects could be affected by reduced flows when later projects come on stream. "We do have a really good resource but to get that out you have to plan it as one unit," he said.

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## Adaptation Services: A Brand New Industry Thanks to Climate Change

*SustainableBusiness.com News*

Adapting to a changing climate and mitigating the risks is already big business and it will only get bigger. Just through 2020, the annual market for "climate adaptation services" is estimated to grow 12-20% a year - a \$700-million market in the US and \$2 billion globally, concludes a study by Environmental Business International. Today's market is led by consulting & engineering and specialty firms working primarily for government agencies in analysis, risk management and planning, but increasingly it will tilt to project implementation and construction.

### Surge barrier planned for NYC:



the effects of climate change. Governments at the local, state, regional and national levels are in the midst of seriously considering its threat to public health and epidemiology, agriculture, power production, transportation, town planning, coastal protection, and water resources.

Some, like New York City, have moved beyond serious consideration to detailed scenario analysis, planning, even initial design and construction of preventative measures. It's

even opening a cleantech incubator that supports startups in this area.

Currently, cities are on the front lines of severe weather events and are more proactive than federal governments - two-thirds of cities around the world are actively planning for the impacts of global warming.

Hundreds of funded projects are already being steered to planning and project management firms with climate adaptation experience, if not a dedicated practice area, the study finds.

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## Dumping the carbon tax: easier said than done

By Lenore Taylor, for [guardian.co.uk](http://guardian.co.uk)

"Dumping" the carbon tax - the fixed price period of Australia's carbon pricing scheme - makes for a handy headline. But it would be much harder for a Rudd government to actually do.



The Greens leader, Christine Milne, has warned Kevin Rudd against creating uncertainty with the pricing of carbon. Photograph: [guardian.co.uk](http://guardian.co.uk)

That's why the Gillard government didn't do it some time back when cabinet examined this option in detail.

To start with, it would require legislation, which can't happen before the election since the parliament has risen and which the Greens leader, Senator Christine Milne -

alive for an opportunity for pre-election product differentiation - was quick to say she would not support.

That would leave a Rudd government, if re-elected, seeking support from the Coalition to change the carbon pricing legislation Tony Abbott has built his entire political persona on promising to repeal.

Also, the current legislation requires that, before the shift from a fixed price to a floating price can occur as planned in July 2015, the new Climate Change Authority must set an annual cap on pollution based on its assessment of what Australia's emissions reduction target should be.

The authority releases a draft report in October and a final report in February 2014 before announcing the first five years of annual caps in May.

That means if a Rudd government really hurried, the earliest it could feasibly start a floating price under the current arrangements would be July 2014 - one year before the price is set to float anyway.

That would probably mean Australia's price dipped to a lower international price at that time because when the price floats the Australian scheme is linked with the European Union scheme, where the price is currently around \$6 a tonne, compared with Australia's price of \$23, rising to \$24.15 next week. It would be a good outcome for business, but not for the budget, which would be down by several billion dollars worth of carbon permit revenue, unless Rudd also managed to wind back legislated compensation.

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## Seaweed biofuels: a green alternative that might just save the planet

By Damian Carrington, for *The Guardian*



Fast growing, carbohydrate-rich kelps could supply green biofuels. Photograph: Murdo Macleod

"It's best to get it out of the water now or it'll start getting grazed by the little beasties," says Lars Brunner as he hauls

50kg of glistening,

translucent kelp from the dark waters of the Sound of Kerrera into the boat. The long summer days mean the seaweed is rapidly storing up sugars, which snails and barnacles find delicious.

"You can eat it, but whether it tastes good is debatable," says Brunner. He is also after the sugars, but for a different reason. His work at the Scottish Association for Marine Science (Sams), with parallel projects in Ireland and Norway, is part of a growing worldwide effort aiming to turn the centuries-old seaweed industry into a major source of environmentally friendly biofuels.

The seaweed is farmed in a picture-perfect sea fjord that once hosted a fish farm, near Oban in Argyll, where craggy, green hills overlook the loch. "It's a very good site," says Brunner. "It has really nice currents; the seaweed needs the water to flow over the blades so they can capture the nutrients they need."

Many millions of pounds are being invested in seaweed research from Vietnam to Israel to Chile because producing biofuels in the sea removes at a stroke many of the serious problems with conventional biofuels. Though important as greener alternatives to oil, many biofuels are produced from food crops, such as corn and sugar, which drives up global prices in a world where a billion people are already hungry. Biofuel production also consumes increasingly scarce freshwater and the worst examples – those from palm oil – can produce more carbon dioxide than diesel.

"Seaweed does not have any of those problems," says Phil Kerrison, another marine scientist, back at the Sams labs. Seaweed farming has even been shown to clean up the pollution from fish farms and kelp grows far more quickly than land plants, turning sunlight into chemical energy five times more efficiently.

Kerrison pulls a square of plush red carpet from a tank, strewn with the tan-coloured kelp. "Carpet is very good as a growth substrate," he says. "It has a rough surface, but then it also holds a lot of water making it very heavy and putting strain on

the moorings." His task is to find the best material to farm the seaweed on, but he is cautious of revealing too much as there are significant commercial interests at stake.

"It could definitely be a large scale energy source," he says. "Modern cars can already take 10% ethanol, so you already have a way of using it and you are already filling up cars with biodiesel from land crops, so why not seaweed?" Many see huge potential, with the UK government already including up to 4,700 sq km of seaweed farming cultivation in its future energy scenarios and another study finding it could in theory supply the world's needs several times over. Seaweed can be used to produce ethanol, which can be mixed with petrol, or methane, the main component of the natural gas heating the UK's homes.

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## Talking trash: Carbon Trust to recognize leaders in waste management

By James Murray

The Carbon Trust has revealed plans for a new waste standard designed to help businesses demonstrate that they are measuring and managing down their waste levels in a responsible manner.

The new international standard was announced to coincide with the fifth anniversary of the Carbon Trust's Carbon Standard, which has seen more than 650 organizations

independently verify that they are measuring and reducing their greenhouse gas emissions year-on-year.

The proposed waste standard will be modeled on the Carbon Standard and the recently introduced Carbon Trust water management standard. However, a spokesman for the company said organizations obtaining the new standard will have to demonstrate they are managing waste effectively and not simply reducing waste levels.

"Waste management is about more than just reducing waste tonnage," he explained. "It is about moving up the waste hierarchy so that you are reducing or reusing waste where possible. Gaining the waste standard will not be as simple as reducing waste tonnage. Organizations will have to be able to show they are managing the waste stream."

The not-for-profit company is planning to pilot the standard with a number of organizations over the summer before getting the final methodology signed off by its standards board. The standard then should be officially launched alongside the announcement of the first wave of organizations to obtain the label during the autumn.

Tom Delay, chief executive of the Carbon Trust, said the new standard would help companies demonstrate that they are managing their waste in responsible manner, while also promoting waste management processes that help to cut costs and improve environmental performance.

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## 10GW And Climbing – US Crosses Another Solar Threshold

### *SustainableBusiness.com News*

The United States is the fourth country in the world to reach the milestone of 10 gigawatts (GW) of installed solar photovoltaic (PV) capacity - a pretty big milestone.

**In the first half of 2013, 1.8 GW of solar PV was added,** bringing it over the threshold. "The US has now joined an elite group of maturing solar PV markets that have accumulated more than 10GW of installed capacity," says Christopher Sunsong, analyst at NPD Solarbuzz. "Only Germany, Italy, and China have more installed PV capacity than the US."

The rapid uptake of solar PV is being driven by the dramatic declines in solar system prices since 2011. Average installed system prices in the US have dropped from around \$6/watt two years ago to approximately \$4.25/watt for residential installations and \$3/watt for large utility-scale PV projects today.



Growth has also been stimulated by a range of state-level solar incentive programs – and nearly 40% of US capacity is within California.

"While the Far West and Mid-Atlantic states dominate the 10 GW installed, the Southwest and Southeast regions have recently made strong contributions," says Samsong. Other regions however, such as the Great Plains and Great Lakes, remain largely undeveloped, creating further market upside going forward."

Much of the capacity in the US has been installed recently: 83% of the 10 GW was completed within the past 14 quarters.

Solarbuzz forecasts 4.3 GW of new capacity over the whole of 2013 because of the large-scale solar projects coming online. Solarbuzz expects growth of 80% over the next 18 months, growing to 17 GW by the end of 2014.

Worldwide solar PV demand reached 15 GW in the first half of this year, roughly 9% higher than 2012, and cumulative solar PV installations are about 116.5 GW, according to SolarBuzz.

[<Source>](#)

## Cheap food is an addiction we must break

By Tobias Jones, for [guardian.co.uk](http://guardian.co.uk)

The brilliant American writer Wendell Berry once wrote that



Food for sale at a farmers market in London.  
Photograph: Graham Turner for the Guardian

"eating is an agricultural act". His point was that since we all eat, we're all responsible for the state of our agriculture. So if things are sorely amiss in our insane food chain, us munching consumers, as

much as producers and the demonised retailers, should shoulder the blame.

The main problem is that we've become so hooked on cheap food that we ignore the hidden costs: the poisoning of our land by pesticides; the consequent collapse of bee colonies, thus declining rates of pollination; the destruction of ancient woodlands and hedgerows; the mass slaughter of cattle because of ludicrous feeding practices that led to BSE – and, lest we forget, 176 people have died in the UK of the resultant Creutzfeldt-Jakob Disease. And the drugs metaphor is entirely appropriate since, like a dodgy dealer, many people have been cutting beef with horse to make it go further.

It's easy to make supermarkets, and Tesco in particular, the pantomime villains in all this. That, after all, is why an Armando Iannucci sketch once pretended Tesco had invaded Denmark, because it really does destroy local communities. In the town near where I farm in Somerset, there's no butcher, greengrocer or fishmonger thanks to the cathedral-like Tesco in the ghastly retail park. But in a way, supermarkets are only giving us what we want, and some of us need: food that's cheap as chips. Why else would every supermarket advert be about price?

With independent retailers decimated, small-scale producers don't know where to place their crops. At this time of year you regularly see someone walking from door to door with bulging bags of courgettes, chard or plums. They simply don't know what to do with them all. The advent of farmers markets helps a bit, but there's still no cheap, accessible marketplace for smallholders.

Us farmers, too, need to acknowledge our faults. Far too many of us have forgotten that, in the words of Berry, farming "is a culture at the same time that it is an economy". Farming's a way of life in which money is almost irrelevant. We're constantly bartering this for that, offering a piglet or firewood in return for a favour or two. It connects us to our local community in a deep way that pre-dates dosh. The very word "culture" derives from tilling the soil.

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## Cities Could Save \$70 Trillion Through Energy-Efficient Transportation

*SustainableBusiness.com News*

Serious investments in improving the energy efficiency of urban transportation systems would have a huge payback for cities around the world to the tune of \$70 trillion in savings, says the International Energy Agency (IEA).

The savings comes from money that no longer has to be spent on vehicles, fuel and infrastructure.

The need for cities to act is urgent, IEA says, because more than half the world's population lives in cities, which are already suffering from traffic jams that translate into billions of dollars in lost fuel and countless hours of productivity - aside from the negative impact they also have on environmental quality, health and safety.

"As the share of the world's population living in cities grows to nearly 70% by 2050 and energy consumption for transport in cities is expected to double, the need for efficient, affordable, safe and high-capacity transport solutions will become more acute," says IEA Executive Director Maria van der Hoeven.

"Urgent steps to improve the efficiency of urban transport systems are needed not only for energy security reasons, but also to mitigate the numerous negative climate, noise, air pollution, congestion and economic impacts of rising urban transport volumes."

Policy makers must take a long-term view to address the challenges, continues van der Hoeven. "Governments must think beyond individual technologies and electoral cycles, and consider how to build - and how to renew - cities that will accommodate and transport nearly 6.3 billion people by 2050," she adds. "We must plan infrastructure, logistics and energy systems now that make sense today and over the coming decades."

IEA's report, "A Tale of Renewed Cities," gives examples from more than 30 cities across the globe that illustrate the way forward.

New York saved 11 minutes off travel times after introducing express bus service and when Seoul reformed its bus system - reversing policies that encouraged crowding - both ridership and safety improved across the city. After revamping its urban rail system, Belgrade saw passenger levels triple in the first six months.

Based on their experiences, IEA recommends policies in three broad categories:

- "Avoid" policies that allow people to avoid travel altogether or avoid increasing transport-related energy consumption, such as incentives for telecommuting and better logistics technologies.
- "Shift" to policies that encourage citizens and commuters to start using more energy-efficient modes of transportation, such as public transit, walking, cycling or freight rail.

- "Improve" policies that lead to greater efficiency, such as more stringent fuel-economy standards and use of cleaner vehicles, including hybrids or plug-in electric cars or buses.

If these are fully implemented across the transportation sector, cities would save that \$70 trillion because that's how much less they would need to spend on oil, roads and other infrastructure and vehicles.

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## Catching up with P&G's sustainability optimist

**By Joel Makower**

Len Sauers is among the most optimistic people I know in the world of corporate sustainability executives. For years, I've watched him enthusiastically and relentlessly extol the commitments and achievements of his company, Procter & Gamble, where he is Vice President for Global Sustainability. I know a few other eternal optimists in the field — McDonald's Bob Langert comes to mind — but Sauers is right up there.

One might easily write him off as a corporate mouthpiece, someone paid to sing pitch-perfectly from the company's hymnal. But as I've watched and talked with Sauers over the past decade or so, I'm fairly certain that's not the case. Sauers not only believes deeply in his company and its sustainability mission, he cares deeply about it, too. He is part of a small corps of committed souls not often heralded in the world of corporate sustainability.

His unbridled optimism came through during two recent conversations — the first when I ran into Sauers at Fortune's Brainstorm Green conference in May, the second during a follow-up phone call last month.

First, some background: In 2010, P&G, the largest consumer packaged goods company in the world, announced a set of 2020 sustainability goals, an update to the goals the company set in 2007. The 2010 goals made four broad commitments: to power P&G plants with 100 percent renewable energy, use 100 percent renewable or recycled materials in all products and packaging, have zero consumer and manufacturing waste go to landfills, and design and sell products "that delight consumers while maximizing the conservation of resources."

As part of P&G's first sustainability goals, in 2007, was the goal of achieving at least \$50 billion in sales of "Sustainable Innovation Products" — those that have an improved environmental profile. To meet that threshold, products must

have a >10% reduction in one or more of the following indicators without negatively impacting the overall Sustainability profile of the product: a) energy, b) water, c) transportation, d) amount of material used in packaging or products, e) substitution of nonrenewable energy or materials with renewable sources.

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## Ingenious Ikea Shelter Could Replace Tents for Refugees

*SustainableBusiness.com News*

Between wars and natural disasters, a startling 43 million people are displaced from their homes, many living in refugee camps, and that number will only grow with more extreme weather coming.

The United Nations High Commissioner for Refugees, which provides canvas tents for about 3.5 million people, asked Ikea - the king of inexpensive, sturdy, assemble-it-yourself furnishings - if it could come up with a better shelter.

Tents offer "little comfort, dignity, or security," says Per Heggnes, Ikea Foundation CEO. Since they have no insulation, they are cold in winter and hot in summer, have no electricity or lights, and last only about six months.

### Ikea's Design

True to form, Ikea's structure arrives in four flat boxes and takes just four hours to assemble without any additional tools. At 188 square feet, it is twice the size of a tent, providing a comfortable space for five people, and lasts three years or longer.

Laminated walls provide insulation and simply clip onto a steel frame. Made from a lightweight plastic, Rhulite, they were developed specifically for his purpose. It allows light to enter during the day, but not at night when people need privacy.



"A main problem in camps is that at night, light sources from inside tents cast shadows onto the walls of the people living inside them," Johan Karlsson, Project Manager at Refugee Housing Unit, which is

manufacturing the components, told *Fast Company*. "In many locations this infringement on privacy is so strong that people prefer to live in the darkness, or even to abandon the tents when needing to use the light."

It also cuts the cost of building, assembling and shipping the 120-pound housing unit.

The shelter has to be light enough to be easily and cheaply transported and strong enough to withstand harsh conditions at refugee camps. "The design is to balance the mechanical properties such as UV, structural strength, insulation, cost and a very specific requirement for this application: privacy," Karlsson told *Fast Company*.

A sail-like metallic fabric attached to the roof provides the benefits of passive solar. During the day it keeps the inside cool, reflecting 70% of solar heat, and keeps it warm at night by sealing in the heat. A thin-film solar panel sits on top of the sail which provides energy for a light.

Other nifty features:

- the tough, rigid floor is actually the building's crate. It unfolds to provide a secure, insulated base that's raised off the ground, keeping insects and minor flooding at bay;
- a ventilated, fabric roof attaches easily and seals the building against weather;

- adjustable feet keep it off the ground and allow for uneven terrain;

Plans for a lockable door have so far been dropped because it adds too much to costs. They'd also like to add more solar capacity and a way to harvest pure water.

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## British company develops technology to recycle disposable coffee cups

By Rebecca Smithers, for [guardian.co.uk](http://guardian.co.uk)



*James Cropper plc has developed technology to recycle disposable coffee cups into high quality paper products, and is opening a £5m plant in Kendal, Cumbria. Photograph: Maitland PR*

The British company which makes the red paper for the Royal Legion's famous poppies has developed the world's first technology to recycle disposable coffee cups into high quality paper products.

Kendal-based [James Cropper](#), a specialist paper and advanced materials group, will on Wednesday open a £5m reclaimed fibre plant using the ground-breaking new technology at its Cumbria production mill.

Until now, the 5% plastic content of cups has made them unsuitable for use in papermaking. In the UK alone, an estimated 2.5bn paper cups go to landfill every year. James Cropper's recycling technology separates out the plastic incorporated in the cups leaving paper pulp that can be used in the highest quality papers.

The new facility is being inaugurated today by the Queen and the Princess Royal.

The plant's process involves softening the cup waste in a warmed solution, separating the plastic coating from the fibre. The plastic is skimmed off, pulverised and recycled, leaving water and pulp. Impurities are filtered out leaving high grade pulp suitable for use in luxury papers and packaging materials.

Mark Cropper, chairman of James Cropper plc, said: "Cup waste is a rich source of high grade pulp fibre, but until now the plastic content made this product a contaminant in paper recycling. Our technology changes that and also addresses a major environmental waste problem and accompanying legislation. We are greatly honoured that Her Majesty the Queen and The Princess Royal are joining us on the occasion of our new plant opening."

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## Australia to Build First CO<sub>2</sub> Capture for Algae Biofuel

By News Editor in Energy,

SYDNEY, Australia, July 5, 2013 (ENS) – In a world's first, Algae.Tec has signed a deal with Australia's largest power company to site an algae carbon capture and biofuels production facility beside a big coal-fired power station near Sydney.

Owned by the New South Wales government, Macquarie Generation has signed an agreement to site the Algae.Tec facility next to the 2,640 megawatt Bayswater coal-fired power station in the Hunter Valley in New South Wales.



Bayswater coal-fired power plant  
(Photo courtesy Macquarie Generation)

The announcement was made July 2 by NSW Resources and Energy Minister Chris Hartcher in the presence of Macquarie Generation CEO and Managing Director Russell Skelton and Algae.Tec Executive Chairman Roger Stroud.

"We are always keen to support the development of a clean and viable biofuels industry – especially when that industry continues to be such an important source of employment for regional New South Wales," said Hartcher.

"This deal is an innovative means of capturing and reusing carbon emissions and providing the Hunter region with a locally produced green fuel source," Hartcher said. "It's designed to deliver a new source of aviation fuel so Australia doesn't have to import so much of its aviation fuel."

"This innovation offers great promise for an industry vital to NSW, giving it a long term and sustainable future," said Hartcher.

Algae.Tec Ltd, founded in 2007, is an Australian company that has developed a high-yield enclosed algae growth and harvesting system, the McConchie-Stroud System.

In the first phase of the A\$140 million project, slated to begin next year, 400 closed tanks will be filled with carbon dioxide emitted from Bayswater to stimulate the growth of the algae inside.

The bioreactors, about the size of shipping containers, are designed to grow non-GMO algae on an industrial scale for biofuel production to replace fossil fuels.

The resulting algal oil, a form of vegetable oil, will be converted to biodiesel and hydrogenated to grade A jet fuel at the new biofuels production facility, while waste vegetable matter will be converted into pellets for cattle feed.

Macquarie Generation CEO and Managing Director Russell Skelton said, "Our agreement with Algae.Tec is another example of MacGen finding creative ways to improve our business and improve our environmental performance. Its new technology is improving a traditional power plant."

Carbon pricing, commonly referred to as a carbon tax, was introduced by the Gillard Government on July 1, 2012. It



New South Wales Resources and Energy Minister Chris Hartcher holds up a beaker of algae oil for reporters at the signing announcement, while developer Roger Stroud looks on, July 2, 2013 (Photo courtesy Algae.Tec)

requires businesses emitting over 25,000 tonnes of carbon dioxide equivalent emissions annually to purchase emissions permits.

The price of carbon in Australia rose to A\$24.15 (US\$22.27) a metric tonne on Monday, following an indexed rise in the federal government's carbon tax.

"Carbon is now our single largest cost," said Skelton. "This technology should reduce our carbon output, reduce our carbon bill, and at the same time improve our bottom line."

The Algae.Tec project will make a "small but measurable difference" to Bayswater's greenhouse gas emissions, says the algae company.

Bayswater now pumps out about 19 million tonnes of carbon dioxide gas a year; the project will capture about 270,000 tonnes of that CO<sub>2</sub>, ramping up to about 1.3 million tonnes after a few years.

The centerpiece of the New South Wales energy system, the Bayswater plant burns roughly 7.5 million tonnes of coal per year and delivers power to eastern Australia, from South Australia to Northern Queensland.

Stroud said algae biofuels will offer New South Wales and Australia a new level of fuel security.

"At a time when all the petroleum refining capacity is closing down in New South Wales, this is the beginning of an era of renewable fuel which can be 'grown' in the state and can substitute imported petroleum products," Stroud said.

Added benefits of the deal are the creation of hundreds of regional jobs in a new and emerging industry for the Newcastle and Hunter region.

"With this announcement today, New South Wales stands out as a global leader in the adoption of renewable technologies that makes our existing power generation infrastructure cleaner and produces valuable fuel oil," said Stroud.

The Algae.Tec solution requires less than one-tenth the land footprint of pond growth options, while its enclosed module system is designed to deliver the highest yield of algae per hectare, and solves the problem of food-producing land being turned over for biofuel production, he said.

Stroud said this deal reflects a genuine desire on the part of the New South Wales Government and the state's power industry, to support solutions to mitigate carbon dioxide emissions from fossil fueled power stations.

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## Ships that Run on Wind & Steam Set for Comeback

*SustainableBusiness.com News*

The hybrid car may be the latest thing in road transport, but hybrid ships that combine sail and steam were plying the oceans in the 19th century – and they're set for a comeback.

Rolls Royce – better known for luxury cars and aero engines – is developing a ship that uses sails to cut emissions and soaring fuel costs.

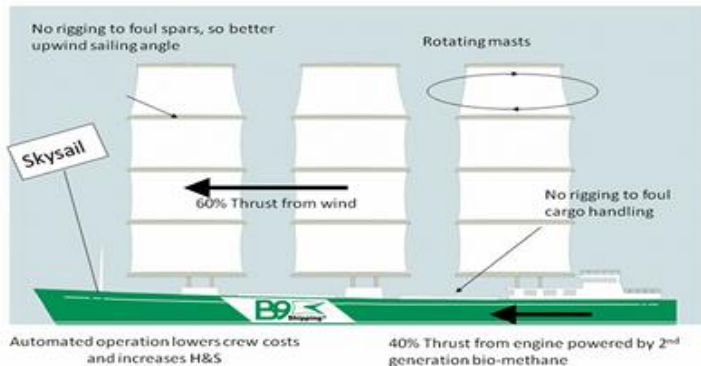
Today, the shipping industry contributes almost 3% of global greenhouse gas (GHG) emissions, because of the dirty bunker fuel that powers most of the world's ocean-going fleets.

A ship under development can carry 4500 tons fueled by an 180-foot sail and backed up by bio-methane engines.

"We're at the dawn of a transition," Oskar Levander, vice president for innovation at Rolls's marine unit, tells Bloomberg. He predicts a switch from high-polluting bunker fuels to alternatives such as dimethyl ether and liquid natural gas, as well as "high-tech wind".

Rolls Royce is working with B9 Shipping, a Northern Ireland-based firm, on the hybrid ship, which will be 330-feet long and will be primarily powered by a Dyna-rig automated sail system.

The company says all the technologies needed are proven and readily available. The Dyna-rig sail system was originally conceived in the 1960s by German hydraulics engineer Wilhelm Prolls and was first used by Italian shipbuilder Perini Navi in its 289-foot clipper, The Maltese Falcon, which made its maiden voyage in 2006.



The free-standing and free-rotating system has no rigging and comprises numerous relatively small sails that are operated electronically from the bridge. This allows them to be trimmed quickly to maximize wind power and turned out of the wind in the event of sudden squalls.

Rolls Royce will provide a back-up power plant based on its Bergen model, which can burn methane produced from municipal waste by another unit of B9 Energy Group. The sail and engine can also be used together for optimal efficiency.

While the hybrid design increases upfront capital costs, B9 says the pay back is 3-5 years for a ship with a 30 year lifespan.

The shipping industry faces tighter controls on sulfur emissions from the International Maritime Organization. These require owners to use clean but more expensive grades of fuel. Trimmer designs and hybrid power systems offer a potential 55% efficiency gain, according to B9's Diane Gilpin.

"Operational budgets are trumping build costs at the moment," she says, adding that B9 is seeking £15 million (\$22 million) to put a ship in the water within two years.

The cruise industry is notorious for its unregulated emissions and garbage disposal. Some like Norwegian Cruise Lines, which introduced carbon offsets last year, are trying to slowly change some business practices.

[<Source>](#)

## Sea turtle conference addresses Great Barrier Reef sickness spike

**Rangers and scientists gather to explore ways of curbing threats that led to soaring number of strandings in recent years**

By Oliver Milman, *theguardian.com*

Pesticides, cyclones and boat strikes have been blamed as causes of a worrying spike in the number of sick and dying sea turtles on the Great Barrier Reef.

A three-day conference being held in Townsville has gathered wildlife rangers, scientists, vets, volunteers and government agencies from across Australia to work out a way to curb threats to sea turtles.

According to Queensland government data, there has been a sharp increase in the number of sea turtles found stranded on the state's coastline.

In 2010, 808 turtles were found stranded, but the tally soared to 1,781 in 2011 and 1,510 last year. This year has so far seen a slight decrease in the rate of strandings, totalling 342 up until 30 June.

Cyclone Yasi, which destroyed vast tracts of seagrass – sea turtles' preferred delicacy – in 2011, caused many animals to starve to death. But the conference has heard that human factors have also adversely harmed the creatures.

Julie Traweek of the Sea Turtle Foundation, which rescues stranded turtles, said the animals faced multiple threats.

"We get a lot of sea turtles in with floating syndrome, where they can't dive, as well as lesions on their organs and brains caused by blood flukes," she said. "This is becoming more common. They can also suffer from tumours, which we know is from a strain of herpes but we're not sure what triggers it."

"We see tumour hotspots in Bowen, whereas they don't see it up on Cape York. They get a lot of turtles that ingest plastic in Benalla in NSW, but less so here."

"Chemical run-off is a problem, but we can't say that for definite. But we do see more problems in areas with lots of coastal development."

Traweek said green turtle numbers appeared to be stable, while loggerhead and hawksbill turtles numbers were "crashing." Although protected in Australia, hawksbill turtles are prized by hunters for their attractive shells when they migrate to Asian waters.



Loggerhead turtle numbers were said to be 'crashing'. Photograph: Getty Images

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## Food waste offers unforeseen benefits

By Paul Brown



Anaerobic digester in New Mexico, USA  
Image: US Department of Agriculture

***Disposing of food thrown away by those rich enough to be able to afford to do so is an expensive problem – but it can provide renewable energy and other benefits.***

Societies all over the planet are running out of holes in the ground in which to dump their waste, so they're under increasing pressure to find alternative solutions.

In the European Union one of the problem wastes is food – rich people buy too much in the supermarket and throw a lot away. This is a disaster for local authorities that have to find a way of disposing of it, and a problem for the planet because rotting food produces large quantities of methane, a global warming gas 23 times more potent than carbon dioxide.

Pressure to do something about the problem has been increased by ever-growing taxes on local authorities and companies who throw away waste in landfill, making it more expensive every year to rely on holes in the ground.

A successful solution to the problem has been found in Oxfordshire in England, which not only solves the waste problem but also produces gas to provide electricity and fertiliser for local farmers. One of the local authorities involved is the Royal Borough of Windsor and Maidenhead, which collects the food waste from Windsor Castle, one of Queen Elizabeth's favourite homes.

Each household in the borough puts its food waste into containers provided by the borough, which then collects them, takes them to a processing plant and turns the contents into a thick soup. Other organic waste from food processors, large supermarkets, restaurants and green waste from forestry, which would also go to landfill, is added to the mixture.

This is then fed into a sealed container, called an anaerobic digester, which is designed to allow bacteria – in the absence of any oxygen – to eat the waste, producing methane in the process. The methane is extracted, cleaned and used to generate electricity.

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## Hydrogen-powered ferry service launches in Bristol

By Steven Morris, for [guardian.co.uk](http://guardian.co.uk)

The developers of Hydrogenesis, billed as the UK's first hydrogen-powered ferry, are claiming that their rather more modest-looking vessel could help kickstart a new chapter in environmentally-friendly marine engineering.

The ferry service was officially launched on Thursday with skipper Richard Rankin carefully steering the boat past noisier, dirtier diesel ferries, pleasure cruisers and narrow boats. "She handles very well, she's quiet and clean," he said. "And we're surprised how efficient she is. We have a problem with pollution here. It's nice to think that this boat isn't contributing to that at all."



Hydrogenesis, the hydrogen-powered ferry operating in Bristol. The project has already attracted the attention of other cities, including London and Hanover. Photograph: Graham Turner for the Guardian

The 11m-long steel boat and the fuel cells that drive the vessel have been made mainly by companies based in south-west England and has received almost £250,000 funding from Bristol city council as part of its successful bid to win **green capital status**. The boat has been tested since February and has coped well with icy conditions during the winter and the current heatwave. Scientists, business leaders and politicians have taken trips on the ferry and, for the rest of the summer, members of the public will be able to enjoy the peaceful ride (the only sound is the hum of the gears changing and the gentle splash of water).

Green party councillor Gus Hoyt, the cabinet member with responsibility for the environment, said the boat was an exciting first for Bristol. "It will showcase Bristol, the UK and the world the benefits of a technology that produces zero emissions."

Hoyt said Bristol was determined to become a "laboratory for change", developing pioneering practices that could become a model for cities around the world.

The consortium behind the ferry, which includes companies running conventional boat operations in Bristol, are wary about spelling out how efficient the ferry is. It has been expensive to build the boat and the refuelling station. However, they say they expected to have to replenish the hydrogen tank every day but have only had to do so every four days. A drawback is that the hydrogen has to be brought in by lorry from Hull in north-east England, which increases the project's carbon footprint.

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## How technology has stopped evolution and is destroying the world

Doug Tompkins, founder of The North Face, on battles with Steve Jobs and why we need to dismantle our techno-industrial society

By Jo Confino, *Guardian Professional*



Doug Tompkins, founder of North Face and Esprit, has been instrumental in creating two huge nature reserves in Patagonia. Photograph: Aaron Black/Getty Images

It has become something of a mantra within the sustainability movement that innovations in technology can save the world. But rather than liberating us, Doug Tompkins, the cofounder of retail brands The North Face and Esprit, believes technology has enslaved us and is destroying the very health of the planet on which all species depend.

Tompkins, 70 has used his enormous wealth from selling both companies to preserve more land than any other individual in history, spending more than £200m buying over two million acres of wilderness in Argentina and Chile.

He challenges the view that technology is extending democracy, arguing that it is concentrating even more power in the hands of a tiny elite. What troubles him the most is that the very social and environmental movements that should be challenging the destructive nature of mega-technologies, have instead fallen under their spell.

"We have been poor on doing the systemic analysis and especially in the area of technology criticism," says Tompkins, who has been deeply influenced by former Norwegian philosopher Arne Naess, who called for a dismantling of the techno-industrial society.

"Until we get better at that, I think we're cooked, we're going to continue to extinct species and we're going to continue to dig the hole deeper of the whole eco-social crisis.

"If you just hold your cell phone for 30 seconds and think backwards through its production you have the entire techno-industrial culture wrapped up there. You can't have that device without everything that goes with it. You see mining, transportation, manufacturing, computers, high-speed communications, satellite communications, it's all there, you see and it's that techno-industrial culture that's destroying the world."

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## Great Barrier Reef's condition declined from moderate to poor in 2011

**Series of reports blames extreme weather conditions and high rainfall for reef's poor health**

By Oliver Laughland, *theguardian.com*



Extreme weather conditions have been largely blamed for the Great Barrier Reef's poor health in 2011. Photograph: Grant V. Faint/Getty Images

Extreme weather conditions have been largely blamed for the Great Barrier Reef's poor health in 2011. Photograph: Grant V. Faint/Getty Images

An alarming set of reports on the condition of the Great Barrier Reef published on Wednesday say its overall condition in 2011 declined from moderate to poor, and highlights that reef-wide coral cover has declined by 50% since 1985.

The series of reports blame part of the reef's poor health in 2011 on extreme weather conditions including tropical cyclone Yasi, and high rainfall which resulted in "higher than average discharge" from a number of river catchments runoffs.

The Great Barrier Reef report card of 2011 said: "These extreme weather events significantly impacted the overall condition of the marine environment which declined from moderate to poor overall in 2010-2011."

The report card also examines the water quality of the region, and showed that the majority of land managers within the Great Barrier Reef region had failed to reach their reef plan targets, aimed at reducing sediment and pesticide loads which are harmful to water quality.

"Thirty four per cent of sugarcane growers, 17% of graziers and 25% of horticulture producers adopted improved management practices by June 2011," the report said.

These reef plan targets are described as "ambitious" and include targets to halve nutrient and pesticide loads by 2013 and to reduce sediment by 20% by 2020. Despite this, the report observes "major positive change" in land management within the region.

The 2013 scientific consensus statement, released at the same time as the report card, concluded that coral cover of inshore reefs had declined by 34% since 2005.

The new environment minister Mark Butler said: "In spite of solid improvement, data tells us that poor water quality is continuing to have a detrimental effect on reef health.

"To secure the resilience of the Great Barrier Reef it is critical that we build on the momentum of the previous reef plan with a focus on improving water quality and land management practices through ambitious but achievable targets."

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## Philly sports aim to hit waste out of the park

By Paula Del Giudice



Over 120 million sports fans attended professional football, hockey, soccer and basketball games in the United States last year - that doesn't even include the millions of collegiate, high school and youth sports fans around the country. That's a lot of hot dog wrappers, soda cups, napkins, lights, water to flush toilets and water the fields, fertilizer to keep those fields green and cars to get fans back and forth. What a footprint! America's favorite pastimes, it seems, have the potential to be anything but green.

In the past few years, though, a lot is going on to change the game. Field managers, team and venue operations managers, owners, leagues and teams themselves along with their many partners are working together not only to improve their image but also to lessen their environmental impact.

Amazing success stories of energy and water savings, increased solid waste diversion rates and improvements in fan travel behavior across the country abound. One of the best places to look for them is where the movement, arguably, got started: Philadelphia, where the most aggressive greening sports activity began at the home of the National Football League's Eagles, Lincoln Financial Field. It was back in 2003, with the opening of a new training facility and the construction of a new stadium, that the ownership group took a serious look at their environmental stewardship responsibilities. They understood the opportunity to be good environmental stewards in how they operated their facilities and inspired their fans to take personal action.



The solar power array outside Lincoln Financial Field.

The impact in that stadium from those fans alone is significant. Each Eagles home game attracts over 70,000 fans. However, since the inception of their greening efforts, it is estimated that over 3 million pounds of waste have been

diverted from landfills, the electricity saved through their Go Green efforts would power 7,150 homes a year and their green purchasing efforts have saved over 6,000 trees. The energy efficiency efforts alone are stunning. One hundred percent of team operations is powered by purchased wind power and augmented by solar power generated onsite. The Eagles also partnered with PPL Renewable Energy to design and construct a 10 kW solar system at their NovaCare Complex, the team's training and practice complex near Lincoln Financial Field.

Image credits: Phillies' Citizen Bank Park/CC license by Jim Epler/Flickr; solar array/reprinted with permission by the Mayor's Office of Sustainability, Alex Dewes.

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## Labour unveils plan to promote food-growing culture in Britain

**Plant fruit trees on housing estates and vegetable patches in schools to address 'nutrition recession', party says**

By Fiona Harvey, [theguardian.com](#)



Mary Creagh, the shadow environment secretary, said councils should think creatively about promoting the growing of local food. Photograph: Will Oliver/AFP/Getty Images

The UK should have fruit trees blossoming around housing estates, schools with access to vegetable gardens and council allotments for growing fresh vegetables, Labour said on Wednesday

while setting out its strategy for the future of food policy. The vision of ways to bring food-growing to the masses

was accompanied by measures on reforming food-safety regulations and supporting more jobs in farming.

Mary Creagh, shadow environment secretary, recalled the measures taken by the post-war Labour government of Clement Attlee to green the new housing that was required all over the country, with an eye to wartime shortages, by planting fruit trees - cherries mainly in the north, apples more prevalent in the south - that provided a free source of much-needed fresh fruit in a time of austerity. She said councils should think "creatively" about social housing and other developments, to promote the growing of local food, as the UK was suffering from a "nutrition recession" that was being ignored by the coalition.

She said ensuring high-quality food for schools and hospitals must be one of the highest priorities: "We know how much of a difference this makes, so we should be taking steps to do something about it."

Creagh stopped short of advocating an allotment or vegetable garden for every school, because some inner city schools may need their scarce land for sports and play, but said that housing associations should be planting orchards rather than merely decorative trees such as larches and planes. Recent studies have suggested that the amount of fresh fruit and vegetables eaten by lower income families has plummeted during the recession, because of its high cost relative to mass-produced meals and fast food, and experts are worried about the effects on children and the obesity epidemic.

Labour also wants reform of food safety rules, by giving the Food Standards Authority new powers to order inspections into suppliers, aimed at preventing a repeat of the horsemeat scandal. Under the proposals, the FSA would be able to compel supermarkets to test their products and to reveal the results publicly, which is not the case at present.

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## Biofuels plant opens to become UK's biggest buyer of wheat

**Vivergo plant near Hull will take 1.1m tonnes of wheat a year to turn into ethanol and animal feed**

By Fiona Harvey, *theguardian.com*

A new biofuels plant that has opened today near Hull will be the UK's biggest buyer of wheat, and the biggest supplier of animal feed.



*Business secretary Vince Cable opening the Vivergo biofuels plant today. Photograph: Dave Higgins/PA*

Vivergo's plant at Saltend in the Humber estuary, opened with £350m investment, will take in 1.1m tonnes annually of wheat that would otherwise be used for animal feed and produce an estimated 420m litres a year of ethanol, to be mixed with petrol and used in vehicles. A byproduct of the process is high-protein feed for livestock, with about 500,000 tonnes expected a year.

Vivergo said the construction and implementation of the plant had already created or helped support more than 1,000 jobs in the area, and there will be 80 full-time employees at the site.

Renewable energy experts and farming representatives hailed the new plant, but there are also concerns over the greenhouse savings from biofuels, and the potential for food price rises as crops are diverted to produce ethanol.

Kenneth Richter of Friends of the Earth said: "This is not a good thing. We haven't got wheat to burn, and the UK has recently turned from being an exporter of wheat to a net importer. The weather has played a big part, but it shows that we haven't got spare wheat."

Clare Wenner, head of renewable transport at the Renewable Energy Association, said: "Biofuels developed here in the UK are among the most sustainable in the world in terms of greenhouse gas savings. This is a fantastic example for the industry, not just for the commitment to producing sustainable fuel and food, but the commitment to developing skills and a manufacturing base in the UK."

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## Emissions trading reforms raise price of pollution permits

**Policymakers say a higher price is essential to encourage more greenhouse gas reductions across Europe's industry**

By Damian Carrington, *theguardian.com*



*The EU emissions trading scheme, the largest in the world and now being replicated in China, is intended to tackle climate change by reducing CO2 emissions across Europe's industry. Photograph: Ina Fassbender/Reuters*

The EU emissions trading scheme, the largest in the world and now being replicated in China, is intended to tackle climate change by reducing CO2 emissions across Europe's industry. Photograph: Ina Fassbender/Reuters

Critical reforms to Europe's flagship scheme for cutting carbon emissions were passed for the first time on Wednesday in the European parliament. The move immediately caused the price of pollution permits, currently near rock bottom, to rise. Policymakers believe a higher price is essential to encourage more greenhouse gas reductions.

The EU emissions trading scheme, the largest in the world and now being replicated in China, is intended to tackle climate change by reducing CO2 emissions across Europe's industry. But a huge oversupply of permits, owing to the economic crisis causing production to drop, and because of lobbying by industry, caused the price paid to emit a tonne of carbon to crash in recent years.

The short-term fix approved on Wednesday will delay the release of permits for 900m tonnes of carbon, cutting the oversupply, and member states will now decide how to implement the plan.

German MEP, Matthias Groote, who steered the reforms through the parliament, said: "We shall not let the ETS be the victim of short-term concerns. Structural reform of our emissions trading system will follow to ensure it remains the cornerstone of EU's climate policy."

"The symbolic nature of this vote cannot be underestimated," Rob Elsworth, from carbon trading thinktank Sandbag. "The parliament has shown that it sides with climate ambition and has silenced those looking to kill the EU carbon market."

EU commissioner for Climate Action Connie Hedegaard also welcomed the vote. "We must have a well-functioning carbon market to boost innovative low-carbon technologies in Europe," he said.

Ed Davey, the UK's energy and climate change secretary, said the vote was an important step forward. "We need a stable carbon market so we get a more certainty for investors so emissions reductions can be achieved at the lowest cost possible."

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## The new food businesses helping to revive urban communities

*Street food, markets and restaurants can increase social connections and boost employment, as long as they're not colonised by the middle class*

By Carly Chynoweth, *Guardian Professional*



Good food does more than fill a rumbling belly: it can also make a real difference to urban communities.

Think of it as the positive version of the broken windows effect. Instead of minor damage encouraging larger crimes, it's new food businesses helping to revive communities,

"Creating more places where street food can thrive in cities creates more places where street life can thrive," says founder of Kerb, Petra Barran Photograph: Janine Wiedel Photolibrary / Alamy

said Cynthia Shanmugalingam, the CEO of Kitchenette, a food business incubator. "Setting up a café or restaurant that you are passionate about shows that you care about the area," she said.

One new restaurant can be the starting point for significant changes in an area, agreed Andrew Sissons, the head of regeneration delivery at Hackney Council. "If you are looking at regenerating an area and you are starting with low-quality retail, one of the first things that you can do to start to improve it – and which we have done in Dalston and Shoreditch, for example – is to get a really good restaurant in and build around that," he said.

For a start it will look nice, which encourages other retailers on the street to raise their game to fit in. "And other things will begin to cluster around it very quickly," he said. (This cluster effect works well in hub cities like London but will not happen everywhere, Shanmugalingam noted).

And it's not just restaurants. "Old railway arches are perfect affordable kitchen spaces for people baking bread or making sauces, things like that," Sissons said. Then there are pop-up restaurants, which "reinvigorate the high street" and can, if they are successful, turn into longer term tenancies.

Food businesses don't have to be inside a building to help regeneration, said Petra Barran, the founder of Kerb, which promotes street food and the people who make it. Her interest is the way in which food creates human connections between individuals. "Creating more places where street food can thrive in cities creates more places where street life can thrive," she said. "It's something that makes people feel part of their city in a way that doesn't necessarily happen indoors... Standing shoulder to shoulder with other people eating at a market connects you in a way that standing close to them on the tube never will."

Barran gets frustrated when councils don't see it that way. One of her fellow street food traders told her that they had been knocked back when they suggested setting up in a Scottish city because street food was contrary to their regeneration plan. "They wanted Prêt and Eat and so on. They had missed the point, that bringing

street food in is a regeneration move in itself. [London's] Kings Cross is an example of that happening. The developers there got in touch with us two years ago to say they had a new street they were building... and they wanted street food there to enliven the space." Now the food market at the top of Kings Boulevard is one of the things that gives the area its identity.

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## Ratings and rankings: How competition promotes corporate sustainability

By Christopher Thomas and Sarah Corrigan

Competition breeds progress. Innovative products, remarkable technologies and consumer convenience are just a few examples of how competition improves our lives on a daily basis. Now, competition is changing the way that companies approach corporate sustainability.

Sustainability ratings and rankings offer a new landscape for viewing how the world's premier companies compare. But deciphering the metrics and methodologies of different raters is challenging. Fortunately, the real value of ratings isn't in the numbers, it's in the fact that a simple benchmarking exercise can translate into substantial organizational change.

The field of ratings and rankings has grown significantly in the last decade. According to research by SustainAbility, the number of indices jumped from 21 ratings in 2000 to 108 in 2010. That's more than a five-fold increase. Why the sudden explosion of "green" leadership tables and indices? The short answer is stakeholder pressure. Socially responsible investing has prompted many investors to look beyond balance sheets and earnings reports.

Additionally, the average consumer is shopping smarter and caring more about the practices and impacts of their preferred brands. Companies want to garner high rankings and win broad stakeholder approval, so they engage in new efforts to explain their practices. Beating out competitors is a key motivating factor. But do ratings and rankings provide an accurate depiction of robust sustainability performance?

In theory, ratings indices offer simplicity; they convert complex quantitative and qualitative data into a comparative and understandable value assessment. In reality, the large quantity of rankings and different evaluative criteria obscures which ones offer a credible assessment of sustainability and resonate with a desired audience. Finding which ratings are out there is easy compared to figuring out which indices to trust. Executive suites typically can rattle off perennial favorites, such as the ROBECO Dow Jones Sustainability Indices, FTSE4Good Indices, CRO Top 100, CDP and Newsweek's Green Rankings. Unfortunately, the field grows murky after the top tier. Some rankings are biased; others evaluate only a narrow field of environmental, social and governance data. Critically, many rankings and ratings are snapshots of past performance. This confusion has spawned efforts to create standards for sustainability ratings. Being able to evaluate the raters is essential, and transparency from the rating organization is the only way to tell if its methodology credibly addresses material issues.

Ultimately, neither prestige nor methodology dictates the value of a ratings system. The true benefits evolve from the application process. Checking a box and hoping for the best just won't cut it. Companies striving to make the top grade typically need to take a deeper look at their operations, nurture innovation and demand continuous improvement for the benefit of all stakeholders.

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## Aveda goes Full Circle to recycle cosmetics packaging

By Jonathan Bardelline



Consumers have an intimate relationship with cosmetics, applying them to their lips, face and hair. But makeup and shampoo traditionally has been laden with chemicals and wrapped in packaging that could be sent only to a landfill.

Just as some green-minded companies have tried to use safe, nature-based ingredients, others are taking on the waste their goods leave behind by collecting packaging most recyclers can't handle.

Aveda, which prides itself on its high levels of organic and plant-derived ingredients, is the latest to make such a move with the debut of its Full Circle program this month. Running in Aveda's 107 Experience Center retail stores in the U.S., the program will accept any Aveda packaging that isn't commonly accepted by local recycling services, including bottle caps, makeup brushes, tubes, pumps and certain bottles and jars.



"Aveda has long committed to the idea of zero waste as part of our product stewardship," said Dave Rappaport, vice president of earth and community care for Aveda.

Many of Aveda's packages contain 100 percent recycled content, a few hold Cradle to Cradle certification and most of its plastic tubes are easily recycled.

### First steps

Aveda dipped its toe into waste diversion with a bottle cap recycling program in 2008, which allowed anyone to bring in bottle caps from any brand's products -- and not just cosmetics -- to Aveda stores. To date, more than 115 million caps have been collected since the program's inception. Bottle caps, made from No. 5 plastic (polypropylene), are not commonly recycled.

That program wasn't just a gesture of goodwill, but a means to attain raw material that can be recycled repeatedly without degradation. Aveda recycles the caps into new ones and sample tubes. The program in part led to the creation of Full Circle.

"We thought that it was time now to make a greater focus on our own packaging," Rappaport said.

In addition to collecting packaging, Aveda, part of Estee Lauder Companies, plans to work with its recycler, **G2 Revolution**, to funnel recycled materials back to suppliers to be used in new Aveda packaging.

### Making waste a resource

The recycling programs that Aveda and other personal care companies operate focus on the primary packaging of their products, such as the tubes, compacts and other containers directly used for makeup and other items, not the plastic or cardboard packaging.

While plastics labeled No. 1 and No. 2 are taken in most curbside and drop-off recycling programs, most cosmetics packaging is made with other types of plastic or mixed plastics that aren't widely accepted. What's more, general recycling programs don't give people the means to recycle items such as makeup brushes.

G2 Revolution's main purpose is to provide a way for companies to recycle packaging, products and other wastes whose final destination is a landfill.

"We try to turn things back into usable products," said G2 CEO John Graham.

The company works one-on-one with clients to determine what items to collect and what can be done with them.

"We routinely achieve north of 92 percent recycling rates on the majority of our programs," he said. Some products reach the high 90s, and many even hit 100 percent.

*Main bottle image by Deyan Georgiev via Shutterstock. Inline Aveda bottle image by Dan Machold via Flickr.*

### Bringing it all together

G2's advantage, Graham said, is in serving as an aggregator, both by working with companies that have lots of locations and also by working with companies that have similar items they want taken.

A typical G2 partnership involves G2 sending pre-paid mailing boxes to a company's stores with instructions on what goes in the box. Once it's full, it's sent to G2's 200,000-



square-foot processing center in Findlay, Ohio, where the contents are sorted out. Each box is weighed and each material recorded to provide clients with detailed measurements of how their programs are progressing. Materials are combined with like materials and eventually shipped out to be recycled by other companies.

In some cases, G2 works with a client to sell its recyclable materials to its suppliers so it can ensure its own products are turned into new ones.

G2 also does some recycling of its own. The company produces a line of cleaning products called Second Life, made using a mix of soaps, lotions and other cleaners that it collects. G2 has chemists at its processing plant that check each product's ingredients and chemical composition to combine compatible ones into products with names such as Dumpster Deodorizer and Sloppy Joe All Purpose.

[<ReadMore>](#)



## Hannah Jones and Nike's innovation juggernaut

By Joel Makower



At a gala dinner Monday night in Chicago, Nike's Hannah Jones was presented with an award named for the late C.K. Prahalad, one of the world's most influential business strategists, who focused his enormous talent on the link between sustainability and long-term business success.

For Jones, Nike's VP of sustainable business and innovation and one of the more courageous sustainable business leaders I know, that seems about right.

The award was presented by the Corporate Eco Forum, a "by-invitation" membership group of corporate sustainability execs, at its annual meeting. The award cited a litany of Jones' aspirations and achievements at Nike: the Considered Design standard, which marries sustainability and innovation; the GreenXchange, a pioneering platform for sharing intellectual property; an Environmental Apparel Design Tool, released publicly to help clothing designers make more sustainable choices; the Nike Materials Sustainability Index and the Sustainable Manufacturing & Sourcing Index; and "truly game-changing targets," such as achieving zero discharge of hazardous chemicals in Nike's supply chain by 2020.

An impressive list, to be sure, but it doesn't begin to tell the whole story.

I've been watching the story unfold since Jones ascended to her position in late 2005, after a dozen years working in corporate responsibility roles for Nike in Europe. I've spent time with Jones — on stage, in private meetings and other venues — and witnessed firsthand her passion and leadership. In a world where so much of what passes for corporate sustainability leadership consists primarily of scorekeeping and box-checking, Jones is a refreshing breeze — and, on some days, a force of nature.

In 2009, Jones and her colleagues began a deep dive into the intersection of innovation and sustainability. "We're going to have to get into the redesign business and reinvent the future," she told me in a 2011 interview. "And that got us thinking, how do we in the sustainability team learn the art and science of innovation and apply that to sustainability?"

Jones and her team benchmarked a number of companies, notably Procter & Gamble and Eli Lilly — "not their sustainability team," Jones pointed out, somewhat apologetically, "but the R&D team and the CFO." Their key question: "How do you create a vibrant innovation portfolio?"

It was a revelatory experience. "What we suddenly realized is that if you view innovation through the lens of sustainability, some of the core capabilities that you build as a sustainability practitioner allow you to fast-track innovation," she recalled.

She explained: "One of the things sustainability people have learned to do is to think about systems and system change." She noted that sustainability professionals bring some innate capabilities to the table. "The listening skills of being a sustainability practitioner, and the consultation skills, and bringing people into a journey and understanding grassroots and community, can actually be huge enablers of mainstream innovation. So I think that bringing two worlds together actually brings richness to both of those worlds."

That sentiment no doubt would sit well with Prahalad (pictured at left, above), an academic, prolific writer and one of the world's most well-respected management strategists, who died in 2010. Among his writings was a co-authored 2009 *Harvard Business Review* cover story, "Why Sustainability is Now the Key Driver of Innovation."

"Our research shows that sustainability is a mother lode of organizational and technological innovations that yield both bottom-line and top-line returns," the authors stated, in an article that's now a key part of many sustainability professionals' syllabus.



C.K. Prahalad and Hannah Jones

"C.K. Prahalad argued that companies only become market winners by moving beyond today's best practices and inventing tomorrow's next practices," P.J. Simmons, chair of the Corporate Eco Forum, told me last week. "This is the essence of what Hannah Jones is all about. Hannah connects the dots on the global megatrends reshaping the competitive landscape, and she is constantly pushing herself, her team and peers to ask the toughest questions about what needs to change for companies to survive and thrive in the years ahead. Even when the answers are uncomfortable, she pushes for change. Hannah is a beacon of all that C.K. stood for."

The leadership at Nike seems to be getting it. As Jones told me Monday, just before the award ceremony: "In the last couple of days we've made some organizational changes and, as part of that, we've seen the Sustainable Business & Innovation function move to fully integrate with Nike's Innovation function. It's a significant signal of the value of having sustainability as a fundamental part of our innovation strategy."

As a result of last week's management changes, Jones' role was elevated — she now reports directly to both CEO Mark Parker and Nike's new president of innovation, Tom Clarke. Nike has made it clear that sustainability — and innovation — are core to the company's success.

It's also yet another affirmation of Jones' award-winning leadership.

*Image of shoe by Jhong Dizon photography via Flickr*

[\[Source\]](#)

## India floods: a man-made disaster

By Praful Bidwai, for [guardian.co.uk](http://guardian.co.uk)



‘Hundreds of buildings were constructed in the flood plains of rivers which should be no-go areas.’ Photograph: Strdel/AFP/Getty Images

The terrible floods in India’s tiny north Himalayan state of Uttarakhand, which killed more than 1,000 people, left 70,000 stranded for days and destroyed livelihoods, have been officially termed a natural calamity caused by cloudbursts and unprecedented heavy monsoon rainfall.

However, the true causes of the epic tragedy lie in the grievous damage recently wrought on the region’s ecology by the runaway growth of tourism, unchecked proliferation of roads, hotels, shops and multistorey housing in ecologically fragile areas, and above all mushrooming hydroelectricity dams that disrupt water balances. Underlying the disaster are multiple governance failures, too.

These man-made factors turned an extreme weather event into a social catastrophe. True, the region experienced heavy rainfall of 340-370mm within 24 hours on June 16-17, leading to flash-floods. But such precipitation isn’t unprecedented. Uttarakhand has recorded single-day rainfall in excess of 400mm several times, including 450mm in 1995 and 900mm in 1965. Cloudbursts, floods and rapid swelling of fast-flowing rivers aren’t uncommon.

But this time the floodwaters, laden with tens of thousands of tonnes of silt, boulders and debris from dam construction, found no outlet. The routes they took in the past, including ravines and streams, were blocked with sand and rocks. The waters inundated scores of towns and villages, submerging some buildings under several feet of mud, smothering life.

Aggravating the devastation were two downpours of water and rocks from the higher mountain ranges, in all probability caused by glacier lake outburst floods (GLOFs), which deluged the Kedarnath temple, a major Hindu pilgrimage centre. GLOFs, or the explosive bursting of glacier lakes, are thought to be a

consequence of human-induced climate change, which is causing rapid melting of glaciers in the Himalayas, themselves warming at twice the global rate.

Such a massive loss of life could have been greatly reduced if an early warning system, effective evacuation plans and a responsive disaster management system were in place. They weren’t. In fact, as the comptroller and auditor general pointed out in April, the Uttarakhand Disaster Management Authority, formed in October 2007, has never met or formulated “rules, regulations, policies or guidelines”. Modestly priced radar-based technology to forecast cloudbursts would have saved lives. But it wasn’t installed. Nor were emergency evacuation plans drawn up.

There was local-level governance failure, too. Haphazard, unregulated construction of roads and bridges was allowed on crumbling, landslide-prone ridges and steep slopes, ignoring the region’s fragile geology and high earthquake vulnerability. Forests were destroyed on a large scale. Hundreds of buildings were constructed in the flood plains of rivers, their “natural” terrain, which should be no-go areas. Riverbeds were recklessly mined for sand. As construction debris accumulated, land contours and flows of streams and rivers changed.

Indiscriminate building of hydroelectric dams was the worst culprit. These involve drilling huge tunnels in the hills by blasting rocks, placing enormous turbines in the tunnels, destroying soil-binding vegetation to build water channels and other infrastructure, laying transmission lines and carelessly dumping excavated muck. Many dams have been built on the same river so close to one another that they leave no scope for its regeneration.

Dams steal water from local people. They alter the hydrological cycle and natural course of rivers. Uttarakhand’s 70 completed large dams have diverted more than 640km, equivalent to half the length of its major rivers. They have profoundly destabilised its ecology. Yet another 680 dams are reportedly in various stages of commissioning, construction or planning, mainly by private companies, which would be largely unaccountable.

A [2009 CAG report](#) complained that the government was “pursuing hydro-power projects indiscriminately”, ignoring the damaging “cumulative effect” of multiple run-of-the river dams. Technically, India’s environment ministry follows an environmental impact assessment process, but that’s badly compromised by the Indian elite’s insatiable appetite for electricity and promoters’ pressure.

When I was on the expert appraisal committee (EAC) on river valley projects in the 1990s, none of the dozens of projects we examined had adequate documentation on the impact on forests, wildlife, hydrology or rehabilitation. All were rejected. The present EAC has approved all 262 projects placed before it over six years, without seriously evaluating their impact or the rivers’ carrying capacity. This is a recipe for yet more Uttarakhands.

[<Source>](#)



### Youth Future Conference 2013

**1<sup>st</sup> to 7<sup>th</sup> September, 2013**

**Bonn, Northrhine Westefalia, Germany**

The Youth Future Conference 2013 is organized with an aim to address these challenges in an interdisciplinary and multi-perspective way – in collaboration with laureates of the German Environmental Award and the “Alternative Nobel Prize”, Right Livelihood Award. The conference will be held from 1<sup>st</sup> to 7<sup>th</sup> September in Bonn, Germany.

The conference is expected to combine the energy and enthusiasm of the young generation with the expertise and experience of the distinguished laureates we want to develop and initiate projects to promote a sustainable future. The organizers wish to invite young adults (18 to 28 years of age) from Europe to be part of the Youth Future Conference 2013. Join us to work for a brighter future in Bonn from September 1<sup>st</sup> to 7<sup>th</sup> and become an ambassador of right livelihood and sustainable development.

[<ReadMore>](#)

### 5th International

### Singapore Compact CSR Summit 2013

**4<sup>th</sup> to 5<sup>th</sup> September 2013**

**Singapore**

The summit is organized by Singapore Compact for CSR on 4<sup>th</sup> and 5<sup>th</sup> September, 2013 at Raffles City Convention Centre, Singapore. This year's Summit shall highlight the value of CSR in driving inclusiveness, growth and innovation especially in times of economic uncertainty. It will look at both the social compact and business impact sides of sustainability. The Summit will feature a distinguished panel of speakers who will share about the growing awareness of sustainability as the next business megatrend that will enable companies to stay ahead of the curve.

The Summit revolves around "CSR: Making The Difference" with the sub-theme "Innovation - Best Practices - Ideas". The event will highlight the value of CSR in driving in driving inclusiveness, growth & innovation in times of economic uncertainty.

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## Forthcoming Events

### India Climate Policy and Business Conclave 2013 at New Delhi

**September 18-20, 2013**

**New Delhi, India**

The India Climate Policy and Business Conclave is India's flagship event in the carbon market space, organized by the Federation of Indian Chambers of Commerce and Industry (FICCI) in partnership with the Ministry of Environment & Forests (MoEF), Government of India, The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and The World Bank. The Conclave is supported by GIZ India and International Emissions Trading Association (IETA).

The India Climate Policy and Business Conclave 2013 will be held on September 18-20, 2013 at FICCI Federation House in New Delhi. The Conclave would also include a Curtain Raiser and Exhibition as well. ThinktoSustain.com is the Media Partner for the event.

The objective of the event is:

- To focus on global and domestic policy issues that provide context for businesses to engage in GHG mitigation initiatives and provide facilitating framework for channeling technology and finance for corporate sector to effectively address climate change issues.
- To bring focus on the role of businesses and opportunities that business and industry can harness to mitigate climate change at the same time showcasing corporate initiatives, globally and from India.
- To provide a platform for businesses to interact with carbon market, climate policy and climate finance stakeholders to explore potential partnerships for climate change related projects.
- To bring focus on actions at the state-level and sensitizing business and industry on the role they play in climate change strategies and actions in various states in India.

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### 8th Conference on

### Sustainable Development of Energy, Water and Environment Systems – SDEWES

**September 22-27, 2013**

**Dubrovnik, Croatia**

The 8th Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES Conference, to be held in Dubrovnik in 2013 between September 22 and 27, is dedicated to the improvement and dissemination of knowledge on methods, policies and technologies for increasing the sustainability of development by de-coupling growth from natural resources and replacing them with knowledge based economy, taking into account its economic, environmental and social pillars, as well as methods for assessing and measuring sustainability of development, regarding energy, transport, water, environment and food production systems and their many combinations. Sustainability being also a perfect field for interdisciplinary and multi-cultural evaluation of complex system, the SDEWES Conference has at the beginning of the 21st century become a significant venue for researchers in those areas to meet, and originate, discuss, share, and disseminate new ideas.

[<ReadMore>](#)



# Energy from Waste

25th to 26th September 2013

London, United Kingdom

SMi's 6th annual conference on Energy from Waste is being organized in London, UK on 25<sup>th</sup> and 26<sup>th</sup> September 2013. This conference will provide attendees with a complete view of the field. Focusing on policy and market updates, project deliverability, finance and investment, technological developments and the renewable heat incentive this informative event will bring together key leaders in the field to provide attendees with an in-depth look into current status of Energy from Waste.

This conference will be the perfect forum for learning about new advances in the field, presenting attendees with the latest information from technical and market updates in this fast increasing sector. SMi's 6th annual conference will explore the market and provide the perfect platform for attendees to discuss current issues, technologies and innovations in Energy from Waste.

With senior industry representatives presenting on their own experiences and referring to case studies, success stories and failures, this event promises to be a unique forum for networking, sharing ideas and developing partnerships with key professionals in the Energy from Waste industry.

[<ReadMore>](#)

# International Conference on Economic and Social Sustainability 2013 (ICESS 2013)

30th September 2013

Tokyo, Japan

**International Conference on Economic and Social Sustainability 2013 (ICESS 2013)** is a global conference focusing on themes surrounding the topic of sustainability and Sustainable development. We invite scholars from every country to participate in this interactive and multi-national event taking place in Tokyo, Japan. The conference is organized by Global Network for Economic and Sustainable Sustainability (GNESS).

To enrich sharing on interdisciplinary topics, the themes of the conference focus on economic and social sustainability, keeping in the mind the environment and long term effects. The Topics include Green and environment innovation/evaluation, Green Business and Management, Politics and social sustainability.

[<ReadMore>](#)

*The Times of India, Delhi, Dated June 26, 2013*

## 'Sustainable development's only possible with ecological balance'

**Magsaysay awardee Chandi Prasad Bhatt** is a noted environmentalist and a pioneer of the tree-saving Chipko Andolan in Uttarakhand. Speaking with **Swati Mathur**, Bhatt discussed the build-up to the region's devastating floods, aerial surveys versus ground reality – and how sustainable development and ecological welfare are interlinked:

■ **Why is the flooding occurring in Uttarakhand being dubbed a disaster waiting to happen?**

Actually, what's happened in Uttarakhand is nothing short of a calamity. Traditionally, Uttarakhand has always been prone to floods and landslides. However, what happened now is a result of sheer callousness. The Bhagirathi and Alaknanda have always been sensitive, flood-prone rivers. On countless occasions, we apprised the authorities about damage happening there with

steps to curb further problems. There were landslides, felled deodar trees and mountain ranges being indiscriminately dynamited in the name of development. Local papers reported this, we also alerted the authorities – but nothing was done.

My submission is, there is a way to do things correctly – like, build stone walls on the sides, then pour in earth to widen roads. That will ensure development and protect from further damage.

### Q&A

■ **What other measures can curtail more environment-linked problems?**

Well, the mountains really need an immediate plan to tackle further damage – and doing this scientifically is possible. There is an urgent need to develop a detailed warning system that alerts residents and visitors across this Himalayan region. Several government agencies need to work



closely for this. For instance, the Geological Survey of India (GSI), Indian Space Research Organisation (ISRO) and the Met department need to work together.

The GSI must identify vulnerable mountain areas, ISRO, through satellite mapping, must identify cracks and monitor them, and the Met department must give advance warning of inclement weather. Once this warning system is made

effective, collateral damage of the kind unleashed in Uttarakhand can be prevented.

The blueprints exist – unfortunately, they are just not being implemented.

■ **Are there sound practices citizens can adopt?**

Yes. We certainly advocate tree plantation. Garhwal actually has a very strong tradition of practices carried forward through generations which play a major role in mitigating effects of climate change. For instance, drainage systems were developed around villages to ensure that rivers in spate don't flow in.

But many new urban pockets that have come up here have not followed these advisories – this time, when the floods came, these areas were swamped.

■ **Have you shared such advice with the authorities?**

Yes, but our advice has fallen on deaf ears. There is a need to understand that sustainable

development is only possible by maintaining the ecological balance. Everyone needs to understand that drawing from the hill cannot be a one-way process.

Leaders like H N Bahuguna, Indira Gandhi and Rajiv Gandhi responded to letters when they were apprised of critical situations and a need for change – now, apart from aerial surveys, little is done on the ground.

We are grateful for such surveys though and I have written to Sonia Gandhi too, thanking her for her concern. But the Himalayas need more than just aerial surveys. There is a lot of ground work that needs to be done. At present, instead of spreading awareness about the ills of ecological imbalances, the Garhwal Vikas Mandal Nigam has itself built guesthouses and cottages on river banks. This may sound like a doomsday prediction but if we don't stop now, the extent of calamities will only multiply.

*The Times of India, Delhi, Dated June 26, 2013*

## Obama pitches for tough rules to curb carbon emissions

Washington: US President Barack Obama will on Tuesday bypass climate change sceptics in Congress and order tough new rules to curb carbon emissions, citing a "moral obligation" to save a warming planet.

Obama will also commit to new international efforts to slow carbon pollution, including withdrawing US support for coal-fired power plants abroad and offering to discuss new initiatives with big emitters like India and China. And he will pledge to prepare the US for the impact of climate change, which his administration

now no longer sees as a distant challenge, while seeking to boost renewable energy forms like wind and solar.

Obama will make the commitments in a speech at Georgetown University, laying out a national strategy that will mark his most serious bid yet to honour earlier promises to fight climate change. But the specifics of much of his plan were unclear, and many of Obama's new rules could face court challenges that would delay their implementation.

The president will be using the executive powers of his office since Congress,

where there is widespread scepticism of climate change science and fear about the economic impact of mitigation efforts, has refused to act. As such, they will lack the sweep that legislative efforts would have in establishing a carbon emissions trading scheme and enforcing change in US energy policy. Previewing the speech, aides said Obama will require the Environmental Protection Agency to work with states and industry to establish tough new carbon pollution standards for new and existing power plants. AFP



*The Times of India, Delhi, Dated June 28, 2013*

# Green bypass for road projects

## Expansion Of Highway Stretches Up To 100km Now Easier

Dipak Kumar Dash | TNN

New Delhi: In a major relief to highway widening projects, the Cabinet on Thursday allowed exemption of environmental clearance requirement for stretches up to 100 km in length. Earlier, this was for stretches up to 30 km, as a result of which most expansion projects required green nod from the environment ministry.

With this, over 70% of projects to be awarded this year under government funding model (EPC) won't need to get the green approval. Out of the 9,500 km highway/ road projects to be awarded this year almost 80% would be bid out on EPC mode. Even several BOT projects would fall within this category.

In addition, the Cabinet



also increased the limit of exempting environmental clearance for highway projects which need additional 40 meters for further widening. This limit was earlier 20 meters.

These are perhaps the biggest ever relief that government provided to revive the highway sector, which has been hit by economic slowdown in the past one-and-half years. Earlier road transport and highways ministry had

**The Cabinet also raised the limit of exempting environmental clearance for highways which need additional 40 meters for widening. This limit was earlier 20 meters**

taken up the case of no green nod for roads upto 200km and expansion of existing stretch by another 60 meters with the environment ministry.

The Cabinet also addressed the concern of highway developers facing huge crunch 'ordinary earth', which has been notified as minor mineral. Earlier, excavation of ordinary earth even in a less than 5 hectare needed environment clearance. On Thursday, the Cabinet de-

cided that such mining of soil in less than 2 hectares and up to 2 meter deep won't need such go ahead.

In the case of soil excavation from 2.5 hectare area, the contractor does not have to hold public hearing.

"All our concerns relating to the environmental clearances have been addressed in the past few months. We expect project awarding to gain pace as majority of our projects will fall under the exemption category," said highways secretary Vijay Chhibber.

Highway developers had been raising the issue of scarce availability of soil to carry out foundation work and to build embankments on the projects stretches, particularly in Haryana, Punjab, Tamil Nadu and Karnataka.

*The Times of India, Delhi, Dated June 29, 2013*

# Green panel stays tree felling for road

## Moves On Plea Against Vikaspuri Project



**FACING THE AXE:** PWD claims it has permission to fell 785 trees for the Vikaspuri elevated corridor

Ayaskant Das | TNN

New Delhi: Acting upon a petition filed by environmental activists, the National Green Tribunal on Friday imposed a stay on felling of trees for the Vikaspuri elevated corridor project. The stay has been imposed although the PWD had earlier claimed that it has permission from the forest department to chop 785 trees.

A two-judge vacation bench of the tribunal, comprising judicial member Justice VR Kingaonkar and expert member Dr RC Trivedi, has ordered that a status quo be maintained on all standing trees in the area till the next date of hearing. The tribunal has also directed the department of environment and forests of the Delhi government to prepare an environment impact assessment (EIA) report to determine the effects of uprooting the trees for the proposed 'landscaping' of the road.

"In the meanwhile, the department of environment and forests may nominate appropriate authority to conduct proper survey for the purpose of environment impact assessment in the context of possible damage to the environment which may be caused on account of removal of trees for the alleged 'landscaping' of the road as proposed," says the order.

Activists had contended in their petition that the PWD has proposed to fell trees in areas that do not fall within the proposed alignment of the project — a 3.3km-long elevated road connecting Vikaspuri with Meera Bagh on the outer

**Activists had stated in their petition that the PWD has proposed to fell trees in areas that do not fall within the proposed alignment of the project**

ring road. Pillars for the elevated road are proposed to be constructed on the central verge of the road and, as per activists, the trees marked for felling stand on the service lanes on either sides of the road.

The contentions put forth by the activists are based upon their assessment of the project from the design which is available on the website of UTIPPEC. "The outer ring road at this location has a right of way of 200 feet, excluding the service lane. However, it has been contended by the

PWD in their affidavit that the trees need to be felled as they are coming in the alignment of the project, says the petition.

In January, the PWD has submitted to the DCF (West) that the trees need to be felled for widening of the main carriageway along the stretch. Activists however, say that it is unnecessary to uproot the trees as they occupy less than 3-4 feet space on the road. "The existing service lanes can be easily used by the PWD and the traffic police ensure that cars are not parked on the main carriageway or service lanes," says the petition.

Activists have expressed fears that denuding the area of trees would adversely impact the health of residents, particularly because a second line of trees is yet to be planted along the stretch. They have alleged that during the approval stage at the UTIPPEC, a large number of heritage trees already exist along the road. These trees, as per activists, can be easily accommodated within the proposed green belt to be developed in the region over an approximate area of around 2.4 lakh square metres.

ayaskant.das@timesgroup.com

# Green panel sends notice to U'khand

Nitin Sethi | TNN

New Delhi: The National Green Tribunal (NGT) has issued a show-cause notice to the Uttarakhand government, Union environment ministry, National Disaster Management Authority (NDMA) and the Indian Meteorological Department seeking information to justify the construction and development activity in the hill state.

**FULL COVERAGE: P 13**  
**► Edit: Rebuild swiftly, P 18**

Unchecked and unplanned construction is seen to be a reason behind the devastation caused by the June 16-17 cloudbursts and flash floods. Describing it as an "ecological and environmental disaster", the tribunal asked

## Last rescue sortie out of Badrinath

Seventeen days after flash floods ravaged Garhwal, the last group of 150 people were flown to safety from Badrinath. Along with stranded pilgrims were locals who said they would starve since essential supplies were short and their source of livelihood, tourism, gone. At least 10 IAF choppers will remain on standby in the coming days. **P 13**

the central agencies and the state for proof that "rampant road and building construction" had adhered to master and zonal plans and if a damage assessment was done.

► 'Basis for building', P 17

# U'khand told to submit disaster plan

Nitin Sethi | TNN

New Delhi: Despite the Uttarakhand government's denial of the Uttarakhand flash floods being a "man-made" disaster, the state will now have to explain to the National Green Tribunal (NGT) how and why massive construction was allowed and what ecological studies have so far been carried out. An NGT notice has asked the state government to furnish details of preventive steps it plans to take to avoid and mitigate such disasters.

The tribunal acted on a plea filed by a body of lawyers called the Legal Aid Committee and went beyond the petition to seek more documents and evidence from various authorities to justify the rapid development. It has also made the NHAI and the Border Roads Organization party to the case. The petitioners had asked the MoEF to place on record the cumulative impact assessment for hydro projects on rivers in Uttarakhand and in the Himalayan region in general. They sought the status of the River Regulation Zone Notification put out in 2002.

The petitioners asked for the state government to furnish details of rules intended to curb unbridled and unauthorized construction on river bodies. The petitioners asked the tribunal to get the National Disaster Management Authority to show what actions it took to deal with disasters relating to rivers in the region.

It has asked if permissions to construct were backed by data, study or master/zonal development plans.

*Deccan Chronicle,  
Hyderabad, Dated  
July 2, 2013*

# FLASHLIGHT THAT RUNS ON HEAT FROM THE HAND

Washington, July 1: A 15-year-old girl in Canada has invented a flashlight that produces light just by using the warmth of your hand.

Ann Makosinski, from British Columbia, invented the thermoelectric 'Hollow Flashlight' that works via the thermoelectric effect.

The thermoelectric effect is the direct conversion of temperature differences to electric voltage and vice-versa.

"I'm sure we've all had that annoying experience when we desperately need a flashlight, we find one, and the batteries are out," Ms Makosinski told NBC News in an interview.

— Agencies



*The Economic Times, Delhi, Dated July 04, 2013*

## Waste Management may Invest ₹208 Cr in Attero Recycling

BISWARUP GOOPTU  
NEW DELHI

Electronic waste recycling company Attero Recycling is at an advanced stage of discussions with a number of global investors for fresh capital to fund its overseas expansion plans. Texas-based Waste Management is a leading contender to invest in Attero which expects to raise up to ₹208 crore in this round of funding, according to a person involved in the negotiations.

"Along with Waste Management, a number of global clean technology-focused private equity funds are also in talks with Attero," said the source.

Noida-based Attero uses proprietary technology to recycle electronic waste and extract precious metals and counts companies such as General Electric, Google, Wipro and Samsung as its clients.

The company has received up to ₹99.2 crore in equity and convertible debt over two previous rounds of funding from a clutch of investors, including Draper Fisher Jurvetson, Indo-US Venture, Granite Hill Capital Partners and IFC, the investment arm of the World Bank. The existing investors are also expected to participate in this round of investment.

Nitin Gupta, chief executive of Attero Recycling, and Rajat Verma, cofounder who is leading the current fund-raising efforts, declined to comment on the developments.

Attero, which earned monthly revenue of up to ₹18 crore in the last financial year, expects to open its second recycling plant in Bangalore, this August. The first at Roorkee in Uttarakhand was set up in 2008.

"The company's first facility overseas will be set up by the end of the current fiscal; the process of identifying local partners in the US, UK and China is underway," said a company executive.

This year has seen increased activity by risk capital in the country's niche, yet growing, waste management industry. Earlier this week, private equity fund IDFC PE, along with other institutional investors, sought a multi-bagger exit from unlisted waste management firm Hanjer Biotech Energies, in which they own a majority stake.

*The Times of India, Delhi, Dated July 04, 2013*

## Green panel stays construction at Noida landfill site

Ayaskant Das | TNN

Noida: The National Green Tribunal has stayed construction activity on the landfill site in Sector 123 here after a commission appointed by it found that the project had been formulated without following the guidelines. The Noida Authority has also been restrained from carrying out digging or construction till the next hearing.

The principal bench of the tribunal headed by its chairman, Justice Swatanter Kumar, imposed the stay based on the local commissioner's report on the landfill's distance from human habitations. The Authority officials are yet to appear before the tribunal to clarify their stance despite getting court notices. The commission filed its report—TOI has a copy—with the tribunal on Tuesday.

The commission found that the Authority had started construction on the site without obtaining the mandatory approval from Uttar Pradesh Pollution Control Board (UPPCB). Habitations, including villages, residential sectors and ongoing

housing projects, were found to be in proximity to the site on all sides in clear violation of the norms.

A petition had been filed by Go Green Welfare Association, a Noida-based organization of residents and homebuyers. Advocate Su-

### The National Green Tribunal imposed the stay based on the local commissioner's report on the landfill's distance from habitations

meer Sodhi had been appointed as commissioner by the tribunal. The report was prepared after Sodhi inspected the site on May 25 in the presence of senior Authority officials, including project engineers and the health department officials, UPPCB officials and representatives of the residents' association.

The petitioners had alleged that the site chosen was amid habitations, which is in violation of the Municipal Solid Waste (Management & Handling) Rules, 2000. A landfill cannot be near a residential cluster, a state highway or a river.

The Times of India, Delhi, Dated July 04, 2013

# Green cover equal to 23% of Delhi lost in 13 yrs

Dipak Kumar Dash | TNN

New Delhi: Green cover and water bodies almost equal to a quarter (23%) of Delhi's area have been lost to development works and rabid urbanization in the National Capital Region (NCR) in the past 13 years.

The first comparative satellite-based study of change in land use in NCR has shown that between 1999 and 2012, the region lost 32,769 hectares of green areas and 1,464 hectares of water bodies, both crucial for sustainability and quality of life in the region.

During the same period, the study found that built-up area in NCR grew 34%, bring-

ing 95,803 hectares of land into the construction zone.

The study was conducted by the National Remote Sensing Centre (NRSC) at the instance of the NCR Planning Board (NCRPB). Its most striking finding was the substantial loss of green cover in Delhi and areas of Uttar Pradesh, Haryana and Rajasthan.

Of the total loss of 32,769 hectares of green cover, the maximum loss was recorded

**► Farm use up, P 8**

in NCR areas of UP (17,386 hectares), followed by Haryana at 8,716 hectares. 'Green' Delhi too lost 733 hectares of forest/green land during this period,

## BARE NCR

- NCR lost green cover and water bodies equal to 23% of Delhi's area in 13 years
- 34% increase in constructed area during same period
- Maximum green cover loss in NCR areas in UP, followed by Haryana and Delhi, which lost 733 hectares
- NCR areas in UP also registered maximum growth in built-up area (up by 41,000ha),

according to the draft regional plan prepared by the NCRPB.

The other alarming indicator of unsustainable growth in NCR was the loss of water bod-



followed closely by Haryana (38,000ha)

► Bucking the trend, Rajasthan sub-region showed increase in land under agriculture

ies, reduced by 1,464 hectares. Again, the maximum loss took place in UP sub-region at 934 hectares. The Haryana sub-region bucked the trend, increas-

ing the area under water bodies by 261 hectares.

The NRSC report also shows that environmentally fragile areas such as the Yamuna riverbed, wetlands, ridge areas and forests were being steadily usurped for development activities.

The UP and Haryana sub-regions, which include Gurgaon, Noida, Ghaziabad and Faridabad, showed a massive increase in built-up area during the study period. According to the report, the maximum increase took place in the UP sub-region, where built-up area jumped from 83,214 hectares in 1999 to 1.24 lakh hectares in 2012.



The Times of India, Delhi, Dated July 06, 2013

# Ragpickers resolve sanitation dilemma

South Corpn Project To Borrow Pune Model

## GREEN IDEA FOR CLEAN CAPITAL

Pune corpn has roped in ragpickers for door-to-door collection of waste in 20 of its 76 wards

### Steps for better waste management:

- Door-to-door collection
- Removal of dumps and big bins
- Awareness campaigns for better citizen participation
- Every household pays ₹1 per day to ragpickers
- Residents fined if waste is not segregated

### Waste collection & disposal process:

- Segregation of waste at home
- Door-to-door collection by ragpickers
- Waste dumped at composting, biogas & waste-to-energy plants
- Waste generated in plants dumped at landfill sites

No. of ragpickers involved

**2,300**

No. of households covered

**4 lakh**

Money earned by ragpickers annually:

**₹7-8cr**

Under V-collect scheme, ragpickers collect e-waste, clothes and other household waste. It is resold or reused by people from lower-income groups



**WASTE SEGREGATION:**  
60-85% segregated against 20% earlier

Waste generated daily in Pune:  
**1,500 metric tonnes**

### WHAT HAPPENS IN DELHI

Door-to-door collection happens in Rohini & Civil Lines

No mechanism for waste segregation

15,000-20,000 ragpickers in the city not allowed to work even at landfill sites

Waste generated daily:  
**6,000-8,000 metric tonnes**

TIMES NEWS NETWORK

New Delhi: Struggling to streamline its solid waste management plan, South Delhi Municipal Corporation is now planning to emulate a method used by its Pune counterpart.

While the municipal corporations in the city have set up waste-to-energy and composting plants, waste segregation—which is critical to the success of these plants—continues to be a big challenge. Pune Municipal Corporation has evolved a model in which ragpickers collect and segregate the waste.

Various attempts by municipal corporations in the city to start door-to-door collection and segregation of waste at source have failed in the past. The erstwhile Municipal Corporation of Delhi had started door-to-door collection of waste in two zones—Rohini and Civil Lines—in 2008, but the private concessionaire involved is unable to segregate waste at source. As a result, the waste supplied to waste-to-energy and composting plants is of poor quality.

South Corporation is hopeful that this model will solve the city's waste management prob-

lem. Like PMC, the corporation is planning to integrate ragpickers in the waste management system. "We will start a pilot project in the next four-six months," Manish Gupta, commissioner, South Corporation, who had visited Pune to study the model, said. "The model can be implemented in Delhi. We will invite expression of interest for this project," he added.

In Pune, close to 2,300 ragpickers are involved in door-to-door collection of waste for which

### ZERO-WASTE PLAN

they charge a nominal amount of Re 1 per day per household. The ragpickers are a part of an organization called SWACH which is working to bring them into the social mainstream. PMC has passed a resolution under which it is mandatory for residents to segregate waste.

"There is a penalty in case waste not segregated at source. The segregated waste is then collected by ragpickers and transported to plants. Waste pickers thus earn their livelihoods and the civic agency gets segregated waste which is effectively utilized," said Kiran Jadhav, a mem-

ber of SWACH who claims the ragpickers earn close to Rs 7 crore annually and the corporation saves close to Rs 12 crore on transportation of waste.

PMC has also started a pilot project to remove big dustbins and dhalaos from the city. "The waste is collected daily, so there is no need for big garbage bins. At present, the project is on in 20 of the 76 wards. Close to 60-85% of the waste generated in the area is segregated," Kiran Kulkarni, director, Janwani, Maharashtra Chamber of Commerce, Industries and Agriculture, said. The organization is helping SWACH and PMC implement the project.

In Pune, it is mandatory for residential societies, which have come up after 2000, to have a composting plant to process waste. With Delhi facing serious waste management issues, municipal officials say the Pune model can be implemented at least in planned areas like Vasant Kunj, Dwarka and Greater Kailash. "There are 15,000-20,000 ragpickers in south Delhi. This will help them earn their livelihood and bring down cases of drug abuse," Dr Rajesh Kumar, executive director of Society of Promotion of Youth and Masses, said.

# U'khand starts 'green audit' of resources

TIMES NEWS NETWORK

New Delhi: Uttarakhand on Friday became India's first state to start tabulating a 'gross environment product' (GEP)—an audit of the state's natural resources—which would be released alongside GDP figures every year.

CM Vijay Bahuguna has directed officials to begin formulating the new green measure

### ► Under green ministry, P 17

on the status of the state's glaciers, forests, rivers, air quality, soil etc, are released said.

These figures could become an important tool for conservation strategies besides giving indication of the toll economic activity was tak-

## WHAT IS GEP?

- 'Gross environment product' will indicate the status of each natural resource in Uttarakhand — glaciers, forests, rivers, air quality, soil
- This would be tabulated by measuring the exploitation of a resource as also efforts made to conserve it
- Comparisons with previous year's figures will show the resource's relative health

ing on the state's environment.

The announcement comes in the wake of the devastation caused by last month's flash floods, after which the hill state received severe criticism for placing development over environment.



*The Times of India, Delhi, Dated July 06, 2013*

# GEP authority under green min

► Continued from P1

Uttarakhand chief minister Bahuguna announced the new green measure after a meeting with environmental activist Anil Joshi, whose organization, HESCO, has been demanding it for some time.

Joshi called it a "historical decision" which other states should emulate.

"It is the most important step that the government has taken. GEP will act as a balance between ecology and economy. It will truly represent the rural resource growth rate, which was otherwise neglected in GDP figures," he told TOI.

## Kedarnath ready for puja by mid-July?

The Badrinath-Kedarnath Temples Committee is hopeful that the traditional 'puja' or worship at the Kedarnath temple would begin in the next 10-12 days, said the committee chairman on Friday. Currently, daily prayers to the lord are being offered at Ukhimath, around 50 km from Kedarnath, the winter home of the deity. "We are hopeful that prayers can begin over the next 10-12 days. Our functionaries have already started moving in to the area. A number of religious ceremonies need to be completed like 'shuddhikaran' or purification which is a must as there have been deaths in the temple complex," Ganesh Godiyal, the committee chairman, told TOI over phone from Uttarakhand.

Godiyal said efforts are being made to move more people as early as possible. "Our team will also have a lot of 'swayamsevaks' who will help clean the temple complex of debris. This should take around 7-8 days as work is already on by the authorities to clear the complex."

**Pankaj Deval**

An Uttarakhand government release said a nodal authority would be formed under the state's environment ministry for coordinating work on tabulating the GEP.

"The CM has called for a meeting within a month with institutions such as the Forest Research Institute and Central Soil and Water Conservation Research and Training Institute for working out how the GEP figures would be arrived at and other details," Joshi said.

All state departments and agencies would be asked to take up GEP-related work as a mission, the government release said. These numbers will be reflected yearly in the state's charter of growth. Joshi said, with GEP figures in the public domain, "government will not be able to ignore the state's ecology in favour of economic growth".

*The Times of India, Delhi, Dated July 07, 2013*

# Action plan on air pollution soon

## Awaits Cabinet Nod, Work To Be Monitored By Chief Secy & CM

**Neha Lalchandani | TNN**

New Delhi: After several delays, Delhi's action plan to curb air pollution will finally be presented in the cabinet in the coming week. Environment department officials say they will monitor work on the "roadmap" but it is the responsibility of several other agencies like transport, municipal corporations etc to ensure the policy proposals are rolled out.

"The plan is ready and awaiting clearance from the cabinet. It has been divided into tasks that will be carried out in short term, medium term and long term. Its progress will be monitored periodically by either the chief secretary or the chief minister or maybe both," said a senior official.

Work will be undertaken under 10 major segments that include air quality monitoring, reduction of vehicular emissions, strategies to reduce the number of vehicles on



Strict action to be taken against vehicles exceeding pollution limit

roads, strengthening non-motorized transport network, bringing in a parking policy, creating an urban transport fund, a clean policy for power plants, generator sets, open burning and control measures for road and construction dust.

The government's priority will be to curb burning of leaves and

garbage. Discoms will be asked to install temporary pre-paid electricity meters for power supply to marriage halls to discourage the use of diesel generator sets. Battery operated LED lights could also be introduced as an alternative to traditional lights used during marriage processions. Officials said strict action will be taken

against vehicles if their emissions exceed the pollution limit, especially those entering the city from neighbouring states. Close to 121 entry points will be monitored by the corporations, traffic police and transport department. If vehicles not bound for Delhi cross the city, they will be turned away.

"Construction projects with a built-up area of more than 20,000 sqm will have to take dust suppression measures during construction. If levels of particulate matter (PM) cross 500 mg/cu m, the project might be stopped," said an official.

A standard advisory on ambient air quality and smog alerts will also be formulated. During Diwali, enforcement will be increased, and a time limit of 10pm has been set for sale and bursting of crackers. Delhi Pollution Control Committee will also test crackers being sold in the market to ensure that they meet specified standards on air and noise emissions.



*The Times of India, Delhi, Dated July 08, 2013*

# Vanishing city greens show up in villages

Land-starved Delhi has no space for plantations to balance out the effects of urbanization, so they are being shifted outside to the detriment of Delhiites

Jayashree Nandi | TNN

About 40km from the heart of Delhi, mini forests thrive inside the Rewla Khanpur village. When TOI visited the area, we were treated to the sight of nilgai grazing and birds chirping; the trees, though not fully grown, were luxuriant enough to provide shade.

To the villagers, who enjoy vistas of open land, this green patch may not mean much, but for Delhiites this would have offered much-needed fresh air. Unfortunately, the city does not seem to have land left for large-scale plantations.

Mini forests have come up in Rewla Khanpur and other villages like Kharkhari and Ujwa in Najafgarh to compensate for the lakhs of trees felled in the city to facilitate infra-



**PLANTATIONS AROUND NAJAFGARH**  
(for DMRC/NHAI and other projects)



structure projects like the Metro, highways and flyovers. About 48,000 trees were cut to make way for the Delhi Metro network.

Delhi Preservation of Trees Act, 1994 says every user agency felling trees for a project will have to fund planting of 10 saplings. "As the forest department doesn't have any land left inside the city, we had to move away. Plots were surveyed and the gram sabhas agreed to give us their land. For now we can grow trees but the gram sabhas can retrieve their land," says a senior forest officer. The villagers don't mind the plantations. Rewla Khanpur, deserted for the most part, is characterized by elders puffing hookahs on charpoys while some farmers work the fields.

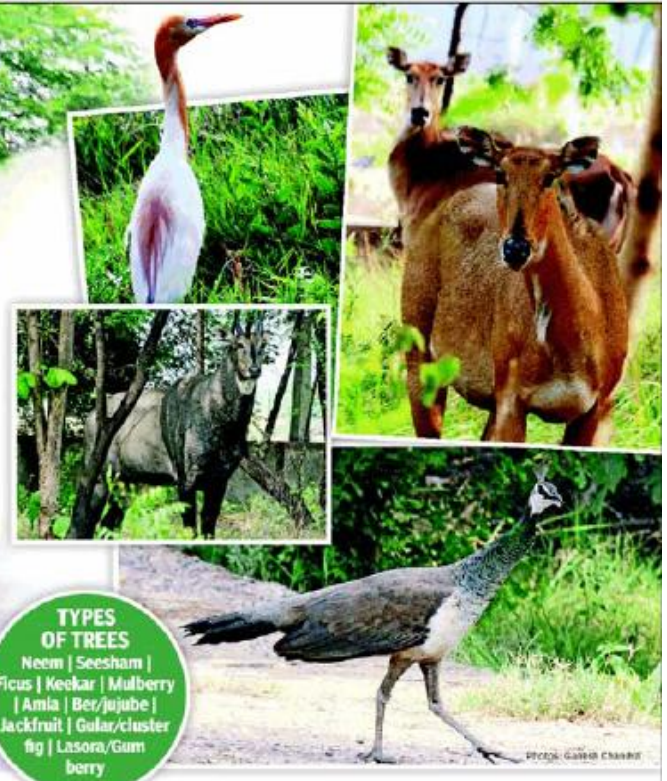
Forest officers fear that very soon there will be no land left for such plantations. Between four deputy

conservator of forests (DCF), they receive at least a thousand applications for afforestation projects by user agencies. DMRC will divert some forest land for Phase 3, and afforestation will be done by the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) for Delhi. Plantations are also being done in Nangloi and Allpur ranges of the west and northwest districts.

"Plantation in an area like the central ridge is difficult owing to the preponderance of keekar trees, which inhibit the growth of other species. Land in the villages is free from such constraints and is usually fertile," says another forest officer. Najafgarh also has some young plantations, about three years old. Unlike manicured plantations where saplings are planted in rows, these plan-

tations are developed like natural forests. "The idea is create a forest-like environment so that there is room for fauna. Many birds make nests in the grasslands, also used by reptiles, so we don't prune the foliage," says DCF Prashant Rajgopal. Only hardy saplings can withstand extreme weather and become a part of the forest. Another difficulty is that plantations are found in patches.

Most of DMRC's compensatory plantations are in Najafgarh. Agencies pay Rs 28,000 to the forest department for planting 10 trees. If they manage to do half of the plantation, Rs 14,000 is refunded. "Some of these plantations are excellent, while some are poorly done. There is no space left in Delhi and planting 10 saplings for every tree is very ambitious," says Prabhakar Rao of Kalpavriksh.



**TYPES OF TREES**  
Neem | Seesham |  
Ficus | Keekar | Mulberry  
| Amia | Ber/jajube |  
Jackfruit | Gular/cluster  
fig | Lasora/Gum  
berry



# Industries in spl areas to require green nod

## These Areas Weren't Meant To Be Industrial

Neha Lalchandani | TNN

New Delhi: Industries located in 'redevelopment areas' that were not designated for industrial activity but have become industrialized over the past several years will now be brought in the ambit of green laws. Industries that were set up before February 7, 2007, must apply to Delhi Pollution Control Committee for consent to operate, a permission that will be renewed annually.

Three categories of industries that were set up after February 7, 2007, will be permitted to continue operations but

must apply for consent to establish along with consent to operate. These industries include green category industries or non-polluting units, hi-tech industries mentioned in Master Plan 2021 and utilities engaged in waste collection, storage, processing and treatment.

DPCC member secretary Sandeep Mishra said, "Delhi Development Authority has identified 22 areas for industrial redevelopment. Since industrial activity will be permitted in such areas, we would like to encourage non-polluting and essential work here. The consent to operate will have to be

renewed annually since it will take time for redevelopment areas to be fully and legally industrialized. In case the scheme fails, we do not want to be left with unauthorized units that boast of a legal tag."

Delhi has about 25,000 authorized industries functioning in 29 industrial areas. However, several more continue to operate outside these areas but with no survey carried out till now to determine their nature or number; the government has no clear picture of how many industries will apply under the redevelopment scheme.

"Industrial units located outside industrial areas are operating with full power and water supply, so there is obviously collusion with civic agencies. No action has been taken against them so far since the environment department does not recognize their existence. Once the industries now start applying for consent, we will get a clear picture of how many actually exist. A survey will also be carried out subsequently within the redevelopment areas to determine how many and what kind of industries are operating from here," said an official.

Redevelopment work in these areas will include widening of roads, provision of civic services and development of open spaces and parking.

Two categories of industries will continue to be banned and will be shut down with immediate effect if found operating. These include H-category units listed under Master Plan 2001 and 99 prohibited and negative industries listed in Master Plan 2021.

### IN THE GREEN ZONE NOW



99

Industries listed as 'prohibited/negative'

#### These include

Brewery and potable spirits | Cement | Distillation of wood/chemical seasoning of wood | Explosives | Leather tanning and dying | Manufacture of pulp and paper | Paints | Waste oil processing

Redevelopment industrial areas are those that were not designated as such under the master plans but became industrialized over the past several years

#### The 22 redevelopment areas include

Anand Parbat | Shahdara | Samaipur Badli | Jawahar Nagar | Sultanpur Mazra | Hastal Pocket-A | Hastal Pocket-B | Naresh Park Extension | Libaspur | Piragarhi Village | Khyala | Shalimar Village | New Mandoli | Nawada | Rithala | Swarn Park Mundka | Haiderpur | Karawal Nagar | Dabri | Basai Darapur

*The Times of India, Delhi,  
Dated July 09, 2013*

*The Times of India, Delhi,  
Dated July 10, 2013*

## System to assess air quality at waste plant

TIMES NEWS NETWORK

New Delhi: Central Pollution Control Board on Tuesday set up temporary air pollution monitoring systems at Sukhdev Vihar and at the waste-to-energy plant. National Green Tribunal ordered this for checking if the plant was releasing more pollutants than allowed.

Sources said a high-volume sampler to test levels of particulate matter of more than 10 micron size, sulphur dioxide and oxides of nitrogen was set up in Sukhdev Vihar colony. Another system to monitor hydrogen chloride and other pollutants was put up in the plant's chimney. "Since these are only temporary systems, they will monitor air quality for not more than 48 hours. The system has been put in place in accordance with an NGT order," said a source.

Residents, who had been clamouring for air quality assessment, say this is the worst time to assess pollution. "Delhi witnessed a downpour this af-

ternoon because of which pollution levels would have come down. Monsoon is scientifically the worst time to measure air quality since the wind and humidity levels aid in reducing pollutants. Till last week the plant was spewing thick plumes of black smoke. Once the pollution monitoring system was put up, they have mysteriously disappeared," said Dr UC Bahri, a resident.

Residents who tried to visit the plant to see how the monitoring was being carried out were prevented from entering by the management. "We were told that a visit by residents was not part of the court order and we would not be allowed to go inside," said Bahri.

Senior government officials also expressed scepticism at the move, saying that a 48-hour quality test in humid weather was not likely to reveal the real picture. "Maybe the testing needs to be carried out for a longer duration in better weather," they said.

*The Times of India, Delhi,  
Dated July 09, 2013*

## Solar-powered 'family car' unveiled

London: The world's first solar-powered car that can tote around the whole family and produce electricity as well has been developed, Dutch students claim. The solar-powered cars manufactured to date are usually built for just one person — not very useful when the need is to carry passengers.

Students from the Netherlands' Eindhoven University of Technology unveiled 'Stella', the world's first solar-powered family 'energy-positive' car with room for four people, a trunk, intuitive steering and a range of 600km.

The solar cells of 'Stella' generate more electricity on average than the car uses and that means the surplus electricity can be returned to the power grid,



1-SEATERS SET TO GET PASSE

thereby making the car 'energy-positive', a university statement said.

The Solar Team Eindhoven set itself

the goal of developing the car of the future by combining aerodynamic design with lightweight materials like carbon and aluminium. The fuel-efficient car design also has ingenious applications like a LED strip and touchscreen that make all the buttons and knobs we know today superfluous.

Intuitive driving is enabled by a steering wheel that expands or contracts when you are driving too fast or too slowly. STE will have the car officially certified for road use to prove that this really is a fully-fledged car. A multidisciplinary team with 22 students from six different departments spent a year on the project that involves challenges from the fields of energy and mobility. ■



*The Economic Times, Delhi,  
Dated July 10, 2013*

# Investor Interest in E-waste Startups Surges on New Norms

Cos gain from rules that mandate producers & bulk consumers to dispose used gadgets

**VASUMITA SADARSH**  
PUNE

Numerous companies that recycle electronic waste are seeing a spurt in growth and drawing investor interest after new rules placing the onus on producers and bulk consumers for the safe disposal of used gadgets came into effect last year.

The e-waste startups, which collect, segregate and recycle electronic components, have seen even more than five-fold rise in revenues in some cases since the introduction of the regulations. "Four years ago, the organised sector handled less than 3% of the e-waste generated in India, but today the figure has moved up to 7.5%," said Shankar Sharma, a director at Gurgaon-based e-waste company Green Vortex. The venture, set up with Sharma's personal savings of ₹30 lakh in 2009, has seen revenue grow from ₹15 lakh in fiscal 2011 to ₹1 crore this year. Sharma is now targeting revenue of ₹8 crore by fiscal 2014.

The new opportunities have boosted investor sentiment across the sector. Noida-based Attero Recycling is poised to raise nearly ₹200 crore of fresh capital from a group of investors, including Texas-based Waste Management Inc. Green Vortex expects to raise fresh funding of ₹15 crore.

"We are seeing startups becoming more active after the



regulations came into force," said Subrata Barman, a senior operations officer at IFC, the investment arm of the World Bank and an early investor in Attero. "The law has made producers as well as bulk consumers to look for recyclers who are licenced and are known for green recycling."

It is this shift towards organised recycling by users who earlier relied on the neighbourhood "kabbadiwalla" that is creating a wave of opportunity. Experts estimate that India generates close to a million tonnes of e-waste a year, of which over 93% is recycled by unorganised dealers in a hazardous manner.

"Consumers still go to the informal sector as there is cash to be made from e-waste," said Anwar Shirpurwala, executive director of the Manufacturers Association of In-

formation Technology, who expects the new regulations to help create the transition to organised recycling in the next few years.

Mumbai-based Ecocentric, founded by Karan Thakkar, has set up a 1,200-metric tonne plant funded from his own resources and bank loans to recycle e-waste.

These start-ups are also finding new business from users who are concerned about the safety of data when used gadgets are being disposed.

"There is always fear of sensitive data getting used for wrong purposes. We give companies the guarantee that data will be completely destroyed before the e-waste is reused or recycled," said Nitin Gupta, CEO of Attero Recycling, which earned monthly revenues of around ₹18 crore in the last fiscal.

Jeevesh Kumar, who set up Greenscape Eco Management in Delhi after a stint at IBM, believes start-ups have an uphill task, with many users preferring to give the e-waste to the cheapest recycler rather a responsible one. Currently, Greenscape earns revenue of about ₹60 crore.

But as the opportunity grows, so will competition. "Five years ago, when Attero came up we were seeing a market ahead of time. Startups wanting to enter today will have to offer the same business with a different twist," said Kumar Shiralagi, managing director of Kalaari Capital, which has invested in Attero.



*The Economic Times, Delhi, Dated July 10, 2013*

# Monsanto's Climate-resilient Crop Patent Claims Rejected

This is the first judgement citing Section 3(j) that says plants & animals aren't patentable

**SANJAY VIJAYAKUMAR**  
CHENNAI

India's patent appeals board has denied Monsanto a patent for a genetically-engineered method of increasing climate resilience in plants. The decision is significant not only for Monsanto's loss of possible exclusivity in an increasingly important segment but also for the interpretation of India's home-grown clauses in patent law — these are unpopular with global companies — for the first time in the case of plants.

The Intellectual Property Appellate Board, in rejecting the American seed company's patent claims, said the technology is merely a discovery of a new property of known substance and not an invention under Section 3(d) of the Indian Patent Act. Section 3(d) is the same Section under which the Swiss drug-maker Novartis' patent claim for its cancer drug Glivec was rejected.

Monsanto's method of "enhancing stress tolerance in plants and methods thereof" has already been accepted in the US and Europe.

"This is the first time Section 3(d) has been used on plant patents, and its implications are far-reaching," said environmentalist Vandana Shiva. This is also the first judgement citing Section 3(j), which specifies that plants and animals aren't patentable. Monsanto, which earned over \$13 billion in revenue last year, played down the decision while its backers welcomed it.

In an emailed statement, Monsanto said the company is in the process of evaluating possible actions with its advisers, but does not foresee any special implications from this decision. "The patents are essential for continued investments. Re-

## Checkmate

**INDIA'S PATENT** appeals board said the US co's technology is merely a discovery of a new property of known substance and not an invention under Section 3(d) of the Indian Patent Act

**EARLIER, THE** Swiss drug-maker Novartis' patent claim for its cancer drug Glivec was rejected under the same section

**ENVIRONMENTALIST** Vandana Shiva said Monsanto cannot do with climate resilient crops what it did with Bt cotton

search and development efforts take over a decade to develop and patent protection is a must."

But Shiva said that if the judgement is upheld, "Monsanto cannot do with climate resilient crops what it did with Bt cotton." Critics such as Shiva blame Bt cotton for the ills in the cotton belt, including high cost of the seed, which they argue is one of the reasons for farmer suicides.

Shiva said she is ready to intervene in case Monsanto appeals in the Supreme Court.

Though Monsanto played down the decision, observers described it as a possible loss of an exclusive market.

"This is a setback to Monsanto because they were betting on transgenic crops," said Subhra Priyadarshini, who tracks genetically modified technology closely and is editor of online science portal Nature India.

Rahul Dev, Patent Attorney Partner at Delhi-based Tech Corp Legal, said the invention would have been applicable to a wide range of seeds, including

soybean, corn, canola, rice, cotton, barley, oats, turf grasses, cotton and wheat.

"This patent was very crucial for Monsanto. Although currently, Monsanto sells only one variety of seeds (hybrid maize seeds) in India. Had this patent been awarded, Monsanto could have enjoyed exclusive patent rights for all the seeds sold in India that used this technology."

This view was shared by Meenakshi Khurana, patent attorney at Khurana and Khurana. She said climate-resilient plants will be important in times of climate instabilities, which are predicted to be increasingly common in coming years. "In calamities like the Uttarakhand floods, salt-tolerant crop varieties are needed in large amounts by the farmers who otherwise cannot produce crops because of sea salt deposition."

No protection for such patents means prices of such plants will remain in check.

According to a report by the Washington-based Center for

Food Safety, Monsanto had received over \$23.5 million from patent infringement lawsuits against farmers and farm business by end of 2012. It also said three agrochemical firms — Monsanto, Du Pont and Syngenta — now control 53% of the global commercial seed market.

Tech Corp's Rahul Dev said the implications could be far reaching. He said the judgement could also set precedent for debates around genetically modified crops, including the Biotechnology Regulatory Authority of India Bill which would set rules for regulating such crops. "Companies like Monsanto will now have to play their business strategies accordingly. After crossing all hurdles, even if such genetically modified crops are allowed to be sold in future, they might not be able to enjoy exclusive patent rights, which will definitely lead to more competition and low pricing of such seeds."

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*The Times of India, Delhi, Dated July 11, 2013*

# Mobile dead? Try solar headphones

## Energy Stored In Batteries Can Charge Phones While Listening To Music

London: A pair of headphones that can harness solar power to charge mobile devices when you are on the move has been designed in the United Kingdom. Andrew Anderson, a Glasgow-based designer, launched the OnBeat headphones on crowdfunding site Kickstarter and hopes to have them on sale by early next year.

The headphone band is fitted with a flexible solar cell with a charge capacity of 0.55 watts.

"The headphones have an integrated flexible solar cell that covers the full headband which capture solar energy whilst out and about," Anderson said on Kickstarter. "The energy is stored in two light-weight Lithium Ion batteries held within the two ear cups for a balanced weight and fit on the head.

"For those rainy days we have also developed the headphones to be able to be charged via USB directly from your computer or



RAY OF HOPE

mains socket," he said.

Anderson hopes to raise £200,000 to get the headphones into production.

"We are still working on the de-

sign and prototype. We need to improve the headphones — people want to know about noise cancellation," he told the BBC.

He admitted that his father

Frank had come up with the idea.

"It's really simple — you would think it had already been done. You can buy solar chargers for phones but the thing is it's like you're carrying two phones around," he said.

The idea of using renewable sources to charge devices is proving popular among developers.

Many inventors have been looking at harnessing the energy generated by walking too. One project seeking crowdfunding via Kickstarter in the US is a shoe insole that can be used to charge batteries. A walk of between 2.5-5 miles is required to charge an average iPhone battery, says the team at Solepower, which developed the prototype at Carnegie Mellon University.

"We developed a proof-of-concept prototype for lighting up shoes so students could easily see where they were walking at night," says its website. AGENCIES

# PWD told to pay ₹75L for damaging trees

Neha Lalchandani | TNN

New Delhi: The Public Works Department has been asked to pay the forest department Rs 74.76 lakh as compensation for cutting or damaging 421 trees along the Andheria Mod-Masoodpur stretch while carrying out work for their road-widening project. TOI had highlighted the illegal felling of trees for this project on February 4.

A report submitted by the director of Dehradun's forest research institute to the national green tribunal has stated that 267 trees have been cut, removed or uprooted and another 154 have been damaged in the 2.91km stretch where PWD started its road-widening work. The report said, "69% of the vegetation removed would have constituted woody shrubs, bushes and saplings and 31% would have been trees." Estimating that 2,670 saplings



The agency felled 267 trees and damaged 154 for road-widening

need to be planted as compensation, PWD will have to pay Rs 74.76 lakh at the rate of Rs 2,800 per sapling.

PWD has variously claimed that its contractor cut trees even though no permission had been received from the forest department to submitting an affidavit saying no tree had been cut by its staff or contractor.

NGT had set up a two member team from Indian Council of Forestry Research and Education in May to establish how many trees were cut, damaged or uprooted by the agency, to inspect area falling under DDA jurisdiction to ascertain condition of trees there and establish the likely value of trees damaged and the amount

needed for afforestation.

The team, assisted by Delhi forest officials and Sonya Ghosh, on whose application the court passed the order, inspected the site between June 17 and 19. The team observed that while constructing a drain, some trees were damaged. Some trees still have exposed roots and there is a need to cover them to prevent further damage.

"Rampant use of heavy machinery has taken place and a lot of changes have already taken place along the sides of the road. There is little chance of thick/undisturbed patch of trees occurring in that area...no stumps have been found in the entire area as it has been levelled by the machines and it is probable that the stumps have been removed from the site," the report says.

A five member NGT bench headed by chairperson Swatanter Kumar ob-

served: "The findings of the special expert committee gives an alarming picture of the misdeeds of all the authorities including the chief engineer, executive engineer and the contractor (of PWD)." A showcase notice has been issued to them.

The team also found that 25 trees have been removed from the DDA area which has also been levelled. "PWD intends to construct the road over the levelled area. In such case, no afforestation is possible."

Ghosh has also found that PWD has not yet received final approval for the project from UTTIPEC. Under right to information, Ghosh has also been told by PWD that the latter has not even submitted its final plan to UTTIPEC and that 'no objection certificates' from statutory bodies like Archaeological Survey of India is yet to be received.

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*The Economic Times,  
Delhi, Dated July 13, 2013*

## Green Ministry Limits Ambit of Clearances for Realty Projects

**OUR BUREAU  
NEW DELHI**

The environment ministry, under pressure from real estate and builder lobbies, and state governments, has limited the ambit of clearances for projects in this sector. Now, local civic authorities will lay down the norms relating to building control and safety in line with the relevant master plan.

The real estate sector has consistently demanded that environmental clearance procedures be simplified and shortened. The urban development ministry too has been advocating single window clear-

ance for real estate and housing projects, arguing that this would help contain escalating housing costs. Given its function as a regulator, the environment ministry had made it clear that it could not be part of a single window clearance system.

However, in response to the overwhelming demands, the environment ministry set up a committee headed by Planning Commission member K Kasturirangan to review the environment clearance process for the sector. The committee recommended that the local authorities decide on the

norms, and the environment clearance authorities focus on environmental impact, waste water treatment, air quality and such issues.

*The Times of India, Delhi,  
Dated July 13, 2013*

## Environment ministry HQ to go fully solar

**TIMES NEWS NETWORK**

**New Delhi:** The country's first "net zero" conventional energy consumption multi-storey building — the new headquarters of the environment ministry — will be completed in Jor Bagh next month. The building will meet its annual requirement of 14 lakh units of electricity by generating solar power on the site.

The environment ministry had set this target for Central Public Works Department (CPWD), which is building the Indira Paryavaran Bhawan. "It is an embodiment of a most every measure of sustainability that is possible," CPWD direc-



**NO CONVENTIONAL ENERGY CONSUMPTION**

tor general V K Gupta said. It will also have an underground automated robotic parking for 330 cars.

Engineers who worked on the eight-storey building said the estimated annual energy demand for a conventional

complex of this size is 22 lakh units, but in this case it was reduced by 30% by taking novel measures. Even rooftop areas have been increased by three-fold from 2,000 sq meters to 6,000 sq meters by building huge cantilevers so that enough monocrystalline solar PV panels can be installed.

The solar power generated in the complex, built at an expense of Rs 200 crore, will be fed back to the NDMC grid from where supply is initially taken. The solar plant will have peak generation capacity to produce 930 kilowatt (close to 1 MW) power. Gupta said the extra investment to make the building net-zero conventional

energy consumption would be recovered in 10 years.

Earlier in the day, speaking at the 159th CPWD day, CM Sheila Dikshit urged the organization to promote green buildings, saying such structures were the answer to rising power consumption.

The CPWD chief said the home ministry had tasked them to build an AIIMS-like medical complex for paramilitary forces at Maidan Garhi in south Delhi. Responding to a question on the progress of the Afghan parliament, Gupta said the core area and functional area will be ready by December. The remaining work would be taken up by Afghan agencies.

## 35 Noida industries under green panel lens

Ayaskant Das | TNN

Noida: The Uttar Pradesh Pollution Control Board (UPPCB) has started a survey to ascertain levels of pollution caused by 35 industries in Noida. These industries were placed under the red and orange categories because of the severity of pollution caused by them. Two months ago, after notices had been issued to the industries, they claimed to have installed state-of-the-art pollution control devices.

The preliminary inspection report was trashed last



**SURVEY STARTS**

week by the National Green Tribunal. In the survey report presented to the tribunal, the pollution control board had neither specified the industries that were

found to be polluting nor had mentioned those units which had not duly complied with the consent conditions. "It is also not clear whether all such industries have been directed to be closed down under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 or the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986," the tribunal had observed in its order.

As part of the survey, a team of pollution control board officials will collect samples of effluent water and air from the units for analysis. The board will specify in its report the actions initiated against polluting industries with details.

This would include names of the industries, nature of activities undertaken by them, their respective production capacities and action taken against those units which have not installed proper pollution control measures.

*The Times of India, Delhi, Dated July 16, 2013*

## Earth losing 300bn tonnes of ice every year

Kounteya Sinha | TNN

London: A satellite has detected that 300 billion tonnes of ice is being lost every year from the Antarctic and Greenland glaciers, dramatically increasing sea levels around the world.

The satellite that detected the melting is Gravity Recovery and Climate Experiment (GRACE). British scientists have been using it since 2002 to detect tiny variations in Earth's gravity field resulting from changes in mass distribution, including movement of ice into the oceans.

Using these changes in gravity, the state of the ice sheets can be monitored at monthly intervals.

Scientists from University of Bristol also found that the rate at which ice sheets are losing ice is increasing.

Compared to the first few years of the GRACE mission, the ice sheets' contribution to sea level rise has almost doubled in recent years. Yet, there is no consensus among scientists about the cause of this recent increase in ice sheet mass loss.

Beside anthropogenic warming, ice sheets are affected by many natural processes, such as multi-year fluctuations in the atmosphere (for example, shifting pressure systems in the North Atlantic or El Niño and La Niña events) and slow changes in ocean currents. The ice sheets covering Antarctica and Greenland contain about 99.5% of the Earth's glacier ice which would raise global sea level by some 63 metres if it were to melt completely.

The ice sheets are the largest potential source of future sea level rise.



**THE HEAT IS ON**

The findings, published in Nature Geoscience, underscore the need for continuous satellite monitoring of the ice sheets to better identify and predict melting and the corresponding sea-level rise.

Lead researcher Dr Bert Wouters and his team compared nine years of satellite data from the GRACE mission with reconstructions of about 50 years of mass changes to the ice sheets. They found that the ability to accurately detect an accelerating trend in mass loss depends on the length of the record.

At the moment, the ice loss detected by the GRACE satellites is larger than what we would expect to see just from natural fluctuations, but the speed-up of ice loss over the last years is not.

*The Times of India, Delhi, Dated July 15, 2013*

## 'Air pollution costing economy ₹3.75L cr a year'

Dipak Kumar Dash | TNN

New Delhi: Outdoor air pollution in urban areas by itself claims 1.09 lakh lives of adults and 7,513 lives of children below 5 years, annually, says a latest report of World Bank. The study released on Wednesday revealed that the annual cost of environmental degradation in India is about Rs 3.75 lakh crores, which is equivalent to 5.7% of the country's GDP.

The study commissioned by the central government has brought out how urban growth centres are choking and claims that outdoor and indoor air pollution have the maximum share of this annual burden on India's economy. According to the estimates of the bank, outdoor air pollution accounts for 29% of this, followed by indoor air pollution (23%), cropland degradation (19%), water supply and sanitation (14%), pasture (11%) and forest degradation (4%).

The first national level economic assessment of environmental degradation in India focuses on particle pollution (PM10) from the burning of fossil fuels. This has serious health consequences, amounting up to 3% of India's



**COST OF DEVELOPMENT**

GDP and results in losses due to lack of access to clean water and sanitation, besides depletion of natural resources.

Indoor air pollution is mainly due to burning of wood in rural India.

PM10 stands for particulate matter up to 10 micrometers in size and include smoke, dirt and dust from factories, construction sites, farming and roads. Annually, over 3.7 lakh hospital admissions are reported due to outdoor air pollution in urban areas.

According to the report, India can make green growth a reality by putting in place strategies to reduce environmental degradation at the minimal cost of 0.02% to 0.04% of average annual GDP growth rate.



*The Times of India, Delhi, Dated July 18, 2013*

# Now, pee power can charge your mobile

## Human Waste Used To Produce Enough Electricity To Send Texts, Browse Web

London: In a world first, UK scientists claim to have developed a novel method to charge mobile phones—using human urine.

Scientists working at the Bristol Robotics Laboratory have described the “breakthrough” finding of charging cell phones using urine as the power source to generate electricity.

“We are very excited as this is a world first, no-one has harnessed power from urine to do this so it’s an exciting discovery. Using the ultimate waste product as a source of power to produce electricity is about as eco as it gets,” Ioannis Ieropoulos from University of the West of England (UWE), Bristol, an expert at harnessing power from unusual sources using microbial fuel cells, said.

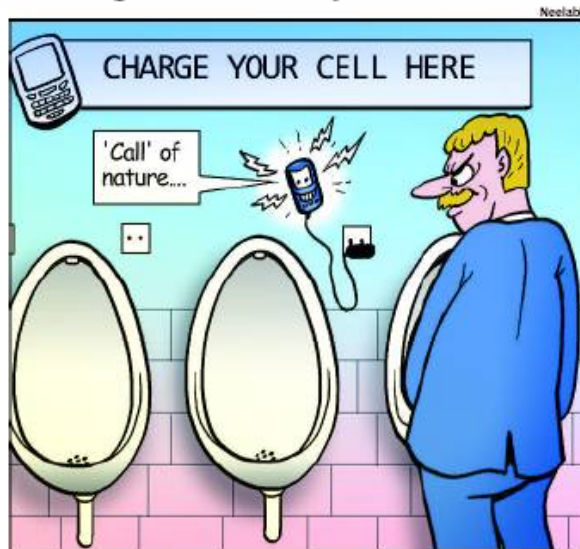
“One product that we can be sure of an unending supply is our own urine. By harnessing this power as urine passes through a cascade of microbial

fuel cells (MFCs), we have managed to charge a mobile phone. The beauty of this fuel source is that we are not relying on the erratic nature of the wind or the Sun, we are actually re-using waste to create energy,” said Ieropoulos.

He said so far the microbial fuel power stack that scientists have developed generates enough power to enable SMS messaging, web browsing and to make a brief phone call.

“Making a call on a mobile phone takes up the most energy but we will get to the place where we can charge a battery for longer periods. The concept has been tested and it works—it’s now for us to develop and refine the process so that we can develop MFCs to fully charge a battery,” he said.

The Microbial Fuel Cell (MFC) is an energy converter, which turns organic matter directly into electricity via the metabolism of live microorgan-



isms, researchers said.

Essentially, the electricity is a

by-product of the microbes’ natural life cycle, so the more they

eat things like urine, the more energy they generate and for longer periods of time; so it is more beneficial to keep doing it, they said.

The electricity output from MFCs is relatively small and so far we have only been able to store and accumulate these low levels of energy into capacitors or super-capacitors, for short charge/discharge cycles.

This is the first time we have been able to directly charge the battery of a device such as a mobile phone and it is indeed a breakthrough, researchers said.

Scientists believe that the technology has the future potential to be installed in domestic bathrooms to harness the urine and produce sufficient electricity to power showers, lighting or razors as well as mobile phones.

The study was reported in the Royal Society of Chemistry Journal of Physical Chemistry Chemical Physics.

*The Economic Times, Delhi, Dated July 19, 2013*

## No Green Nod Needed for Infra Projects in 35 ‘Red’ Districts

**OUR BUREAU  
NEW DELHI**

In a bid to speed up development in naxal-affected areas, the environment ministry has decided to exempt public infrastructure projects from seeking forest clearance in 35 additional districts.

In May 2011 the ministry said public infrastructure projects like schools, health centres, roads, bridges would

not require clearance under the Forest Conservation Act, 1980, if it did not affect more than five hectares of forests. In December 2012, the exemption was extended to all 82 districts identified by the home ministry and Planning Commission for the implementation of the Integrated Action Plan.

The decision to extend it to 35 additional Naxal affected districts comes on the back of representations from the home ministry. The exemption is

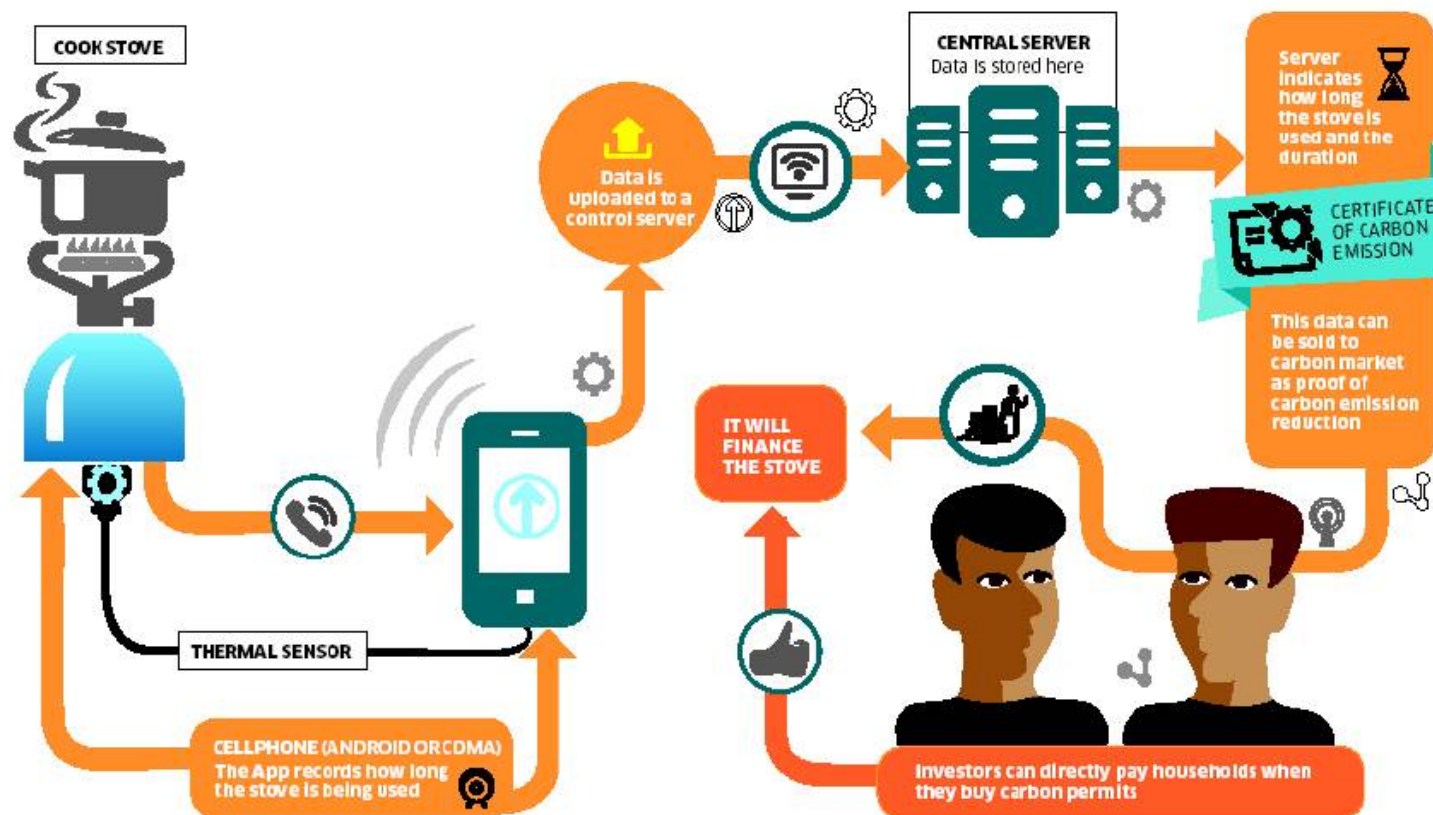
being given for critical public utility infrastructure of 13 categories and all categories of public roads and quarrying of materials used in the construction of roads. As long as the diversion is less than 5 hectares, the state is authorised to grant approvals, and need not send the applications to the environment ministry and the Forest Advisory Committee for approval.

The 35 districts are spread across six states.

*The Economic Times, Delhi, Dated July 20, 2013*

# Cook, Earn & Save the Earth

Application called Sootswap enables remote verification of stove usage, is being tested in UP town



Qualcomm, Nexleaf Analytics, The Energy and Resources Institute, and the UK Department for International Development have come together to develop a mobile application for monitoring and incentivizing the use of clean cook stoves in India.

Clean cook stoves cost between US\$50 and US\$100 (₹3,000-6,000) each and are currently out of reach for the estimated three billion people worldwide living on less than USD\$2 a day.

But what could make these affordable are financial incentives being provided by registered carbon credit programs for reducing carbon emissions.

Estimates suggest that a family could earn enough money selling carbon credits on the carbon market to directly finance the purchase price of a clean cook stove within two to five years through a loan.

The only obstacle is the difficulty and the expense to verify the reduction in carbon emissions produced by clean cook stoves, making it a challenge to

apply carbon credits to the use of improved cooking technologies.

To address this issue, these companies have developed a system christened SootSwap system, which includes a mobile phone-based temperature-sensing application and a thermal sensor that connects to a CDMA or an Android phone.

Each time the cook stove is fired up, the temperature increase activates the sensor. This temperature data is then wirelessly uploaded from the cellphone to a server where it is analyzed to indicate the number of times a stove is used and the duration of each use, enabling remote verification of stove usage.

This capability will create an opportunity to make data available to carbon market investors as proof of reduction in carbon emissions. Investors can then purchase the validated credits and transmit money directly to the families.

I.H. Rehman, Director, Social Transformation, TERI said: "We are in talks with the American Carbon

Registry and SGS of Switzerland for selling the carbon points that get accrued from these stoves. Our endeavour is to make this a fully workable model where the costs of the module at the user's end is actually financed by the carbon buying agencies in rural India on a mass scale and we are working to make this a workable model."

Over the past three years, SootSwap has been tested and validated both in the laboratory and through a pilot project involving more than 100 rural Indian homes in villages around Jagdishpur, a town in Uttar Pradesh.

In the next phase, SootSwap will be used with Project Surya's Climate Credit Pilot Project, known in India as C2P2. The pilot phase of the initiative aims to demonstrate the benefits of the adoption of clean cook stoves in 2,000 households. Participating families will receive a clean cook stove through bank financing and a mobile phone equipped with a temperature sensor and the SootSwap application.

Using these tools, families will be allowed to link their reductions in black

carbon emissions made possible by the clean cook stoves to carbon credits. Black carbon is caused by the use of solid fuels such as firewood, cow dung and crop residues and emissions from household cooking fires.

Project collaborators hope that the potential for earnings will motivate more families to use clean cook stoves and ultimately lead to the broad adoption of clean cooking technologies.

According to estimates, some 3 million people use traditional stoves that use wood, coal or kerosene as the fuel. These stoves are a slow killer and studies further show these kill around four million people globally as a result of smoke inhalation produced over these open fires.

Switching to clean-burning cook stoves can reduce the amount of firewood used in open fires, as well as the amount of smoke indoors and outdoors. This could lead to improved health for women and children who have been shown to be the most exposed to the smoke.

Debjoy Sengupta, Kolkata



*The Times of India, Delhi, Dated July 21, 2013*

# E-waste still not landing in recycle bin

TIMES NEWS NETWORK

New Delhi: Electronic waste disposal laws were notified on May 1 last year but even now, about 90% of the e-waste generated in the city or imported from other centers is treated in the informal sector. Citing two cases pending with the National Green Tribunal, Delhi government has once again appealed to consumers to dispose off e-waste only through authorized recyclers.

The city has nine authorized collectors and segregators of e-waste and four recyclers listed with the central pollution control board for north Delhi. Despite an extensive organized chain, waste is still being treated openly in small rooms.

Attero Recycling Pvt Ltd, one of the first e-waste recycling units to set shop in north India, has taken up door to door collection. Its chief operating officer Rohan Gupta says the company has one storage facility in Delhi from where stock is taken to their Rourkee plant twice a week. "Other than door-to-door or targeted col-

## LITTLE CONTROL OVER THIS HAZARDOUS TRADE

- Delhi generates about 20,000-30,000 tonnes of waste a year
- Over 30,000 people are employed in informal recycling in Delhi
- About 90% e-waste treated in informal sector
- There are four registered e-waste recyclers in north India
- Nine agencies are authorized for collection, segregation and storage

### RECYCLING YIELDS:

Lead, mercury, arsenic, cadmium, beryllium, barium, chromium, glass dust, tin, lead, brominated dioxin, beryllium cadmium, hydrocarbon ash



### THE DISPOSAL ROUTE



lections we have also had to tie up with other collectors but collection has not really picked up. The

goods are first taken to our storage site in Okhla industrial area where they are sorted, packed and

each box is barcoded. The waste then is taken to Rourkee, where we have a special metal extraction

plant, to extract precious metals and other recyclable material and process the waste before selling it in the market. In the end we are left with about 1% or so of the waste which is disposed of at a hazardous waste site," he said.

Sources say if the chain set-up by the government was being followed, authorized recyclers would have a lot of business but due to several chinks in the network, most e-waste is still being recycled in the informal sector. "We even offer to buy back goods but there seems to be a massive lack of understanding of rules. Waste-pickers also have it easy as they have a direct approach to consumers," said the owner of a collection agency. Another said that most collection was taking place in big business houses or more recently in schools and colleges. "Individual households have not been touched at all," he said.

NGO Toxics Link, which has been working extensively on e-waste, says that informal recycling is thriving in the city and more units have come up since the new laws were notified.

*The Times of India, Delhi, Dated July 24, 2013**The Times of India, Delhi, Dated July 24, 2013*

## Warming stalled? No, it's a pause

London: Global warming may have been on "pause" for 15 years but could speed up again and still remains a threat, UK scientists have warned. Huge amounts of heat are being continuously absorbed by the deep ocean, which could explain why global warming has "paused" over the past 10 to 15 years, scientists say.

After a period of rapid temperature increases during the 1980s and 1990s there has been a significant slow-down since the turn of the century, leading some sceptics to claim that global warming has stopped. "The Independent" reported. According to scientists from the UK Met Office, the most likely explanation for the recent hiatus in global warming is the continual absorption of thermal energy by



'HEAT SINKS'

the huge "heat sink" of the deep ocean many hundreds of metres below the sea surface.

Measurements from hundreds of ocean floats released over the last decade, which descend and drift to depths of up to 2,000 metres, show that huge amounts of

heat from the sea surface is now being transferred to the deep ocean, with unknown consequences for the environment, scientists said.

Scientists said the pause, however, is unlikely to change the predictions over the future course of warming. Temperature increases expected by 2015 will only be delayed by a further five or ten years. Average surface temperatures are still on course to increase by 2 degrees Celsius this century, with further rises expected by the end of the century, they said. A pause in the rate of increase in global temperatures lasting this long is not exceptional, with similar pauses of about 10 years expected on average twice every century, professor Stephen Belcher, head of the Met Office Hadley Centre, said.

## Green body panel to check tree felling

TIMES NEWS NETWORK

New Delhi: The National Green Tribunal has constituted a special committee to examine which of the 1,476 trees needed to be felled for an elevated road project between Vikaspuri and Meera Bagh can be transplanted and ensure that the work is carried out as soon as possible.

A five-member bench headed by NGT chairperson Swatanter Kumar on Tuesday constituted this committee, comprising the conservator of forest, Delhi, a PWD superintendent engineer, a senior officer from UTIPEC and one scientist to be nominated by Indian Council of Forestry Research and Education (ICFRE).

The bench observed, "Most of these trees are fully grown of age of 20 years plus and up to 100 years old."

### ROAD PROJECT

these trees would have an immediate impact on the environment." When PWD requested the court to at least allow felling of trees on the central verge, the tribunal said that unless compensatory plantation takes place, PWD will not be allowed to cut trees for the project.

"This committee shall also earmark the space on the sides of the road under development for expansion and construction of elevated corridor, where the trees would be either transplanted or sapling shall be planted," the orders says.

The forest department is not represented in the UTIPEC, the agency which clear such road development projects, and hence has had no role in the planning of this project. Officials now say that the project can easily accommodate some of the trees. Applicant Aditya Prasad, a tree activist said, "This felling can be easily avoided by shifting the lanes on the other side of the tree line." he said.

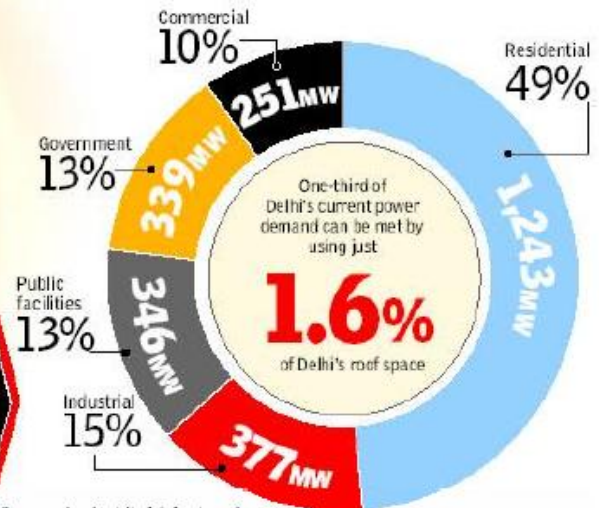


The Times of India, Delhi, Dated July 24, 2013

# A ray of hope for solar power

As electricity from conventional sources gets costlier and cheap solar technology looms on the horizon, the government may renew its efforts to promote green energy

**Potential of ROOFTOP SOLAR POWER GENERATION in Delhi for different land area types (in MW)**



TIMES NEWS NETWORK

**A**ffordability of solar technology, coupled with high rates of diesel-generated power, has again revived the possibility of the Delhi government promoting renewable energy. A report by Greenpeace India and Bridge to India says Delhi has the potential to generate 2,557 MW of solar power using only 1.6% of the city's roof space.

The Delhi government had conceptualized a project to promote rooftop solar power in 2011 but it was shelved as the power produced would have been expensive compared to that generated through conventional sources. "Setting up solar rooftop at houses is complex and needs fiscal support. But, the high tariff of grid electricity and cheaper solar installations make it a potential and sustainable energy

source. In 2012, Delhi's tariff increased by about 20% and might rise by 25% in another five years, while solar prices have almost halved in the past two years," said Anand Prabhu Pathanjali, energy campaigner, Greenpeace India.

By achieving the 2 gigawatt potential, the city can meet 16% of its needs. Delhi has a renewable purchase obligation (RPO) of 0.2% for 2013-14—it has to meet 0.2% of the demand through renewable energy. By 2016-17, the RPO will touch 0.35%. Presuming that dis-

coms will sell 25 million kW in 2013-14, there is a need for 50,000 kW of solar energy, necessitating 35.5 MW of installed capacity. Delhi has an installed capacity of 2.5 MW while it has a total area of 1,433 sq km with 700 sq km of built-up space. Only 31 sq km is available for rooftop projects with a potential for generating 2,557 MW solar power. The maximum potential for rooftop power lies with residential buildings, contributing 49% of the total share, followed by industrial buildings with a 15% share, government buildings at 13%, commercial buildings 10%, and semi-public buildings pitching another 13%.

Against its highest peak demand of 5,642 MW in 2012, Delhi produces only 1,346 MW—55% is coal-based. Localized renewable generation can reduce the shortfall. While the demand has risen, Delhi's generation capacity has not kept up. Its demand might cross 11,000 MW in a few years but the only additions likely in terms of generation are a 1,370 MW gas-based plant and a 948 MW coal plant. Land is costly and unavailable for large conventional power plants, said the report. Delhi does not have a policy to promote solar power and the only incentive is a 20% subsidy on the cost of a solar system or a cheap loan.

## Policy recommendations for the government

- 1 Bundle projects for government tenders
- 2 Communicate potential and feasibility of rooftop solar power
- 3 Provide support for grid connectivity of rooftop solar power
- 4 Create a knowledge and skill base for executing such projects
- 5 Improve solar financing framework

**Delhi govt had conceptualized a plan for rooftop solar power but shelved it in 2011 for being economically non-viable.**

**WHAT HAS CHANGED SINCE THEN?**

## COST OF 5kW SOLAR SYSTEM

2011	₹9 lakh
2013	₹5.5 lakh

## COST OF DIESEL VS SOLAR POWER (₹/kW)

2011	₹12	₹17
2013	₹14	₹11.6



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