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## Business Sustainability News

## International

### Can the UK fly more without breaking climate change targets?

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



Airbus says free-glide aircraft approaches and landings could be part of the measures that allow an unrestrained increase in flying with no great increase in carbon emissions. Photograph: Airbus S.A.S 2012

Planes launched into the skies by catapults running on green energy, then cruising efficiently in self-organised flocks across oceans and continents. That is the kind of blue-skies thinking, outlined by Airbus on Thursday, that the aviation industry argues will allow an unrestrained increase in flying with no great increase in carbon emissions.

The realisation of these and other measures, such as biofuels and more efficient jet engines, is key in determining whether the UK could build new runways in the south-east and at Heathrow – a question in the spotlight after a cabinet reshuffle this week that seems to make it clear the government would like to – while keeping its commitment to tackling global warming. The other question is how much of the nation's future

emissions, which will need to be cut severely to meet legally binding climate targets, are allotted to flying.

The aviation industry is bullish. “We think we can definitely decouple growth in aviation – and all the benefits that brings – from the growth in emissions, and the benefits of that,” said Matt Gorman, the director of sustainability at Heathrow owner BAA and chair of the Sustainable Aviation Council (SAC), which represents over 90% of UK airlines and airports.

On past trends, the number of air passenger is set to rise by 250% by 2050, according to the Department of Transport. The SAC's 2012 roadmap argues that virtually all of the extra greenhouse gases that would be emitted by this rise can be cut by a combination of sleeker aircraft, leaner engines, smoother ground operations, more direct flight paths and up to 40% use of biofuels in global aviation. The roadmap goes even further, suggesting that the use of carbon trading would mean aviation's current carbon footprint could be halved even if passenger numbers more than doubled.

But environmental campaigners are scornful of the industry's vision. “The roadmap is wishful thinking in the extreme,” said Jean Leston, a transport expert at WWF-UK. “We are being sold a lot of promises that are not being met. The measures may cut emissions by a few per cent, but the demand for flying is going up far faster. They should not be allowed to expand until it has demonstrated these efficiencies can be achieved.”

Greens note that aviation is the fastest growing source of carbon emissions in the UK and that Britons have had the highest flying footprint of any nation. They also point to scientific evidence that the impact of carbon pollution emitted at high altitude is far higher than that at ground level, meaning the 5% of national emissions caused by aviation result in more than 10% of the country's contribution to global warming.

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## Global carbon trading system has ‘essentially collapsed’

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

The world’s only global system of carbon trading, designed to give poor countries access to new green technologies, has “essentially collapsed”, jeopardising future flows of finance to the developing world.

Billions of dollars have been raised in the past seven years through the United Nations’ system to set up greenhouse gas-cutting projects, such as windfarms and solar panels, in poor nations. But the failure of governments to provide firm guarantees to continue with the system beyond this year has raised serious concerns over whether it can survive.

A panel convened by the UN reported on Monday at a meeting in Bangkok that the system, known as the clean development mechanism (CDM), was in dire need of rescue. The panel warned that allowing the CDM to collapse would make it harder in future to raise finance to help developing countries cut carbon.

Joan MacNaughton, a former top UK civil servant and vice chair of the high level panel, told the Guardian: “The carbon market is profoundly weak, and the CDM has essentially collapsed. It’s extremely worrying that governments are not taking this seriously.”

The panel said that governments needed to reassure investors, who have poured tens of billions into the market, by pledging a continuation of the system, and propping up the market by toughening their targets on cutting emissions, and perhaps buying carbon credits themselves.

Governments have a last chance to restore confidence in the system when they meet in Qatar this December to discuss climate change. But few participants hold out any hope that they will agree to toughen their 2020 emissions targets, which are scarcely even on the agenda. Instead, governments are focusing on drawing up a new climate change treaty by the end of 2015, which would stipulate emissions cuts for the period after 2020.

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The clean development mechanism is in dire need of rescue, according to a UN panel. Photograph: Corbis

## Light goes out for incandescent bulbs

By **Leo Hickman**, for guardian.co.uk



Incandescent lightbulbs have been phased out in Europe from September 2009 and September 2012. Photograph: Ina Fassbender/Reuters

After more than a century lighting up the world, the switch will be flicked off across the EU for the final time on incandescent bulbs on Saturday as the phased ban on their sale is completed.

From 1 September, an EU directive aimed at reducing the energy use of lighting means that retailers will no longer be allowed to sell 40W and 25W incandescent bulbs. Similar bans came into effect for 60W and 100W incandescent bulbs over the past three years. The restrictions are predicted to save 39 terawatt-hours of electricity across the EU annually by 2020.

Earlier this year, the UK government said the ban would bring an “average annual net benefit” of £108m to the UK between 2010 and 2020 in energy savings. But the phase-out of incandescents has been met with resistance by some users who say replacement technologies, such as CFLs, halogens and LEDs, do not perform as well. Despite the substantial long-term financial savings promised, the higher upfront price of replacement bulbs has also been criticised by those opposing the ban.

“The phase-out has been very smooth,” said Peter Hunt, joint chief executive of the Lighting Industry Association. “Concerns about poor performance of replacement bulbs have been proved wrong. The new LED replacements for halogen downlighters that have come onto the market over the past year work just as well, for example. Price is still a barrier, but that’s coming down almost daily as volume increases.”

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## How to make farming an appealing career choice for a new generation

By Clare Whitmell, for guardian.co.uk



One of the biggest entry barriers for aspiring farmers is the cost involved in purchasing equipment and machinery. Photograph: Wayne Hutchinson/Alamy

With the challenges of climate change and food and water security, there's never been a greater need for innovative, sustainable farming in the UK. But the industry is facing a severe shortage of new recruits. With the average age of a farmer at 58, the Royal Agricultural Society of England

(RASE) report estimates the UK will need 60,000 new entrants over the next decade.

One of the biggest obstacles for aspiring farmers is the cost – especially the increasing price of farmland – and most opportunities arise through succession or inheritance. Startup costs are also high.

But there are encouraging signs. Demand for agricultural courses is increasing, reports Harper Adams University College, which has experienced an 11% increase over the last five years, while the Royal Agricultural College has seen demand increase by 8% this year. Russell Readman, agriculture course manager at Harper Adams, explains that the industry is in a more buoyant mood; the key driver being the need to increase sustainable food production.

Graduates from agricultural courses enjoy exceptionally high employment rates, with Harper Adams in the top three in the country. Readman attributes this success to the year in industry all students undertake during their course, giving them exposure to the workplace and helping them gain key skills – both technical and interpersonal. Employer feedback is that these students have a can-do attitude, while “the applied nature of the courses demonstrates principles in practice”.

The diversity of opportunities in farming also contributes to the high employment rates, according to Readman, with the sector offering roles in both food production and ancillary services. It's also a global industry and many students find their transferable skills are useful abroad.

So how can the farming sector attract potential recruits?

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### Tips:

- Do your consumer research on the Internet and buy as many things as you can on-line. You'll save time and the small shipping fees are much less than what you'd spend driving around in a vehicle.
- Pay your bills like electricity, telephone, mobiles etc online as far as possible this will save paper, time, and fuel in driving to those places.
- Unless it is unavoidable to have printed newspapers subscribe to online version and read.
- Use of disposable cups and glasses should be avoided instead use reusable ceramic, glass or other reusable cups and glasses.
- Save water in your toilet with a dual flush system: There are flush tanks for toilets available in the market which has two knobs one for flushing liquids (releases smaller quantity of water) and second for solid waste for which more water is required. In many countries separate attachments for this are available which can be fitted to your flush tank.
- Household batteries contain hazardous materials therefore It is always better to purchase a good selection of high-quality rechargeable batteries and a charging unit. This will save money in the long run and keep hazardous materials out of our environment.
- Where fresh vegetables, fruits, meat and poultry products are available in the market, discourage use of packed, frozen items. This will save energy, packaging material etc.

## Beyond energy savings: How green buildings can cut labor costs

By David Bergman

Many sustainability-minded businesses realize that green buildings usually have lower energy costs, but that may not be the most significant reason to incorporate sustainable design in your facilities. That's because utility bills, and even construction costs, are typically a relatively small part of a business's bottom line. The larger portion – as much as 92 percent of a building's design, construction, operations and maintenance – comes from labor and labor-related costs. (A white paper published in Building Design + Construction puts those costs at 78 percent, while CTG Energetics President Malcolm Lewis estimates they make up an average of 92 percent.) The good news: Buildings that utilize sustainable design can realize substantial savings in their labor expenses.

The relationship between green buildings and reduced labor costs is strong, with documentable reductions in the real costs of labor and overhead. Most of the labor benefits arise from some of the less sexy aspects of green building, the ones affecting indoor environmental quality. IEQ includes indoor air quality, which is

enhanced in green buildings by fewer pollutants from building materials, cleansers, equipment, etc. Less obvious green building attributes, such as quality; the availability of fresh air, daylight and views of nature; as well as the controllability of lighting, heating and cooling, all contribute to better IEQ.

All of these aspects also define the experience of the people occupying the space, whether it's an office, home, school, medical facility or even a store. For instance, studies have shown that students learn more, customers buy more, and patients recover faster in buildings with natural light and views.

*(Silhouette of worker by 1971yes via Shutterstock)*



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## World's Largest Green Roof Tops a Parking Garage

*SustainableBusiness.com News*



The 24.5 acre, 99,127 square meter green roof sits on top of Millennium Garages. It extends over the parking garage at Soldier Field, home of the Chicago Bears football team - the recipient of a Green Roofs for Healthy Cities Award of Excellence in 2004.

At a cost of \$500 million, it's the brainchild of former Mayor Richard M. Daley, and one of the first public/private partnership construction projects in the city.

Millennium Park's green roof is 20,000 square meters larger than the second largest green roof in the world at Frankfurt International Airport in Frankfurt, Germany.

Chicago now boasts more green roofs than any US city and some of its largest are built over underground structures. It has more than 200 green roofs, covering a total 2.5 million square feet. A green roof tops Chicago's City Hall and Cultural Center, which also have beehives.

A green roof is an ecological workhorse, reducing storm water runoff and energy consumption. It provides acoustic protection, creates habitat for birds and insects, and is key to mitigating the urban heat island effect.

Although the cost is higher upfront, the payback over time for green roofs is significant in energy savings and in protecting the roof membrane, making it possible to skip up to three replacement cycles.

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## Can Walmart, Best Buy and Shell finally kill paper receipts?

By Jennifer Inez Ward

The latest salvo has been fired against the ubiquitous paper receipts, which are clogging up utility drawers everywhere.

Thanks to a massive push by a plethora of corporations hoping to move retail and food transactions through our electronic devices, paper is beginning to seem passé.

Recently a collection of big-gun corporations came together to form a for-profit company designed to capture the consumer's mobile wallet. Merchant Customer Exchange is hoping to move to the center stage in creating a standard form of electronic smartphone payment.

Besides Wal-Mart, Shell and Target, there's a host of others retailers that make up the company, including Lowe's, CVS, 7-11 and Best Buy. MCX said in a press release that it expects many more to join the bandwagon.

Merchant Customer Exchange's retail giants are keen on offering consumers a commerce experience via smart phones that will supersede the convenience of paying at the register or via other systems.

Then primary goal: Grab a huge share of the mobile wallet market and move consumers to a default digital payment system for purchases.

But, as a bonus, the digital payment system could potentially lead to a fade out of those (sometimes) long receipts and coupons that always seem to clog your pockets after you conduct a transaction at a brick and mortar site.

"This is going to profoundly change things because there will be far less paper, dealing with mobile devices," said retail expert Bob Phibbs, "It has huge implications."

For years now, there have been serious talks about the end of the paper receipt era, but no one seems to have quite mastered a universal platform that's accepted by most consumers. This time, the storm may be just right to create a paperless dream. With more services and products making their way online, companies are rising to the occasion.



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## Amazon Launches Green Shopping Website

SustainableBusiness.com News

Amazon.com sells just about any product you can think of these days and now it's reaching out even further. Its new green shopping site, Vine.com, is one of a bunch of new websites designed to dig down to niche markets, from baby products (Diapers.com) to pets (Wag.com) and toys (YoYo.com).

These sites, including Vine, are run by Quidsi, which Amazon bought in 2010.

As most green sites do, Vine will sell a panoply of screened products that contribute to a green lifestyle, from personal care to housewares, for kids to adults ... and pets.

Although Vine looks like a standalone site, it's part of the Amazon.com network. Shoppers can combine products from other Amazon sites into one cart, getting the same free shipping options.

Vine is headed up by one of our own - Josh Dorfman, who wrote the book "Lazy Environmentalist," which were also radio and TV shows.

He's screening products in these categories: non-toxic, reusable, organic, made from sustainable materials, energy or water-efficient or powered by renewable energy. It also has sections for locally-sourced products (within 100 miles of your home) and fair trade products. There are dozens of green shopping sites that provide the same products - how will Amazon's big box approach affect these small retailers?

Amazon has been criticized as a laggard on disclosing and acting on its greenhouse gas footprint from shipping and data centers. In May, the company exited the right-wing group ALECAfter 500,000 signatures were delivered at its annual shareholder meeting.

This summer, eBay closed its fair trade shopping channel, WorldofGood.com, choosing to integrate green offerings into its broader network instead of a standalone site.

Here's Vine.com:

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## California stages successful cap-and-trade trial

By BusinessGreen Staff



California officials have completed a successful trial of its much-anticipated carbon trading scheme, which will be launched in November in an attempt to put a price on emissions from industrial facilities and power plants.

The state's Air Resources Board staged a mock greenhouse gas auction late last week, in which heavy emitting companies pretended to bid for carbon permits in order to test out the system ahead of its official launch.

California will roll out the platform for real on Nov. 14, when more than 400 companies will be able to buy and sell tradeable carbon credits through quarterly auctions.

A statewide cap on carbon emissions will then be imposed from 2013, before being gradually lowered year-on-year, providing firms with a financial incentive to curb their greenhouse gas emissions.

Under the scheme, which is largely modeled on the EU's emissions trading scheme, companies will have to hold carbon allowances to cover their own emissions, forcing them to purchase additional emissions if they exceed their cap.

In the first year of the scheme the board plans to give away the vast majority of credits, auctioning just 10 percent in order to put a price on carbon.

However, the amount of free carbon permits will be reduced each year so by 2020, 50 percent of allowances will be auctioned, providing a clear price signal for firms to invest in low emission technologies.

According to local reports, Air Resources Board board officials said the dress rehearsal ran smoothly, buoying hopes that the November launch will be a success.

Around 150 companies submitted bids during the simulation, although the agency did not release any pricing numbers or trading volumes, and no money changed hands.

However, the Board is still facing pressure from politicians to give away all of the credits for free, over fears the cap-and-trade scheme will have a negative impact on businesses and result in higher energy bills.

Assembly member Henry T. Perea and Senator Michael J. Rubio have argued that the state can achieve its carbon reduction goals without conducting allowance auctions.

*Photo of power plant provided by Kinetic Imagery via Shutterstock*

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## 'Nemesis' breaks electric car land speed record

By Adam Vaughan, for guardian.co.uk



A battery-powered car designed to "smash the boring, Noddy stereotype of the green car" broke the UK electric land speed record on Thursday.

The Nemesis, a Lotus Exige modified by utility company Ecotricity, reached an average speed of 151mph near York today. It was driven by 21-year-old Nick Ponting, who started racing go-karts at the age of 12, and first broke the record by hitting 148mph earlier today at Elvington airfield in North Yorkshire.

The previous record, of 137mph, was set by the grandson of racing legend Sir Malcolm Campbell, Don Wales, driving a Bluebird Electric in 2000. Wales attempted to break his own record in August 2011 but failed after the car hit a pothole on a beach in Wales.

Dale Vince, the founder of Ecotricity, said the company had built the Nemesis to "stimulate thought and debate about how we'll be getting around when the world runs out of oil. And what we've been able to demonstrate is that wind-powered cars are not just feasible, but can be a load of fun."

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# European Wind Hits 100 Gigawatt Mark

## SustainableBusiness.com News

Earlier this week, we reported on last year's record for solar installations in the European Union (EU) – 18.5 gigawatts (GW) of new capacity for a total of 52 GW.

Even as solar accelerates, wind plants in Europe still generate twice as much energy - recently reaching 100 GW, reports the European Wind Energy Association (EWEA).

How significant is this milestone?

For starters, it's twice the installed wind capacity in the US, as of the end of 2011.

It has also helped prevent building dirty power plants - it would take 62 coal-fired plants or 39 nuclear reactors or 52 natural gas generators to produce the same amount of electricity, notes EWEA.

"It would require burning 72 million tonnes of coal annually in coal fired power plants to match Europe's annual wind energy production. Loading that amount of coal on trains would require 750,000 wagons with a combined length of 11,500 kilometres - the distance from Brussels to Buenos Aires, Argentina," says Christian Kjaer, EWEA CEO.

It took two decades for these countries to reach 10 GW and just 13 years to add another 90 GW - thanks in large part to the EU's target to cut carbon dioxide emissions 20% by 2020 and to country-specific subsidies for renewable energy. Half the capacity was installed in the last six years alone, says EWEA.

"Despite only utilizing a tiny fraction of Europe's vast domestic wind energy resources, wind power is having a substantial impact on Europe's energy security and environment, and benefits us hugely in creating green jobs and technology exports," says Kjaer.

The vast majority of the 100 GW is onshore wind, and big offshore projects are planned. Offshore, would could quickly ramp to 100 GW is being held back by financing, but the biggest obstacle is lack of grid infrastructure.

Some of this year's largest installations in Europe are:

- Greater Gabbard (500 MW) offshore farm developed by SSE and RWE in the UK
- Anholt offshore wind farm (400 MW) developed by DONG Energy off the coast of Denmark
- Ormonde offshore wind farm (150 MW) developed by Vattenfall in Sweden
- Linowo (48 MW) developed by EDF Energies Nouvelles Polska in Poland
- Ausumgaard (12 MW) developed by a private landowner in Denmark
- Akoumia (7.2 MW) developed by Greek power company PPCR on the island of Crete

The UK reached its own milestone of 2.5 GW this month with the opening of the offshore 317 MW Sheringham Shoal project. 60% of EU's wind is located in Britain, over triple that in Denmark, the second biggest market.

During the second quarter, wind-generated electricity amounted to 4.5% of the UK's power supply. Across the EU, wind supplied about 5% of demand, compared with about half from fossil fuels, 28% from nuclear generators and 13% from hydropower, reports Bloomberg.

The EU wind industry has been having a banner year, despite the economic troubles of key wind nations including the UK, which is changing its subsidy policies; and Germany, where grid connection problems have been holding back some projects. US installations have also accelerated, as developers rush to complete projects before the expiration of the wind production tax credit at the end of 2012.

Recent studies underscore worldwide wind potential, including one that finds wind can supply half the world's power. In the US, for example, wind is capable of providing enough power for the entire east coast.

The expiration of the wind credit has become a major issue in the US President election campaign. Republicans want it to expire to advance their fossil fuels agenda, while the Democrats are advocating an energy mix that supports more wind and other renewable energy technologies. A flurry of lobbying is being supported by both sides.

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## New HTC phone will be sold without charger in bid to cut waste

By **Adam Vaughan**, for guardian.co.uk

A new flagship smartphone by Taiwanese phone company HTC will be sold without a charger in a pioneering bid to cut down on electronic waste.

Network operator O2, which will trial the pilot for the as-yet unnamed phone, estimates that of the 30m new phones sold annually in the UK, 70% of their buyers already have a compatible charger for the handset. The company has previously said it will phase out new chargers with handsets sold in 2015.



HTC's existing high-profile One X smartphone - a new version may be sold without chargers in a bid to reduce waste. Photograph: Chiang Ying-Ying/AP

The reference to a “flagship” HTC phone – expected to be unveiled shortly and heavily anticipated by the technology press – suggests the handset could be a five-inch version of HTC’s existing high-profile One X smartphone.

Three years ago, 10 major phone makers including Apple, Nokia and Samsung committed to a voluntary agreement to work towards a universal charger based on a micro USB connector, in an effort to reduce unnecessary waste. But no such universal charger has been settled on, and Apple appears to have backtracked on the idea with the introduction earlier this month of a new proprietary Lightning charger for its iPhone 5 that is likely to be the standard for several generations of future iPhones.

Ronan Dunne, O2’s chief executive, said: “Right now, O2 with HTC has to go it alone on this matter – we both believe in it passionately enough that we can’t

wait for the industry as a whole to join us in this crusade. The environmental cost of multiple and redundant chargers is enormous and I believe that, as the mobile phone has become more prevalent, we as retailers and manufacturers have an ever-greater responsibility to be a more sustainable industry.”

He admitted the industry has not yet delivered on a universal charger, saying: “In the last few years, our sector has made progress towards a universal charging solution, although not nearly as fast as I would have liked. As a result, we have fallen short of our original promise as an industry to standardise charging across all handsets.”

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## ‘Ugly’ fruit and veg make the grade on UK supermarket shelves

By **John Vidal**, environment editor, for guardian.co.uk

Knobbly carrots, wonky spuds, bent courgettes and discoloured cauliflowers will return to supermarket shelves after one of the worst growing seasons farmers have experienced in decades.

The driest March in 59 years, followed by the wettest June and autumn storms and flooding have reduced British fruit and vegetable harvests by more than 25% and left supermarkets unable to source their regular shaped, blemish-free produce.

On Thursday, Sainsbury’s relaxed its rules on the cosmetic appearance of fresh produce and allowed fruit and vegetables that would normally be ploughed back into fields to be sold in its 1,012 stores.

“We’ve taken the decision to radically change our approach to buying British fruit and vegetables as a result of this year’s unseasonal weather. This may mean a bit more mud on peas or strawberries that are a little smaller than usual, but our customers understand and love the idea,” said Judith Batchelar, director of Sainsbury’s food.

“The unpredictable weather this season, has left growers with bumper crops of ugly-looking fruit and vegetables with reported increases in blemishes and scarring, as well as shortages due to later crops. We’ve committed to make use of all fruit and veg that meets regulation and stands up on taste, and hope customers will help us all make the most of the British crop in spite of its sometimes unusual appearance,” she said.

Other supermarkets, including Morrisons and Waitrose, have said they may also relax standards.



Misshapen, wonky vegetables, like this green bell pepper, will no longer be left on the shelf. Photograph: John Arnaud/Alamy

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## How WRI is giving companies the jump on green investment

By **Marc Gunther**



"I'm an economist," said Andrew Steer. I'm not an environmentalist by training."

This is a good thing because, unlike some U.S. environmental leaders, Steer, who is the new president and CEO of the World Resources Institute (WRI), is willing to deliver some straight talk about economic growth, environmental protection and the costs of clean energy. He's also committed to WRI's global, fact-based, business-friendly approach to addressing big environmental problems.

Over lunch the other day, Steer met with a group of reporters for the first time since joining WRI last month. A 60-year-old Brit, he is only the third president of the Washington-based nonprofit, following James "Gus" Speth, a lawyer and academic, and Jonathan Lash a lawyer and former regulator who is now president of Hampshire College. By contrast, Steer spent most of his career at the World Bank, working in international development and as the bank's climate change envoy.

While living in Vietnam, Steer saw first-hand how the past two decades have brought material progress along with environmental degradation. Not one of the bank's 100 Vietnamese employees owned a car when he arrived in Hanoi in 1997, he told us. Today, nearly all do. They are better off, but the city is more polluted and global greenhouse gas emissions continue to rise.

"Per capita income in developing countries is twice what it was. More people have been lifted out of poverty in the past 20

years than in the prior 100 years," he said. "But the price that we've paid, in terms of environmental debt, if you will, has been much too high. We have incurred a massive environmental debt."

But while economic growth can drive increases in pollution in the short run, history suggests that as poor countries become richer, they grow more willing and able to pay for cleaner water and air. China, of course, has invested heavily in solar and wind power, hoping to build export markets. According to Steer, Morocco is investing in solar thermal power, hoping to export electricity to Europe; India and South Africa are seeking alternatives to coal; the Indonesian government raised gasoline taxes and rebated the proceeds to the poor; and even Ethiopia devised a "green plan" with help from consulting firm McKinsey.

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## Wind Can Supply Half the World's Power

**SustainableBusiness.com News**

A new study shows that wind energy is easily capable of supplying a full half of the world's electricity needs, given the political and social will.

How many wind turbines are needed? 4 million, 5-megawatt (MW) turbines would be an optimal number. After that, installing more turbines would have a diminishing return.

Those 4 million turbines would produce 7.5 terawatts a year - more than half the energy the world is expected to consume in 2030, report researchers at the University of Delaware and Stanford University in a study published in *Nature*.

5 MW turbines are huge - about 100 meters tall - but half would be offshore. On land, they would cover one-half of one percent of the Earth's land - about half the area of the State of Alaska. However, virtually none of this area would be used solely for wind, but could serve other purposes such as open space, farmland, ranchland, or wildlife preserves.

And it would be most efficient to spread them across the globe, rather than all in one place, high wind areas like the Sahara and Gobi Deserts and the American plains.

The data doesn't consider community or political barriers that often get in the way of siting wind farms.

The research shows what's physically possible, taking into account variables such as the exposure of each wind turbine to winds of varying velocities as well as global temperatures, moisture, clouds and other climate factors.

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## How trucks are changing for the long haul

By Joel Makower

Forget the Volt, the Leaf, the Prius, even the Tesla. An entirely different transportation revolution is happening when it comes to big rigs.

In recent years, commercial truck fleets have begun changing course, steering toward next-gen technologies that embrace electric, hybrid-electric, and other fuels instead of petro-based diesel, and innovative drive-train technologies. It's a development that's born partly of concerns about carbon emissions and other pollutants, but increasingly about mitigating the risk that comes from volatile and unpredictable fuel prices.

Compared to the slick ad campaigns being run by Nissan, Toyota, Chevy, and other auto makers, the greening of trucks is decidedly non-sexy -- unless you're fleet manager. But commercial trucks are a key part of the energy mix: while they represent only about 5 percent of on-road vehicles in the United States, they account for about 20 percent of fuel consumption.

A major driver is the search for alternatives to diesel. "It used to be that diesel was the only option for a fleet manager," says John Boesel, president and CEO of Calstart, a membership group dedicated to the growth of a clean transportation technologies. "As a result, fleet managers did not have a lot of motivation to understand how all of their vehicles were actually being used. Now there are different alternative fuels and different drive trains emerging."

Boesel stopped by the GreenBiz office last week to talk about vehicles, VERGE, and his group's upcoming conference on high-efficiency trucks. One of the interesting things about the September 18-20 event, the 12th annual HTUF Conference and Expo, isn't just the display of big, shiny vehicles in the parking lot. It's a user forum, focusing not just on who's buying the trucks, but who's driving them, and how.

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## Australian 'mega mine' plan threatens global emissions target

By **Oliver Milman**, for guardian.co.uk on

Plans to open up a new Australian "coal export rush" would turn a single Queensland region into the seventh largest contributor of carbon dioxide emissions on the planet, undermining international efforts to keep global warming below 2C, a new report has warned.

Nine proposed "mega mines" in the Galilee Basin would, at full capacity, result in 705m tonnes of CO2 released into the atmosphere, according to a Greenpeace Australia analysis. This level of emissions would surpass those of all but six nations in the world. By comparison, the UK emitted 549.3 million tonnes of CO2 from all sources in 2011.

Greenpeace said that the nine mines' production capacity of 330m tonnes of coal a year for export would represent an "unprecedented" increase in the scale of coal mining in Australia. The mines' maximum output, primarily aimed at servicing the burgeoning Chinese and Indian markets, would nearly double Australia's total 2010/11 coal production of 352m tonnes and eclipse its export total of 283m tonnes.

The Greenpeace report states that the mines will only be able to launch and operate at capacity if global appetite for coal continues to grow strongly. This scenario would in effect nullify an internationally agreed goal to keep the increase in average global temperatures below 2C from pre-industrial levels.

Greenpeace warns that a growth in coal-fired emissions represented by the nine Queensland mines would be in line with the International Energy Agency's model of a "catastrophic" 6C rise in temperatures.



A coal train awaits loading. Photograph: Ian Waldie/Getty Images

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## Siemens, Air France-KLM, BMW lead Dow Sustainability Index

By Bruce Kennedy



BMW, Air France and Siemens were named as some of the world's leaders in sustainability by one of the longest-running sustainability indicators, which released its latest listings today.

The 2012 Dow Jones Sustainability Indexes (DJSI) review was announced by SAM, the Swiss-based investment company that focuses on sustainability investing. SAM partners with Dow Jones Indexes in the development and publication of the DJSI, which tracks the financial performance of some top international companies.

The DJSI uses a “best-in-class” approach for measuring sustainability. The world’s largest 2,500 companies are annually invited to report on their sustainability performance. Broken down into 57 sectors, those businesses are then analyzed by a variety of social, economic and environmental criteria -- especially regarding risks and opportunities within their specific industries.

Those 57 sectors are then combined into 19 “supersectors,” which SAM uses to identify top industry leaders.

The DJSI World 2012/2013 deleted 41 companies this year and added 41 new members. The largest additions, as measured by free-float market capitalization, include Microsoft Corp, Canadian National Railway Co, and Target Corp. The largest deletions are International Business Machines Corp, GlaxoSmithKline PLC, and United Technologies Corp.

Some of this year’s DJSI supersector leaders include:

- **Australia & New Zealand Banking Group** -- in Banks
- **Unilever NV** -- in Food & Beverage
- **Roche Holding AG** -- in Healthcare

- **Siemens AG** -- in Industrial Goods & Services
- **Repsol SA** -- in Oil & Gas
- **Alcatel-Lucent SA** -- in Technology
- **Air France-KLM** -- in Travel & Leisure
- **Bayerische Motoren Werke AG** -- in Automobiles & Parts
- **Roche Holding AG** -- in Healthcare

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## Why not all packaging deserves a bad wrap

By Tom Szaky

Consider the following sayings: “Don’t judge a book by its cover,” “Good things come in small packages,” “Think outside the box” — what’s the common thread? Disregard the packaging!

Okay, perhaps I’m being a bit too reductive, but it still stands to reason that, even



though thinking outside the box is crucial in modern business, thinking about the box is also quite important. How was it made? Who made it? Where will it wind up after being used?

Consumers are beginning to ask these questions with increasing urgency, and with good reason: According to the EPA, containers and packaging made up the largest portion of municipal solid waste generated in 2010, 48 percent of which was recycled. Additionally, half of the participants in a 2011 study done by Perception Research Services (PRS) said that they were willing to pay more for eco-friendly packaging. Furthermore, a March 2012 Nielsen study showed that recycling was the most important environmental aspect of a product across both genders and all age groups.

With consumer awareness on the rise and traditional resource availability in decline, I believe that a sustainable business model will be the only successful business model in the not-too-distant future. Take Coca-Cola’s new PlantBottle, for example. Up to 30 percent plant-based and 100 percent recyclable, the PlantBottle boasts a reduced ecological footprint without sacrificing functionality or performance. Additionally, initiatives in sustainability have been shown to substantially improve brand equity and forge strong ties with consumers.

*Packaging image by Mattalia via Shutterstock.*

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## Procter & Gamble CEO on solving the world's sustainability challenges

By **Jo Confino**, for guardian.co.uk



Procter & Gamble's CEO Bob McDonald: 'Innovation can solve world's sustainability challenges'. Photograph: Reuters

With \$2bn a year to spend on research and development, it would be odd if Procter & Gamble's CEO Bob McDonald was anything other than a firm believer that innovation can be a driving force to solving the world's sustainability challenges.

Despite recognising that environmental problems are worsening, the head of the world's largest consumer products company is convinced that it is possible to solve the riddle of how to decouple continued economic growth from issues such as resource use.

"When you are an \$84bn company, with over \$2bn of R&D and nearly half a billion of dollars in consumer research budget, you get tremendous capability that you can make a difference and that is what we are trying to do," says McDonald, 59, who presides over a global empire that embraces brands ranging from Gillette and Pampers to Ariel and Duracell. "Our R&D budget is more than 60% bigger than our nearest competitor and more than most of our competitors combined; we expect it to deliver."

Big as it is, McDonald recognises that P&G cannot solve the world's problems on its own and is increasingly collaborating with other companies through the Consumer Goods Forum. He gives the example of the PET Technology Collaborative, in which P&G is working with companies such as Coke, Ford, Heinz and Nike to develop plastics made from plant-based materials.

While some business leaders privately express pessimism about scaling up solutions before environmental disaster strikes, McDonald describes himself as "jazzed up. I am excited, I am encouraged."

He supports the views of Matt Ridley, who in his book 'The Rational Optimist,' regales against doomsayers and suggests that however much things improve from the way they were before, people still cling to the belief that the future will be nothing but disastrous.

In particular, McDonald points to Ridley's example of the fear of many English people in the 1800s that they would be swamped by manure because of the exponential rise in the demand for horses, only to see their concerns disappear with the invention of the automobile.

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## UK Green Investment Bank Gets Approval This Year

SustainableBusiness.com News

The UK's Green Investment Bank - the first in the world dedicated to greening the economy - took a step forward with the appointment of its CEO.

The British government appointed Shaun Kingsbury to the post, who previously served as a partner with private equity firm, Hudson Clean Energy Partners. 6 directors were appointed earlier this year. "The UK GIB is a major new innovation vital to securing investment in what is one of the great challenges of our age, the decarbonisation of our energy supply," says Business Secretary Vince Cable.

Initially, the bank - which is capitalized with 3 billion pounds (\$4.84 billion) - will focus on waste processing and recycling; waste energy; non-domestic energy efficiency; offshore wind; and the Green Deal, which encourages businesses and home owners to make their buildings more energy efficient.

The goal is to develop projects that have significant green impact as well as financial returns. It began making investments earlier this year and is expected to be fully operational by year end when it gets approval from the European Commission. That approval gives the Bank the ability to receive state aid. But it won't be able to begin borrowing money until 2015, and only when the national debt has declined as a percentage of GDP." Many believe these restrictions make it a "fund" rather than a "bank." The government also doesn't require it to get a banking license, which means it can't leverage its capital.

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## The mini parks that could transform Los Angeles

By **Rory Carroll**, for The Guardian

The idea is simple. Choose a street lined with cars, remove two of them, ring the space with plants, install a bench, table, bike racks and, hey presto: a park. A tiny one with a distinct rectangular shape perhaps, but still a park. Or, as those who created it say: a parklet.

Four parklets are about to infiltrate the citadel of automobile worshipping Los Angeles, a pilot project that could lead to hundreds more. "The goal is to create public space and re-purpose how we use streets," says Madeline Brozen, programme manager of the Complete Streets Initiative. "The great thing about streets is they're so transformable." Los Angeles gave the green light last month and the parklets should be debuting within weeks – two on Spring Street downtown, one on Huntington Drive in El Sereno, and one on York Boulevard in Highland Park. "The idea is to bring things down to human scale so people can socialise and enjoy their own neighbourhoods." She dismisses the notion that parklets are for hobbits. "There'll be space to exercise, to sit and read, to talk." Don't all rush at once.



A design for a parklet, featuring public seating and a pair of exercise bikes in place of car-parking space. Photograph: Downtown LA Neighborhood Council/Berry and Linné

San Francisco pioneered permanent parklets in 2009 and now boasts around 35. Other cities such as Oakland, Long Beach, Philadelphia and New York are following suit, an indicator, along with campaigns for bike paths, walkways and public transport, that the US love affair with cars is fading. LA – currently bracing for "carmageddon II" when the 405 shuts again for roadworks – has become an enthusiastic convert to the pedestrian. As well as new plazas, conventional parks and art walks there is a passion to queue for gourmet food trucks.

The parklets will be reviewed after six months and, activists hope, replicated across the city. It takes about three days and up to \$30,000 (£18,500) to create one. Great news unless, like Seinfeld, you obsess about getting a parking space.

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## Tesla Innovates Again: Solar-Powered Charging Stations Across the US

SustainableBusiness.com News

Tesla Motors (Nasdaq: TSLA) is innovating again, this time revealing plans to build out a charging network powered by solar energy. It plans to spread them across major U.S. highways to expand its 200-mile industry-leading driving range and offer the service to Tesla car owners for free.

Constructed in secret, the first six "superchargers" are already installed across California, and in parts of Nevada and Arizona. Tesla plans to install 100 superchargers over the next few years at a cost of \$250,000 each.

"The technology at the heart of the Supercharger was developed internally and leverages the economies of scale of existing charging technology already used by the Model S, enabling Tesla to create the Supercharger device at minimal cost," the company says. The electricity used by the Supercharger comes from a solar carport system provided by SolarCity.

Tesla says the Supercharger is much more powerful than other charging technologies. It provides almost 100 kilowatts of power to the Model S, with the potential for 120 kilowatts in the future. This replenishes three hours of driving at 60 mph in about half an hour - about the time it takes for people to stop at a highway rest stop and have lunch.

Drivers will find these charging stations on some of the most heavily used highways in the US, "enabling fast, purely electric travel from Vancouver to San Diego, Miami to Montreal and Los Angeles to New York," the company says. Then Tesla will move on to Europe and Asia, where it will begin opening supercharging stations in late 2013.

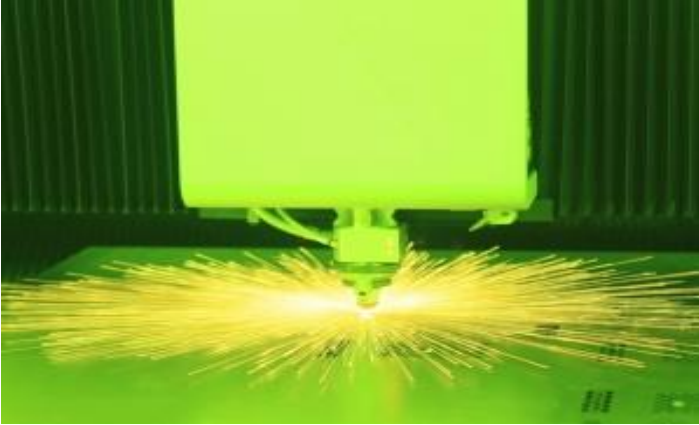
Each supercharger will generate more solar energy than cars can consume from charging, sending the excess to the grid. By adding even a small solar system at home, electric car owners can extend this same principle to local city driving too.

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## White House energy efficiency plan will up output, curb emissions

By **Nate Aden** and **James Bradbury**

Last week, President Obama signed an Executive Order establishing a national goal of deploying 40 gigawatts (GW) of new industrial combined heat and power (CHP) and waste heat recovery (WHR) by the end of 2020, a 56 percent



increase from 2010 levels.

The actions outlined by the order will help spur investment in U.S. industrial energy efficiency, which will reduce greenhouse gas emissions, create jobs, and strengthen manufacturing competitiveness by decreasing energy bills.

### A Substantial Target

This executive order reinforces domestic energy market and regulatory developments that are converging to make conditions for CHP investments more favorable than they have been for decades. Key contributing factors include federal environmental regulations and rapidly changing energy economics, particularly regarding U.S. shale gas development.

As a result of converging resource, economic, and regulatory circumstances, U.S. base-load power generation capacity is projected to drop just as manufacturing facilities with older boilers are considering compliance options for reducing toxic air emissions. Under the right policy conditions, this confluence of factors can facilitate deployment of natural gas-fired industrial CHP/WHR.

### What Is Combined Heat and Power (CHP)?

CHP is a set of cross-cutting efficiency technologies for facilities with substantial on-site demand for electricity and heat. Rather than generating steam and electricity through separate, inefficient processes, CHP involves cogeneration of both, resulting in significant efficiency gains. Both CHP and WHR systems capture heat that is normally wasted in combustion processes and use it to generate electricity or

useful thermal energy. Due to its utilization of waste heat, CHP uses approximately 40 percent less energy than conventional production of heat and electricity. CHP technologies have the potential to reach energy efficiencies of 70 percent to 85 percent when used on applicable industrial plants.

### What Are CHP's Benefits?

Increased CHP utilization provides energy, economic, and environmental benefits. The Department of Energy estimates that achievement of the 40 GW CHP goal together with a 2.5 percent per year reduction of industry energy intensity could bring about savings of 10 quadrillion Btu (approximately 10 percent of total U.S. 2010 energy use) by 2020. The White House estimates that increased CHP utilization could save industrial energy users "tens of billions of dollars" in avoided energy costs. In addition to reducing manufacturers' vulnerability to energy price volatility, implementing CHP can help businesses comply with environmental regulations in cost-effective ways. For example, the pending Boiler MACT standards include a provision to credit efficiency measures, including CHP, for achieving required toxic emissions reductions.

The Oak Ridge National Laboratory estimated in 2008 that CHP amounted to 8.6 percent of U.S. electricity generation capacity and 12.6 percent of electricity generation, compared to Denmark's CHP utilization of more than 50 percent of electricity generation. Reports estimate that the U.S. has approximately 64 GW of remaining industrial CHP technical potential. Within the U.S., the Midwest has particularly large opportunities for increased CHP utilization.

While there is large potential, the ambition of President Obama's 40 GW goal is illustrated by its juxtaposition with the current Department of Energy Annual Energy Outlook 2012 reference case forecast for industrial CHP. As illustrated below, the new CHP goal is 13 percent higher than the reference case forecast for 2020 installed capacity. Achievement of the 2020 CHP goal would result in 56 percent growth of U.S. industry CHP capacity compared to 2010 levels.

### How Will the Executive Order Help Move Industrial Energy Efficiency Forward?

The Executive Order aims to help address persistent regulatory, policy, and institutional barriers that have long-prevented proven efficiency technologies from being more fully utilized in the United States. While recent conditions have become more favorable, key barriers to investment have included unfavorable market prices for energy, electricity sector rate structures that discourage utilities from supporting end-use efficiency and self-generation, and high up-front costs that may be viewed as risky to manufacturers concerned about future economic conditions.

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## US Scuttles Practice of Sinking Ships to Create Artificial Reefs

### SustainableBusiness.com News

The US Maritime Administration has quietly adopted a new policy that ends the practice of sinking old ships to create artificial reefs.

Since the program began in 1972, approximately 45 "non-retention" ships have been disposed of in this manner – along with all the toxic substances they contain, such as polychlorinated biphenyls (PCBs) that are toxic carcinogens and other heavy metals that would have value if they were recycled.

PCBs are often in fiberglass, felt, foam, cork, paint, insulation and other ship components.

The new policy applies only to ships built before 1985, which covers all 38 ships currently designated for scrapping. Those ships will go to domestic recyclers instead, says The Basel Action Network (BAN), which worked for the new policy.

"The Obama administration got this one right, and they should be commended for finally putting into place a more conservative policy that protects our resources, our jobs as well as the marine environment," says Colby Self, director of the Green Ship Recycling Campaign at BAN.

Now, what to do about all the ships the US Navy sinks during live-target fire practice under its sinking exercise (SINKEX) program?

Unfortunately, regulations regarding which old ships are used for these at-sea exercises are less rigorous, says BAN. Since 1999, the Navy has sunk 117 ships in this manner – including three very close to Hawaii in July 2012.

BAN, the Sierra Club and the Center for Biological Diversity challenged the SINKEX program in a July 2011 lawsuit against the US Environment Protection Agency (EPA).

"When decommissioned Naval warships containing PCBs are disposed of at sea via the SINKEX program, solid PCBs remaining on them may leach into the marine environment. These PCBs may then be transported to shallow water ecosystems by a variety of methods including by biographic transport, upwelling, and meridional circulation overturning, where they may bind to sediments or be absorbed by fish or other marine organisms," the organizations say in their lawsuit.

The Navy is supposed to document how much toxic material has been removed from vessels before they are sunk under the SINKEX program, but that documentation is often incomplete, alleges the lawsuit.

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## Oregon's Biggest Wind Farm Comes Online, Shepherd's Flat

### SustainableBusiness.com News

A huge new wind farm has come online in Oregon, one of the biggest in the world and the largest in that state. At 845 megawatts (MW), Shepherd's Flat traverses 30 acres along the Eastern Columbia Gorge in the northeast part of Oregon.

Caithness Energy built the project - its expected to inject \$37 million into Oregon's economy including paying farmers rent for placing turbines on their land.

Over 338 turbines will generate 2 billion kilowatt hours a year, eliminating 1.5 million metric tons of carbon each year, about the same as taking 260,000 cars off the road. It employed 400 people to build the farm in a time when work was hard to come by, and will provide permanent employment for 45 people.

The energy is being sent to California and has been fully purchased by Southern California Edison under a 20-year power purchase agreement. It will supply electricity to 235,000 homes.

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## Toyota Rolls Out 21 Hybrids, Looks to Fuel Cells; Germans Go for Electric Instead

SustainableBusiness.com News

While some car manufacturers are placing their bets on electric cars, Toyota has decided to continue its focus on hybrids, and will introduce 21 updated or full model change hybrids in the next three years.

It expects to sell a million hybrids each year through 2015. This year, the Prius family became the third top selling cars in the world.

The company is looking to reduce the cost of producing hybrids to increase sales and bring profits in line with conventional cars.

Toyota sold 310,000 hybrids in Japan last year, making up 26% of its sales there, but it sold about half that (178,590) in the US - a tiny percentage of the 1.64 million vehicles sold. So far, it's sold 8400 Prius plug-ins (Prius PHV) in Japan and 6100 in the US since it debuted this year.

This week in the US, Toyota launches sales of RAV4 EV - a small SUV that has an electric motor made by Tesla. The car sells for \$49,800 - its goal is to sell just 2,600 in the next three years in California.

Because of the use of proprietary technology, the company sees a brighter future for fuel-cell powered cars than electric, which the company says "can be made by any company." It plans to introduce a fuel cell sedan and a bus in about three years.

### **Honda Agrees on Fuel Cells**

Calling fuel cells the "ultimate environmentally responsible vehicle," Honda plans to introduce a fuel-cell electric vehicle for sale in the US in 2015.

Honda CEO, Takanobu Ito, made the announcement in a speech this week in Japan where he set the company's sales goals for the next five years.

"This new fuel cell vehicle will showcase further technological advancement and significant cost reduction that Honda has accomplished," he said.

The company has been working on the technology for a decade in its FCX Clarity - it's three times as fuel-efficient as a conventional vehicle and twice that of a hybrid, Honda claims.

Honda is hedging its bets however, also producing electric vehicles, like the electric version of the Fit.

### **Hyundai Goes Straight to Fuel Cells**

Hyundai has also been slow to move on electric cars and is focused on fuel cells instead.

Electric cars are slow to win consumer acceptance, Hyundai says, because the cars take too long to charge, have short driving ranges and expensive batteries, which boost the price.

Fuel cells have their own problems, of course, such as very high production costs and just a few scattered hydrogen fueling stations.

But Hyundai wants to get a jump on that market, and is introducing its first car at the Paris Motor Show. The fuel cell version of its Tucson crossover goes on limited sale this year - just 1000 cars - as the company works on halving production costs, reports *Reuters*. The initial price is a hefty \$88,000 from a manufacturer known for less expensive models.

Hyundai thinks it can make fuel cell cars for the same price as electric by 2020-25, says *Reuters*.

### **BMW, VW, Mercedes, Daimler Go For Electric**

So far, German car manufacturers have been quiet on advanced vehicles, preferring to fine tune conventional models, but BMW, VW, Mercedes and Daimler are all ready to push into electric.

"German manufacturers slept through the hybrid trend, which eroded their image as technology leaders," auto analyst Peter de Haan of Switzerland - based Ernst Basler + Partner told *Bloomberg*. "Electric drives give them the opportunity to recover."

In the next few weeks, Daimler will debut an electric version of the Smart Car and Mercedes is showing off its SLS AMG E-CELL at the Paris Motor Show this week, in advance of sales next year. The "supercar" has four electric motors that achieve acceleration to 62 mph in just 4 seconds, about the same as the gas-powered version.

VW is readying electric versions of the Up! city car and the Golf for next year; Audi's R8 e-tron two-seater and the Porsche 918 Spyder plug-in arrive in 2013. BMW has the i3, the first car in a new "i" electric sub-brand. Nissan is moving beyond the Leaf to Zoe, a compact made by partner Renault.

Market research firm IHS Automotive expects 102,000 electric vehicles to sell worldwide this year and to more than triple in 2014 to 384,000 cars.

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## One grower's \$17 million quest for a greener tomato

By Kristine A. Wong

More than 15 years ago, Casey Houweling ventured from his native



Canada to start raising his tomatoes in the Southern California sunshine. From Romas to grape tomatoes and tomatoes on the vine, Houweling's Tomatoes grows a wide range of GMO-free varieties at its outpost in Camarillo,

Calif. in addition to its original facility in British Columbia, Canada.

It's a massive operation. Each year, rows and rows of plants inside the company's glass-enclosed greenhouses produce over 108 million pounds. Growing the tomatoes hydroponically -- without the use of soil -- enables Houweling to use less water, yield more on less land and save money. He has also outfitted his greenhouses with solar panels, reuses water and recycles or composts the majority of the company's waste.

Over the last three years, Houweling has aimed to boost productivity even more -- and reduce his environmental impact further -- by making a major investment.

He recently unveiled the fruits of that investment: a new 125-acre greenhouse powered by two high-efficient, two-stage turbocharged gas-powered GE Jenbacher J624 engines. The combined heat and power (CHP) system can produce 8.7 megawatts of electrical power -- enough to run about 8,800 homes -- and goes beyond capturing and reusing heat, as traditional cogeneration systems do.

It also captures CO2 which can then be pumped in to the greenhouse as a fertilizer, as well as water that can be used in facility operations.

As the first commercial CHP greenhouse in the U.S., it's arguably poised to become the most efficient in the country, and is expected to increase tomato production by 20 percent.

The system makes use of excess low grade heat and water released during production which would normally be wasted, according to GE spokesperson Scott Nolen. And since all of its power output won't be needed 24 hours a day, Houweling plans to sell the excess power back to the grid.

"From a common sense perspective it seemed like a no-brainer," Houweling said, reflecting back to his mindset when he first took on the project financed by lease and equity from company profits.

Yet by the time the greenhouse is ready for use, he'll have spent a total of \$17 million -- with no idea what his financial return will be.

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## Bangladesh's urbanisation creating a healthcare black hole

By Annie Kelly in Dhaka, for guardian.co.uk

In 1901, Bangladesh's urban population was less than 2%. Now, more than a century later, urban planners are predicting the country's future will be one of sprawling, inter-connected metropolises with a largely urban population moving between hundreds of cities and large towns.

Last year, the national census showed that out of a population of more than 150 million, just under 30% live in the rapidly expanding cities and towns, with the urban population



Women and children at a village in Khulna. Urbanisation threatens to undermine Bangladesh's impressive strides on healthcare. Photograph: Munir Uz Zaman/AFP

increasing about 6% a year as millions of people leave rural areas in search of work.

Dhaka absorbs many of those on the move. Its sprawling slums are testament to the capital's struggle to accommodate the millions of new residents. Land is so scarce that people have filled in rivers around the city to make space for new housing. Mass evictions are on the rise as landowners clear out slums to make way for more profitable building projects. New residents are increasingly pushed out to the city's fringes.

The government's refusal to acknowledge either the slums or the fact that 40% of Dhaka residents are now slum dwellers means that public service budgets -- and basic facilities like water and electricity -- are not being extended to accommodate the millions of new residents.

While many rural districts now have an accessible community outreach healthcare system in place, in Dhaka the vast majority of healthcare services are still based in hospitals.

According to healthcare workers, hospitals are already unable to meet the growing demand for treatment and services. Dhaka's largest hospital is operating at 50% staff capacity and trying to accommodate 3,000 patients in a facility with just 800 beds.

Many rural migrants, fearful of hidden costs, are reluctant to access hospital or clinic-based services at all. And since no healthcare facilities are provided in the slums, Dhaka's newest -- and poorest -- residents are facing a healthcare black hole.

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## From pastry to plastic: Starbucks finds sweet spot for food waste

By Rachel Nuwer



Local Hong Kong Starbucks branches have teamed up with researchers to boil old baked goods down to their core chemical components in order to extract recycled ingredients used in plastics, laundry detergents and other ubiquitous products.

"We'd go collect bakery waste from Starbucks outlets once a week and process it in our lab to convert the waste into useful chemicals, like succinic acid and bioplastic," says Carol S. K. Lin, a biochemical engineer at the City University of Hong Kong who led and presented the project at the 244th National Meeting and Exposition of the American Chemical Society.

"Succinic acid is a popular molecule, and there are already plants built in Europe, Thailand and the States," she says.

Starbucks kicked off the experiment earlier this year with their "Care For Our Planet" campaign in Hong Kong. The coffee chain advertised charity sets of cookies and cups, and for each one sold Starbucks donated about \$1 (HK \$8) to the university for research support. By the end of the campaign, Lin's school collected about \$6,400. Along with a grant from the Innovation and Technology Commission, Lin had enough resources to perform a thorough investigation of the pastries' recycling potential.

The goal is to find a use for the 1.3 billion tons of food waste that is dumped each year.

She and her colleagues used biorefinery technologies -- or the process of converting organic materials into bio-based products like animal feed, chemicals or biofuels -- to break down the pastries. To achieve this, they undertook a method called acid hydrolysis

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## US and EU must change biofuel targets to avert food crisis, says Nestle chief

By John Vidal, environment editor for guardian.co.uk

Nestlé, the world's largest food company, has added its weight to calls by the UN and development groups for the US and EU to change their biofuel targets because of looming food shortages and price rises.

"We say no food for fuel," said Paul Bulcke, chief executive of Nestlé, at the end of the World Water Week conference in Sweden. "Agricultural food-based biofuel is an aberration. We say that the EU and US should put money behind the right biofuels."



Nestlé chief Paul Bulcke says that without more efficient use of water, the world's food supplies will become severely limited. Photograph: Eric Piermont/AFP/Getty Images

Under laws intended to reduce foreign oil imports, 40% of US maize (corn) harvest must be used to make biofuels, even though one of the deepest droughts in the past 100 years is expected to reduce crop yields significantly. In addition, EU countries are expected to move towards drawing 10-20% of their energy supply for transport from biofuels to reduce carbon emissions.

But Nestlé, which has 470 food factories around the world and 25% of the world's bottled water market, says clean economy and US energy independence should not be pursued at the expense of food supplies or massive price increases.

"[Using biofuels] was well-intentioned at the time, but when you have better information then you have to be coherent," said Bulcke. "You have to know when to say: 'Stop here'. Now we see, too, that the carbon [reduction] element of biofuels is not as clear as it was intended to be."

Bulcke said Nestlé had lobbied the US and EU governments to change their quotas. "We have said [it] to [the] US government, but politically it's hard. We are an important food company and, yes, we do have a voice. We try to be vocal with our convictions."

He argued water is the world's coming crisis because, without better use of it, food supplies -- which the UN predicts must increase around 50% in the next 40 years -- will be severely limited.

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# Community energy online: linking people to projects

By **Emily Mackay**, for guardian.co.uk



Microgenius' first project will help fund the development of a hydro-electric generator at Jordan Dam on the River Don (model pictured above) which will be part of Sheffield's first community-owned renewable energy scheme.

In a Sheffield church hall on Saturday, about 100 people were offered the opportunity to be part of England's largest community-owned hydro scheme. But to have a role in a national movement that fundamentally changes the way that energy is generated, the Jordan Dam project needs to reach a much bigger audience – and that is where Microgenius comes in.

Like many people I had looked into the possibility of installing solar panels on my roof, but the first installer took one look and shook his head. "Too angular," he said. So I started to look at other ways to invest in renewable energy and stumbled upon the community energy movement.

Co-operatives have been around since the 19th century, and increasing numbers of both co-operatives and community benefit societies (Industrial & Provident Societies) are being formed to install sustainable energy microgeneration using modern hydro, wind, solar and biomass technologies. They are selling community

shares to ordinary people to make these projects a reality.

There are at least 59 energy co-operatives already registered across the UK, according to the Community Shares Action Learning Research Project and that's just the tip of the iceberg – there are many more bubbling under the surface.

The co-operative movement in general is going through a renaissance, both in the UK, where it has outperformed the economy for a fourth year running, and internationally, with 2012 being the UN's International Year of Co-operatives.

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## Why it's okay to mix up climate mitigation, adaptation

By **Mark C. Trexler**



In the face of continuing non-action on climate change policy at the national and international levels, we've seen a growing fatigue develop around the topic of corporate climate change mitigation. But regardless of the lack of government action, companies can't be seen to be ignoring climate change. Additionally, there is a growing recognition that a lack of mitigation will mean increased climate impacts. As a result we're seeing a rapid increase in corporate discussion of climate change adaptation.

Climate change adaptation historically has been seen as quite distinct from climate change mitigation. Indeed, distinguishing between climate change "mitigation" and climate change "adaptation" is not conceptually difficult if one looks at the typical formula for risk:

$$\text{Risk} = H \times E \times V$$

Where H = Hazard (e.g. sea level rise), E = Exposure (e.g. exposure to sea level rise), and V = Vulnerability (e.g. damage from sea level rise).

In this formulation, climate change mitigation reduces risk by addressing the level of the hazard (e.g. GHG concentrations in the atmosphere). Climate change adaptation, on the other hand, moderates risk by reducing either exposure to or vulnerability to the hazards of climate change. For example, reducing one's exposure to sea level rise could mean building farther away from an exposed coastline; reducing one's vulnerability to sea level rise could mean building high enough to avoid storm surges.

In this context, the distinction between mitigation and adaptation seems clear. And it makes sense to distinguish between mitigation and adaptation efforts at a societal level. The policy objectives are different, the policy measures you would use are different, and the distributions of policy costs and benefits are likely to be very different.

The same logic is filtering down into, for example, commitments by multilateral development banks (MDBs) to dedicate distinct percentages of their lending portfolios to mitigation and adaptation efforts. MDBs are now trying to figure out a metric by which to measure where their portfolio dollars are going. This is not as simple as it sounds when you get into possible multiple impacts of a given loan, but as representatives of societal policy one can see why the MDBs want to be able to differentiate between mitigation and adaptation.

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## Malawi shifts focus to nutrition and new crops to tackle food crisis

By Alex Duval Smith, for guardian.co.uk



A farmer works on his land in Nsanje district, southern Malawi. Photograph: Gianluigi Guercia/AFP

A nutrition act and new crops are at the centre of the Malawi government's latest attempts to overcome the effects of annual food shortages that affect more than 10% of the population.

From October, President Joyce

Banda's government says it will give away 60,000 goats to needy families on condition that they pass on the goats' kids to designated neighbours. The landlocked south-east African country is also drafting a nutrition act that will ban the sale of non-fortified basic foodstuffs.

Senior civil servants claim the moves mark a departure from farming policies that simply aimed to fill people up with staple maize in lean times. Food shortages affect 1.6 million people every year, and an estimated 47% of children have stunted growth because of undernutrition, making them more vulnerable to illness and learning difficulties.

Mary Shawa, the principal secretary for gender, said the nutrition act will send a signal that Banda, in power since April, considers food security a high priority. "Childhood stunting has a direct impact on the economy. It is clear that nutrition needs to be tackled across several sectors, including agriculture, education, local government and academia, and that is what we are doing," she said.

Jeffrey Luhanga, principal secretary for agriculture and food security, said stabilising food supply was his priority. Subsidies will increasingly focus on encouraging farmers to grow protein-rich crops and crops that can be exported or processed in the country, he said. "In maize, you have starch but you also need lots of protein."

Malawi, whose economy is heavily dependent on agriculture, has become something of a laboratory for food policy since 2004, when former president Bingu wa Mutharika defied resistance from donors and introduced a generous seed and fertiliser subsidy programme. After years of relying on food aid, in 2005 Malawi produced a grain surplus of more than 500,000 tonnes. The country repeated the feat in 2007 and increased its surplus in 2008.

At the UN general assembly in 2008, Mutharika proclaimed that his "green revolution" was a recipe for "Africa to feed the world". To prove his point, he sent 150 tonnes of rice to Haiti after the earthquake there in January 2010.

[<ReadMore>](#)

## Development must be less about growth, more about wellbeing

By Mark Tran, for guardian.co.uk

People and their wellbeing need to be at the centre of development, with less emphasis on economic growth, according to a new report, but this requires philanthropic and development organisations to challenge current thinking.

"Development is political," said the final report of the Bellagio Initiative, a six-month exploration into the future of philanthropy and international development. "Not everyone can be a winner at the same time, but if no one among the winners is prepared to give up just a little in order to reach politically sustainable solutions, then we will all lose out. The real wellbeing challenge is not just to find ways to live well, but for us to find ways to live well together."

Care work was cited as an example of an area that would receive greater attention under the new approach. Care for children and the elderly – work often done by women – is systematically undervalued and overlooked in the development agenda, said the report. A case in point was how the burden of coping with the day-to-day challenges of the global economic crisis has fallen unequally on women around the world.

"This means that in times of crisis – because of their neglect of the care agenda – international development and philanthropy organisations are complicit in processes of disinvestment in the raising of children, in building good families and communities and in creating the social contexts in which people can thrive," said the report.

Other areas in need of rethinking included: the consequences of rapid and



An outreach programme in Nkoilale village in Narok district, Kenya is giving children improved educational opportunities. Photograph: Phil Moore/AFP/Getty Images

unplanned urbanisation as both threat and opportunity for wellbeing; the role of the natural environment in protecting and promoting the wellbeing of poor people who depend on it; and how wellbeing is to be considered for people who are increasingly mobile in their search for livelihoods and security.

The Bellagio Initiative said the foundations of a new theory of development are well established, much of it inspired by Amartya Sen, the economist and Nobel prizewinner, along with a groundswell that development theory is complex. "But there is a need to make this sometimes high-level conceptual work more relevant and more widely accessible for those making development choices and practices," said the report.

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## Centuries of Indian life could be extinguished by the arrival of Walmart

By **Ian Jack**, for The Guardian



Traditional Indian street vendors and markets will be threatened by an influx of foreign supermarkets. Photograph: Rafiq Maqbool/AP

Certain habits in Indian life once gave an illusion of permanence. On hot afternoons 30 years ago, for example, you could lie on your bed under a slow-turning fan and hear noises from the street that had been the same for at least a century. The lonely wife in Satyajit Ray's film *Charulata* heard them in the film's celebrated opening sequence as she flitted about her Victorian mansion in 1870's Calcutta like a trapped butterfly, and in 1982 you could hear them still: some rhythmic chanting, the hollow patter of a little drum. And if, like *Charulata*, you went to the window and looked down, there in the dusty lane you would see a gang of coolies shouting something like a work-song as they pushed a wooden-wheeled cart with a heavy load, or a street entertainer drumming up business with his tabla. The most common sounds, however, were the singsong calls of peddlers selling fish or vegetables, or milky sweets and ancient biscuits from a portable glass case. Some salesmen rode bicycles; that transport apart, these were scenes that looked as if they had existed for

centuries and would never be expunged by modernity.

Their extinction is coming – not immediately and not everywhere, but probably inexorably in the middle-class districts of the big Indian cities, now India's governing coalition has said it will open up the retail market to foreign supermarket chains. The coalition put the plan on hold last year after some of its smaller parties, notably West Bengal's Trinamool Congress, branded it as against the interests of "the common man". The postponement suggested a weak and muddled government. Economic growth was faltering, the prime minister, Manmohan Singh, looked particularly ineffectual, and the administration's reputation suffered the lash of critics at home and abroad (not least in the USA). Last week it decided to face down opponents and show its free-market muscles by reviving planned reforms that will allow familiar European and American names – Walmart, Tesco, Carrefour — to build stores in cities of more than a million people, providing the local state government agrees.

Western supermarkets arrived in China several years ago and there is now hardly a country in the world without them. India's resistance came out of what Louise Tillen, an academic at the India Institute in King's College London, describes as a "compound of opportunism and ideology" in a democracy that tolerates dissent and political fixes, but that resistance looks to have collapsed. The government says the marketing, technical and managerial expertise of the big supermarkets will transform food production and consumption by cutting out middlemen and building the system known as "the cold chain" that delivers fresh food swiftly from the field to the shelves. The farmer gets higher prices, the consumer pays lower ones and less food is wasted: the supermarkets hire staff in their thousands, no food rots in the warehouses.

Perfection! Unless you are a middleman, or one of India's 12 million small retailers, or a peasant farmer with a crop yield too insignificant to interest Walmart, or a street vegetable peddler. The process is known as "retail Darwinism". In Vietnam, to quote a recent survey, a supermarket needs 1.2 people to sell a tonne of tomatoes rather than 2.9 people for every tonne in more traditional distribution channels. In several large Indian cities, fruit and vegetable sellers have already seen their incomes cut by up to 30% since the advent of smaller Indian-owned supermarkets; the powerful giants from abroad could bring far larger changes.

How does India's cultural elite – with apologies for that clumsy phrase – feel about this revolution? To judge from my friends there, some feel anxious, hopeless and sentimental: emotions familiar to the supermarket's enemies everywhere. One of them writes from Delhi that the vendors who come to her door selling vegetables, milk, flowers and fish are "one of life's greatest pleasures".

They do their rounds on environmentally sound bikes, while supermarket shopping needs cars and car parks. "We fear all this will go," she writes of the old pattern of vendors and neighbourhood shops and bazaars, adding that in India's hierarchical society to shop at a supermarket has an exclusive appeal, a generalised version of the Waitrose cachet, because until now they have specialised in prepared rather than fresh food and have prices (and security guards) to keep out the poor. "In my view," she says, "they are urban, classist, expensive, sell packaged stuff and restrict the right of entry. It could hardly be worse."

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## Chance for north west low carbon firms to reach India's growing market

By **Martin Wainwright**, for guardian.co.uk



Cutting the carbon: an opportunity for north west technology firms.  
Photograph: Bei Feng/EPA

Green initiatives are sometimes posited as largely the work of the developed world, with other countries far behind or too hard-pressed to give sufficient time and attention to the sector.

However accurate in the past, this is changing, as an initiative involving Salford university shows.

You might pause at the notion of similarities between England's rainy north west and the baking climate of Hyderabad in India, but there are mutual interests and technologies which can benefit both parts of the world. The university, along with India's Green Building Council and UK Trade and Investment, is currently recruiting for a low carbon trade mission to prove this point.

Academics are looking for companies to visit the IGBC's annual Green Building Conference which takes place in Hyderabad between 27 October and 3 November. They will join around 2000 international delegates seeking access to an Indian market which is expected to be worth £135 billion by 2020.

Steve Waterworth, who runs Salford University's Energy Hub and is co-ordinating the visit says:

This is a golden opportunity for North West businesses to make an impression in one of the world's fastest-growing economies. The climate may be very different in the UK, but through the consultation and research carried out at Salford, we have seen that technology created by North West companies is transferable – if the right contacts are in place.

The prospect also offers hope amid the growing angst about stimulating the private sector in the English regions. The Indian national and state governments are promoting a low carbon economy vigorously and the country's total of only 64,000sq ft of 'green buildings' is now estimated by the IGBC to have risen to 856,000,000.

Part funding of the visit is available for eligible businesses. Anyone interested should contact Gary Bateman at the university on g.bateman@salford.ac.uk.

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## Delhi Tightens Plastic Bag Ban

SustainableBusiness.com News

India's second biggest city Delhi is taking its 2009 plastic bag ban even farther, joining a growing lists of cities adopting stricter measures on their usage.

Starting in mid-September, a new ordinance prohibits the manufacture or sale of all plastic sheets or bags within the city limits – including shopping bags, garbage bags, magazine and greeting card coverings, and plastic film.

Plastic bags meant for medical purposes are exempt under the municipal's government restriction, but the local government has said the time for leniency is past.

The city actually banned thinner plastic bags back in 2009, but the law has been largely ignored.

Delhi's sewers are often clogged by plastic bags littering its streets, causing widespread sanitation issues. What's more, wild animals often die after eating them – including the country's sacred holy cows.

Los Angeles became the largest US city to ban plastic bags back in May, and the law is being phased in over the next year. After that time, consumers will be charged 10 cents per paper bag in supermarkets – if they don't bring their own. Seattle has announced a similar ban.

California attempted a statewide ban in 2010, but that law was thwarted. Hawaii beat it to the punch as the first state to ban plastic bags statewide – keeping an estimated 450 million bags a year out of its waste stream. The state also banned paper bags that don't have a minimum of 40% recycled content.

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## Letter from India: Letting in companies such as Walmart won't create a boom economy

By **Jason Burke**, for The Guardian



Indian prime minister Manmohan Singh: spearheading drastic reforms. Photograph: Prakash Singh/AFP

Mr Luthra, the shopkeeper in my local market who sells me ancient imported cheese, packets of sliced salami and a variety of other once-scarce western delicacies that he produces like some kind of illicit contraband from a fridge buried in the back of his store, has views on many subjects.

Oddly, the new measure brought in by the Indian government last week to allow foreign supermarket chains to sell directly to customers rather than retailers such as him is not among them. Though he is one of the millions of small businessmen who critics of the new measure say are likely to lose their livelihoods, Mr Luthra is unconcerned, even when told Walmart has said it hopes to open a store in India within a year to 18 months.

"I have been here 30 years. I know everybody. They know me. How can some American compete with that?" he asks.

Fly into Delhi and you'll arrive at the international airport's new terminal building, opened in 2010. It is a vast sprawl of glass, steel and orange carpets, and it is busy 24/7. It is a concrete – in every sense of the word – manifestation of what 20 years of sustained economic growth can produce. Since a package of reforms designed largely by the then finance minister Manmohan Singh was implemented in the early 90s, India – or rather, some Indians – have enjoyed the effects of an economy expanding by up to 9% each year. The amount that has trickled down to the most needy may have been derisory, but that huge sums of cash have been created is undeniable. A recent report from the Indian National Council of Applied Economic Research quoted in the local Hindustan Times said that the famous "Indian middle class" grew from 2.7% of the population in 1995-96 to nearly 13% today.

Leave the airport and within a few minutes you will have really entered India. The roads are chaotic, clogged and pitted, a new tunnel ends beside a shanty town and the new Metro link to the airport is broken. All the gaps in India's growth story – so often ignored in the west and elsewhere – are glaringly obvious. The most recent batch of Indian reforms, introduced by the very same Manmohan Singh, now prime minister, is inspired by the fear that these holes will swallow all the progress of the past decade if drastic action is not taken soon.

Whether they are implemented could determine if India's growth picks up again, whether it continues to flatline or whether it continues to slow, with India set back several decades in shortish order.

Up in South Block, part of the monumental red sandstone complex designed by the British to house their administrative staff in the centre of what they called New Delhi, close aides explain that Singh's sudden courage stems neither from fears of further loss of confidence in international markets, nor from concern over his "legacy", but from victory in an internal battle within his own party.

The ruling Congress party has long been split between those favouring economic policies that owe much to the decades of socialist-style central planning and those looking to boost private-sector growth and foreign investment and cut back state spending. But first came a change in finance minister and then the party president Sonia Gandhi was convinced by Singh that unless some money was generated soon, the various big dole schemes she believes are essential to improving the lot of India's poor (and her party's electoral chances) could not be funded.

"It's understood now that without money there is no welfare," an aide to the prime minister says. "There are many more [reforms] to come."

This is a huge shift, in a country that is home to around a fifth of the world's population. But the problem is that the most recent reforms, though impressive in the context, are less so in the grand economic scheme of things. They may bring in a little more investment and reassure the markets, but they won't tackle the real fundamental bottlenecks that are stifling growth – runaway public expenditure or the soaring inflation that punishes the poor most. For this, lots of new legislation is needed. Even the PM's loyal aide, particularly as last week's announcements cost the government a coalition partner, admits that new laws are impossible.

The result then is that India, at least until the next election in 2014 and almost certainly beyond, will not see the deep reform needed to return to high growth. It will putter on at 6% at best. A lot by current western standards, but economists here say it is only just about enough to meet the current needs of the growing population.

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## India Speeds Solar Auctions, Approves \$4.1 Billion for Sustainable Transportation

### SustainableBusiness.com News

India's massive power outage in July, the world's largest, is energizing the nation's interest in solar energy and clean transportation.

Not only is India's government speeding auctions for 3 gigawatts (GW) of solar plant development through 2017, it's planning investments of \$4.1 billion to spur electric and hybrid vehicle production.

### Speeding Up Solar

Auctions for up to 1,000 MW of new solar could be held before the end of the current fiscal year, reports Bloomberg.

India's National Solar Mission calls for 10% of its energy - 2,000 GW - to be supplied by solar by 2022. Right now, at least half of India's power comes from coal-fired power plants.

India's solar auctions give the lowest bidder the right to supply energy. Most of its existing capacity - about 1,040 MW - has been built in the last 12 months; another 3,000 MW could be constructed between 2013-2017.

India has used auctions, along with tariffs and power-bundling arrangements as development incentives to encourage solar development. And that's reduced the cost of solar energy by an impressive 38% from 2010-2011. It is now also considering implementing subsidies, Tarun Kapoor, joint secretary at the Ministry of New and Renewable Energy, told Bloomberg.

India's last auction in December 2011 awarded 350 MW of solar capacity to utilities including Welspun Group, Mahindra Group and partner Kiran Energy Solar Power Pvt., and Azure Power India Pvt. With the exception of a 10 MW project that was cancelled later, all of those projects should be finished by early next year.

First Solar has made India a priority for solar project development. It is angling to win 20% of the country's solar PV sales, by working directly with businesses seeking a more predictable energy supply.

The solar transition in India's 30 GW backup power market, is powered mainly by diesel generators, is particularly attractive because high diesel fuel costs and lower solar panel module pricing have make solar power a cost-effective alternative.

### \$4.1 Billion for Electric, Hybrid Vehicles

While developers angle for a piece of India's solar market, the country is also taking steps to accelerate the sluggish market for electric and hybrid vehicles.

India's target is 6 million green vehicles by 2020, the vast majority of which (4 million to 5 million) will be two-wheelers, such as bicycles, scooters and motorcycles.

The government approved a \$4.1 billion investment to spur production over the next eight years, with about 60% coming from the public sector and 40% from private companies. reports Reuters.

Government officials say the funds will be used for subsidies, research and development support, consumer demand creation, and development of infrastructure.

Most manufacturers are focused on low-emission conventional cars right now because of the infrastructure for EVs doesn't exist and the vehicles are too expensive.

India's Tata Motors is among the domestic companies experimenting with green transportation alternatives, although its AIRpod urban car runs on compressed air not electricity.

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### **SCMS National Conference on Innovation for Competitive Edge: Growth and Sustainability**

**October 16 – 17, 2012**

SCMS NOIDA is organizing a national conference on "Innovation for Competitive Edge: Growth and Sustainability". It intends to provide an open platform to bring together scholars nationwide to present research and to stimulate discussions on new developments in innovation for growth and sustainability in this competitive world.

The conference will provide a unique opportunity to participate and understand the need of innovation in this world of cutting-edge competition. The objectives of this conference are:

- To harness the creative and innovative spirit of researchers and academicians to create a competitive edge for growth and sustainability of the organization
- To foster increased partnerships and collaboration among public, academic and private sectors to ensure knowledge mobilization
- To promote more formal R&D efforts for education as well as corporate industry to solve the social and professional problems to ensure progressive, and innovative future for the country.

[<SeeBrochure>](#)

### **International conference on Socially Responsible Products and Services for Sustainable Asia and beyond**

**New Delhi, India**

**18-19 October, 2012**

The SR Asia International Conference on Socially Responsible Products and Services for Sustainable Asia 2012 will be held in India International Center (IIC) 40, Max Mullar Marg New Delhi. This Conference has been designed as a unique platform to avail social responsible products and services to Asian population: individuals and organizations to catalyze social change, giving impetus to developing Asia. The partners in the conference are FICCI, CSR-EORPE, Asian Productivity Organization (APO) and CBI Ministry of Foreign Affairs Netherland. It is believed that this endeavour will have a game-changing impact nationwide on the way the stakeholders work together towards the common goal of creating large partnerships in future for developing socially responsible products and serving their nation first.

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## Forthcoming Events

### 2nd International Indo-German Symposium on title of “Green Chemistry and Catalysis for Sustainable Development”

29<sup>th</sup> – 31<sup>st</sup> October 2012

2nd International Indo-German Symposium on title of “Green Chemistry and Catalysis for Sustainable Development”, is being organized during October 29<sup>th</sup> and 31<sup>st</sup> October, 2012 at ICT, Matunga, Mumbai, In this Symposium, It is expected that a unique spectrum of scientific programme will be presented on the most recent and exciting developments in field of Green Chemistry, Catalysis and Sustainable Development. The Conference is expected to display the numerous breakthroughs and significant developments in the important areas of sustainable development and their relevance to the wellbeing of mankind. We will also publish peer reviewed paper in International journals.

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## INTERNATIONAL CONFERENCE

On

### Innovation & Research in Technology for Sustainable Development

An International conference is being organized Jindal Steel works at Raigarh in the state of Chhattisgarh during 1<sup>st</sup> and 3<sup>rd</sup> of November, 2012. This conference is to provide a space for sharing current thinking and practice, underline under what conditions technological research and innovation can foster and promote sustainable development considering all forms of technological research and innovations that are potentially conducive to sustainable development: process innovations, product innovations, organizational innovations and market innovations. It will also look at the entire spectrum of research and innovation in technology for a prosperous future.

#### EXPECTED OUTCOMES:

- Promotion of research and innovation culture.
- Setting up of an incentive framework for promotion of innovations
- Reinforcing the ties between research, innovation and markets
- Studying the ambivalent role of technological innovation as a key factor of a new means of production, compatible with sustainable development.
- Supporting dissemination of clean technologies, low on consumption of resources, by favoring the dissemination of information and knowledge.
- Promoting technological diversity, to avoid getting locked into technologies which may present long-term risks.
- Reinforcing the long-term research & innovation capacity by favoring the development of skills and strategic prospecting.

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## Forthcoming Events

### UGC SPONSORED TWO-DAY NATIONAL SEMINAR ON “CLIMATE CHANGE - A CHALLENGE TO SUSTAINABLE DEVELOPMENT (NSCC-2012)”

29<sup>th</sup> to 30<sup>th</sup> November 2012

The TWO-DAY NATIONAL SEMINAR ON “CLIMATE CHANGE - A CHALLENGE TO SUSTAINABLE DEVELOPMENT” (NSCC-2012) is being organized at Vijaywada, Andhra Pradesh. This seminar is being organized by KBN College in collaboration with ANU, APPCB, APCOST. The department of Zoology is organizing a two-day National Seminar on “Climate Change- A challenge to sustainable development” on 29th and 30th of November’2012.

The seminar is being organized to provide a platform for academicians to share their intellectual thoughts in sustaining eco-friendly environment. Further, the participants will be encouraged and motivated to implement the measures to control pollution and to conserve natural resources.

[<Brochure>](#)

### *International Conference*

on

## **Environmental Governance and Green Economics**

**(ICEGGE)**

**October 14th, 2012**

One day conference is being organized by Centre for Sustainable Management and Green Technology (CSMGT), which is an autonomous wing of Interscience Institute of management and Technology IIMT, Bhubaneswar) is organizing the International Conference on Environmental Governance and Green Economics (ICEGGE) for the first time to provide a platform in this domain. The conference is being held at Hotel Presidency, Bhubaneswar on October 14<sup>th</sup> 2012. This conference is being organized to provide a platform for scholars, academicians, industry practitioners, Government bodies, NGOs and Civil Society Groups in this field in order to stimulate the discussion and improve our understanding of the issues for better research and policy decisions in future.

[<SeeBrochure>](#)

# Water contamination poses serious health risks

*The contamination of water is directly proportional to the degree of environmental degradation and can threaten the very basis of human survival*

**I**t is a no-brainer that clean water is absolutely essential for healthy living. Adequate supply of fresh and clean drinking water is essential for all human beings, yet millions of people worldwide are deprived of this basic necessity of life.

Globally, freshwater resources are imperiled not only by over exploitation and poor management but also by ecological degradation. Discharge of untreated waste, dumping of industrial effluent, and run-off from agricultural fields are some of the ways in which water is contaminated. Industrial growth, urbanization and the growing use of synthetic organic substances have serious effects on freshwater bodies.

Developed countries suffer from problems of chemical discharge into the water sources, mainly groundwater, while developing countries face problems of agricultural run-off in water sources.

Farm runoff, containing agricultural chemicals and manure, may lead to contamination of drinking water supplies with fungicide, insecticides, herbicides, and fertilizers, containing phosphorous and nitrogen.

Some studies have shown that fertilizers in water supplies may cause cancer. In China, research on populations exposed to nitrates in their drinking water, suggested links between nitrate contamination and stomach and liver cancer.

The chemicals used in water pipes may contaminate drinking water after it has been treated. Copper, tar, asphalt iron, zinc, coal, polyethylene, concrete, polyvinyl chloride, vinyl, asbestos and lead are all potential sources of post-treatment contamination.

Another recent study showed a link between leukemia and trichlorethylene, which comes from plastics used in the



drinking water delivery system. Before that, a study of several water systems demonstrated an increase in the cancer-causing properties of drinking water after it passed through the delivery system.

Researchers are also concerned about the potential for micropollutants to cause cancer through chemicals that mimic naturally-occurring, biologically-active compounds. These substances appear to disrupt intercellular communications. For instance, nonyl-phenol, a common chemical, increases proliferation in breast tumor cell cultures.

Water supplies can be contaminated in houses with lead pipes or plastic pipes that emit volatile compounds. The contamination of water is directly proportional to the degree of environmental degradation. Rainwater flushes airborne pollution from the skies, and then washes over the land before running into the,

rivers, aquifers, and lakes that supply our drinking-water. All of the chemicals generated by man will eventually end up in our water supplies.

Concerns about the health risks of contaminated drinking water may compel those who consume tap water to shift to bottled water or other beverages. These beverages may include sweetened soft drinks and alcoholic beverages, which can pose bigger health risks than those associated with drinking water. To make matters worse, the production and disposal of containers for alternative beverages, including bottled water, may lead to the release of carcinogens.

Contaminants such as lead, asbestos, and trihalomethanes could appear in your water supply after the water leaves the public water treatment plant. It is no surprise then that people all over the world are looking for alternatives to drinking tap water.

*The Times of India, Delhi dated  
September 03, 2012*

### Capital soon to join solar city club, calls for proposals

Risha Chitlangia | TNN

New Delhi: Delhi will soon join the list of solar cities. Recently, the New Delhi Municipal Council floated tenders inviting proposals from consultants for the solar city project. Officials say a consultant will be appointed soon.

"We are in the process of appointing a consultant for the solar city project. For this project we have got all the necessary approvals from the ministry of new and renewable energy (MNRE). The consultant will get six months to prepare the master plan for the solar city," said Amit Prasad, spokesperson, NDMC.

The main aim of the solar city project is to bring down the total non-renewable energy consumption by 5%. "While preparing the master plan, the consultant will take into account the expected increase in power consumption over the next 10 years. We plan to put up solar panels for water heating and generation of electricity," said an official.

Once the master plan is ready, it will become mandatory for all buildings in the NDMC area to install solar panels. The civic agency is mulling of directly using the electricity generated from the solar panels in all its buildings. "Instead of storing it in batteries, we will connect the electricity generated from solar panels to the main electricity supply. This will also bring down the load on the grid," said an official.

"We had a pre-bid discussion with some of the consultants who have applied for the project on Tuesday. The consultants will prepare a master plan proposal after studying the group situation. In Delhi, we don't have much land, so we have to make good use of the rooftops. The consultant will also work out a budget for the project," said an NDMC official.

The civic agency has received Rs 50 lakh for the project from the MNRE. Once the master plan for solar city is ready, the civic agency will submit it to the ministry for final approval. Officials are hopeful that the work on the project will start by next year.

*The Economic Times, Mumbai dated September 03, 2012*

# Oberlin & Lessons from Sustainability

## Who is David Orr?

He is the Paul Sears Distinguished Professor of Environmental Studies and Senior Adviser to the President of Oberlin College

Authored six books including the widely praised Ecological Literacy and Earth in Mind; His most recent book is Down to the Wire: Confronting Climate Collapse.

## What are the Aims of Oberlin Project?

The project is a collaborative venture -- developed by David Orr -- between Oberlin College, the City of Oberlin, Oberlin city schools and private sector to build a post-fossil fuel based economy. It has four goals.

### First Goal

Redevelop a downtown along 13 acres and do it to the US Green Building Council's neighborhood development standard platinum level

### Second Goal

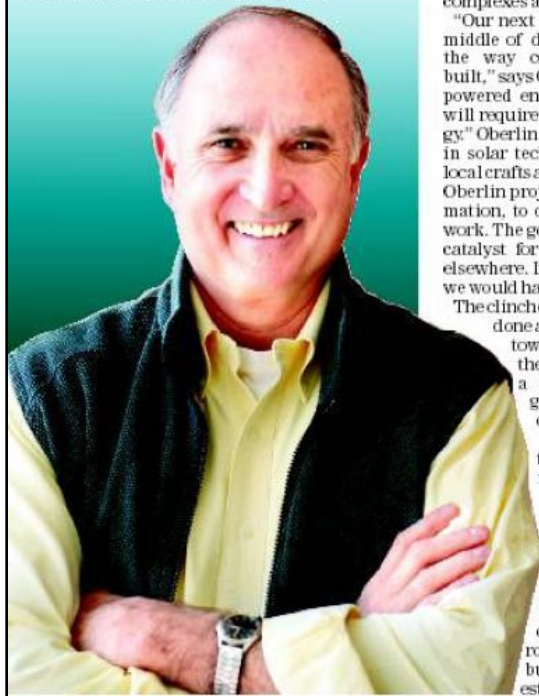
To get the city and the college to become carbon and climate neutral. Rebuilding the energy systems, starting first with energy efficiency

### Third Goal

To develop a 20,000-acre green-belt. Oberlin wants to reach 70% food self-reliance, and this will provide the space for that to happen

### Fourth Goal

To create an education consortium that puts college, public school, and two-year college students together to determine what young people need to know to build careers and lives



## HARI PULAKKAT BANGALORE

When I read the newspapers in Bangalore this morning," says David Orr, distinguished professor of environmental studies at Oberlin College in the US, "I see at least a dozen stories that deal with environment. The issues in southern India are the same as in the US or in Europe. And that gives me hope that we are part of a global movement." Orr is inspiring a sustainability project in his university town that he believes can become a model for the entire world.

Oberlin, situated near Cleveland in northern Ohio, has been building a town that practises 'full-spectrum sustainability'. Three years into the project, the results are truly remarkable.

The entire town is being renovated as part of the project. New downtown housing is making people move back into town, obviating the need for long commutes. It has also remodeled an arts museum and a historic theatre, but amidst all these renovations, it has also reduced its carbon emissions and created jobs. Oberlin already gets 96% of its electricity from renewable sources. A 20,000-acre green belt around the town provides food and acts as carbon sinks. The town is working to add 2 megawatts of renewable energy production every year while also reducing energy consumption by about 3% every year. On the anvil is the creation of a thriving business district that is sustainable, and it would include hotels, commercial complexes and shopping malls.

"Our next big project is a hotel in the middle of downtown that will change the way commercial buildings are built," says Orr. "It is a hotel that will be powered entirely by sunshine, and it will require a lot of advanced technology." Oberlin is busy creating businesses in solar technology, energy efficiency, local crafts and so on. "A good part of the Oberlin project hinges on business formation, to change the way businesses work. The goal is to become a model or a catalyst for lots of things happening elsewhere. If we had no impact outside, we would have failed."

The clincher is that no one globally has done all these things together in a town. Oberlin is a test case of the Clinton Climate Initiative, a large multi-billion-\$ programme to fight climate change.

Oberlin College has a distinguished history. It is famous as the first American college to admit women and African American students. Its current reputation rests on a few departments, of which the music conservatory is the most well-known. Orr is one of the pioneers of environmental design, having built one of America's greenest buildings there. Called the

John Lewis Centre for Environmental Studies, this building has been called by the US department of energy as one of the 30 milestone buildings of the 20th century. The building uses a large number of unique design principles. It produces 30% more energy than it needs, mostly using solar panels. It uses a waste water treatment plant using principles of natural wetland ecosystems, without consuming any energy. The building uses only 63% of the energy used by buildings of its size in the vicinity.

The Oberlin Project has raised money -- more than \$60 million -- through a variety of mechanisms. However, the town is not rich. It is part of the rust belt that has declined in fortunes of late as manufacturing moved away from the US to other countries. Oberlin's economy has struggled for quite some time and the town has poverty levels of 23%. But now, with the eco-project, new jobs are being created as localisation becomes one of its major components. "There is a strong movement in the US for localisation," says Bill McKibben, environmental activist and the author of the first book on global warming. "It isn't easy because US, unlike India, is a globalised country."

**US professor is building sustainable town model with ideas for the entire world**

McKibben says that building village-scale solar power is one of the first lessons of the project for India. "You don't want to be tied to a national grid and face blackouts," he says. In fact, one of the aims of Orr is to develop a global network of cities that follow Oberlin's example. "We want it to go viral around the world," says Orr. "We take a model with roots in minority traditions in India, the US or Latin America and try to understand how to build sustainable economies, transform education, transform energy systems, and transform the technological scaffolding of civilisation." One more aim is to understand where the carbon emissions are coming from, and then to convert all the numbers into a business organised around energy efficiency. "The bad news is that we are not very efficient," says Orr, "and the good news is that we are not very efficient. There is a market to exploit technology to cut emissions."

Orr has been giving the project a new spin of late, as being important for national security. US government officials had told him that the grid was certain to go down one day since it was being targeted. If it does, it may not come back to life quickly. The lower the reliance of a town on a national grid and the more self-sustaining it is, the better the chances of it surviving a terrorist attack.

"They are redefining security," says Manish Jain, who runs the NGO Shikshantar in Udaipur "by building resilience around communities." Orr and Jain, who has worked to strengthen local communities, have been talking about developing a global cities network. "The environmental movement is now truly global," adds Orr.

The Times of India, Delhi dated September 03, 2012

# Bamboo trade may open up to tribals

## Forest Department Set To Lose Monopoly Over ₹10k Cr Annual Business

Nitin Sethi | TNN

New Delhi: Environment minister Jayanthi Natarajan has overruled objections from her officials to break the forest bureaucracy's monopoly over the annual Rs 10,000 crore bamboo trade and declared it a 'minor forest produce' instead of a 'tree' under forest laws. This will allow tribals, instead of forest departments, to harvest and auction bamboo, which is one of the major raw materials for the paper, pulp and board industry, from their community and private lands.

The forest ministry had for long classified bamboo as a tree despite its scientific description as a grass. The classification ensured that under the Indian Forest Act, 1927, fallen bamboo got classified as timber and remained



EYING THE GREEN

under the firm control of the forest bureaucracy which harvested and sold it to the industry. The tribals got a pitance on some occasions even as the industry got bamboo at low rates over long lease periods.

With the introduction of UPAs flagship Forest Rights Act, the tribal affairs ministry pushed to get the fast

growing species of grass out of the control of forest officials with the law providing that right to harvest minor forest produce (products not classified as timber) grown on traditional forest lands would lie with the tribals.

But the forest bureaucracy refused to alter its regulations and classification of the species and put up hurdles in

various states based on the Indian Forest Act and its existing rules.

Previous environment minister Jairam Ramesh too pushed the case for relaxing the archaic and incorrect classification of bamboo and easing the norms to ensure that tribals got their rights under FRA but met with only partial success.

Earlier this year, the tribal affairs ministry secured Cabinet nod to offer minimum support price for minor forest produce, including bamboo, to tribals through a new scheme along the lines of the support prices provided to farmers for major crops. The PM announced the scheme in his August 15 speech as a part of UPAs pro-tribal measures.

But the tribal affairs ministry in the last stages of transferring control of bam-

boo to tribals and finalizing the scheme, got a jolt when senior environment ministry officials stuck to the line that bamboo was a 'tree' under the Indian Forest Act, 1927 and could not be harvested, transported or sold by tribals. Natarajan then stepped in and overruled her officials and put on record that bamboo would be classified as a minor forest produce under the Indian Forest Act, 1927 as well.

The decision will pave the way for the tribal affairs ministry to launch the scheme though officials still expect a lot of resistance from state forest officials in handing over real control to the tribals. In some states, forest officials have blocked tribals from selling bamboo by using other regulations like working plans for forestlands being amended to permit harvest.

The Times of India, Delhi dated September 03, 2012

# Delhi's last chance to be a green city

## Experts Demand Environment-Friendly Building Norms For New Urban Areas

Jayashree Nandi | TNN

New Delhi: The new areas of Delhi, categorized as 'urbanizable areas' in Master Plan 2021, are mainly tracts of farmland dotted with farmhouses. But now that they have been opened up for urbanization, city-based urban planners and architects want the government to take steps before the developers grab the land and turn these areas into another Gurgaon.

Planners see these areas as a "golden opportunity" to place Delhi on the global list of eco-cities. The opening-up of over 60,000 hectares for urbanization to accommodate about seven million people can be a real test for building an alternative city.

Urban planners insist on urbanizing these villages while maintaining an ecological balance. They say that without any guideline, real estate giants will raise huge skyscrapers but with no security for water or power or very less pedestrian space. There are reports of large areas already being bought, leaving little time

### SECURING FUTURE

Some features that can help develop new areas as per sustainable city model

<ul style="list-style-type: none"> <li>▶ Make rainwater harvesting an inbuilt feature in new buildings</li> <li>▶ Make them 'optimum density' areas so that they are less resource intensive</li> </ul>	<p>the optimum</p> <ul style="list-style-type: none"> <li>▶ Use eco-friendly building materials. Avoid use of too much glass as it doesn't suit environmental conditions in Delhi</li> </ul>
<ul style="list-style-type: none"> <li>▶ Make pedestrianization a priority in colonies</li> <li>▶ Orientation of buildings should be such that they consume less energy. They should be able to use natural light and ventilation to</li> </ul>	<p>low-rises instead of only high-rise gated apartments</p>

**Make rainwater harvesting an inbuilt feature in new buildings**

to make interventions to design a better peripheral city. Planners suggest that the Delhi government prepare a set of guidelines that builders should abide by to create a "sustainable city".

"It is a great opportunity to rectify what has gone wrong. We are not talking about very expensive technologies here. It may actually cost far less if pri-

vate and public developers adopt these technologies. But once the city develops, there will not be any room for change," says A G K Menon, architect, urban planner and conservation consultant.

Planner and architect Vinod Gupta also stresses that "The development of these fringe areas are the most interesting aspect of Delhi today

Here we have an opportunity to do what has not been done so far. We can study the topography and create norms for builders that will reduce the pressure on the environmental resources quite a bit".

According to Menon, all buildings should compulsorily develop rainwater harvesting structures in the building, orient the buildings depending on the location and use landscape to minimize energy consumption and ensure optimum density of population in the new areas so that the peripheral cities are less resource intensive.

"Rainwater harvesting has been made compulsory. But it should be inbuilt in every new construction in the new areas. Building materials are also important. Look at Gurgaon, they have used so much glass when it doesn't suit our environmental conditions at all. The guidelines should specify eco-friendly building materials that require less energy during construction and will help reduce the cooling or air-conditioning load later," adds Menon.

Planners are also con-

cerned about the optimum population density. It should neither be low density, leading to use of more resources for very few people, nor can it be very high density as "we don't have the infrastructure to support it. We need to know what is optimum", says Gupta.

The director of Indian Institute of Human Settlements, Aromar Revi, also bats for optimum density. "A core principle of sustainable urban design is to plan and incentivize condensed urbanism and contain sprawl. This makes cities more livable because many parts are then walkable, which reduces traffic. It also increases access to jobs as poor people have to travel less, and increases water and energy efficiency because these services don't have to be delivered over long distances."

Revi also thinks many parts of core Delhi are still low density. It will have an extensive Metro network connecting most parts by 2016 "This will enable people to use more public transport, leading to reduced congestion, air pollution and GHG emissions," he says.

*The Times of India, Delhi  
dated September 03, 2012*

# Now, small buildings can go for green stars

Neha Lalchandani | TNN

New Delhi: The focus of energy efficiency has usually been large buildings, whether residential or commercial. Now, there is a project that will help smaller buildings reduce their carbon footprint. An offshoot of GRIHA — the green rating for integrated habitat assessment — SVAGRIHA has been conceptualized especially for buildings that are less than 2,500 sqm.

The project was launched earlier this year by The Energy and Resources Institute (TERI) and new and renewable energy ministry. According to Mili Majumdar, director of TERI's sustainable habitat division, the cumulative contribution of energy guzzling small buildings to climate change is quite large which is why the need was felt to draw up a focused programme for this kind of architecture. "Unlike GRIHA where a building is evaluated on 34 criteria, SVAGRIHA will evaluate buildings on 14 parameters. Once a building has been planned, the SVAGRIHA team will step in to advise on energy efficiency measures that can be adopted. People can also put up information about their buildings online and will get a list of steps that they can adopt suiting their needs," she said.

## THE MONITOR

The project will be evaluated on the following parameters. Star ratings will be awarded on the basis of points scored

Parameters	Points
Maintain native vegetation cover on site	6
Passive architectural design and systems	4
Reduction of direct heat while maximizing daylight penetration	6
Efficient artificial lighting system	2
Thermal efficiency of building	2
Use of energy efficient appliances	3
Use of renewable energy on site	4
Reduction in water demand	5
Rainwater harvesting	4
Resource generation from waste	2
Reduce embodied energy of building	4
Use of low-energy materials in interiors	4
Adoption of green lifestyle	4
Innovation	2

In India, about 30% of the energy consumption is attributed to the buildings sector; out of which residential and commercial buildings con-

tribute 24% and 6% respectively, says TERI. While GRIHA with its complex system of analysis was created for large establishments, there was a need to simplify the process for smaller buildings and also bring builders of tier 2 and 3 towns under the green rating umbrella. The cost of registration and evaluation for the projects will be between Rs 60,000 and Rs 1,00,000.

The process for getting a SVAGRIHA rating includes registering with ADaRSH (Association for Development and Research of Sustainable Habitats), submission of calculations that determine possible energy efficient methods, drawings and other documents as required. The calculations, available on SVAGRIHA website, will use data like area under construction and quantity of material used. It will also provide recommendations to improve the environmental performance of the building.

The submissions will be reviewed under SVAGRIHA parameters and a site visit will be carried out post construction to determine how and what measures have been put in place. Finally, a GRIHA certified evaluator will assess the building and award the rating.



*Deccan Chronicle, Hyderabad  
dated September 09, 2012*

# Mandatory solar heater clause can save ₹100 crore annually

**DC CORRESPONDENT**  
HYDERABAD, SEPT. 8

The state government had made it mandatory for hotels, hospitals, guest houses, lodges etc., to use solar water heaters by a government order in 2004. The order was withdrawn in 2008. However, as per a study by energy auditors, ₹100 crore can be saved each year just by renewing the order and making the clause mandatory.

The AP Electricity Regulatory Commission, in March this year, had issued regulations imposing mandatory purchase of renewable energy on the AP discoms, open

**If discoms target higher use consumers initially, it would result in a benefit of ₹105cr per year**

access consumers and captive users.

"This is burdening the AP discoms and ultimately the consumers to the extent of about ₹1,000 crore every year. It would have been wiser to explore cheaper opportunities available for promotion of renewable resources. The

move will benefit both the discoms and the electricity consumers," said energy manager and auditor, B.N. Prabhakar.

As per the deductions presented, the cost of 100 litre of solar water heat (for a family of four) will be ₹12,000 while the cost of modification of piping would be around ₹2,500. A ₹4,500 subsidy from the ministry of new and renewable resources will get the net effective cost to ₹10,000.

"If the discoms target higher use consumers initially, it would result in a financial benefit of ₹105 crore per year," said the auditor.

Deccan Chronicle, Hyderabad dated September 09, 2012

## Biodiversity successes to be showcased

**COP-11 21 DAYS TO GO**

**U. SUDHAKAR  
REDDY | DC**  
HYDERABAD, SEPT. 8

The state Biodiversity Board and forest department will be showcasing the success stories of biodiversity committees on the side-lines of COP-11.

Examples of access benefit sharing, where locals are paid royalties by companies, include access benefit sharing for tribals in Khammam for Perantalapalli bamboo products, the fishing community's access benefit sharing in Krishna district, Amarchinta biodiversity committee of Mahbubnagar getting access benefit sharing from a company exporting neem leaves to Japan etc.

Handmade traditional bamboo products are sold with the help of Integrated Tribal Development Agency and forest department at Perantalapalli of Velairpadu mandal where the Kondareddy tribal families are known for their expertise with bamboo products, toys and gift articles.

According to National Biodiversity Authority secretary C. Achalendar Reddy, the Hyderabad-based Bio India Biologicals Corporation had exported neem leaves accessed from Amarchinta in Mahbubnagar and had paid a royalty of ₹53,000 to NBA. The authority had transferred ₹20,000 to Amarchinta BMC and the same was utilised for planting saplings, fencing and awareness programme.

S. Gangadhar of the corporation, who is working with the society says, "During COP-11 we are organising Empowerment of Local Bodies and conservation and sustainable utilisation of bio resources through access benefit sharing in a side event. Former secretary of the State Biodiversity Board, Mr Ramana Murthy said, "In Krishna district the local fishing community has done good work on access to fish resources."

### 20 colonies told to turn green

As part of the city beautification drive for COP-11, the GHMC has identified 20 residential colonies, and the civic body is encouraging them to increase the green cover on their premises. Out of these colonies, the best colony will be felicitated by the GHMC.

### IMPORTANT COP-11 ROUTES

#### GHMC ROADS (43.5 km)

- Stretch from Road No. 1 and 12 junction of Banjara Hills to Jubilee Hills Check Post (5.90 km)
- Rajiv Gandhi junction Somajiguda to Ravindra Bharati via Raj Bhavan, NTR Marg and Secretariat (6 km)
- Madina junction to Chaderghat junction via Salar Jung Museum (3.3 km)
- Ambedkar Statue to Chaderghat bridge via Abids and Koti (4.80 km)
- Liberty junction to Tarnaka via Himayatnagar, Fever Hospital and Osmania University (6.50 km)
- Paradise to Hari Hara Kala Bhavan via Bata (3.1 km)
- Sangeet to Paradise junction via SD Road (2 km)
- Road No. 45 Jubilee Hills (2.9 km)
- Road No. 10 Banjara Hills to KBR Park (3.5 km)
- MG Road junction to Indira Gandhi Statue via Necklace Road (5.50 km)

#### R&B ROADS (53.50 km)

- HICC Madhapur to NFCL junction (11.2 km)
- NFCL junction to SD Eye Hospital (6.1 km)
- SD Eye Hospital junction Mehdiapatnam to ORR junction Gachibowli (12 km)
- NFCL junction to Sangeet Junction Secunderabad via SP Road (8.5 km)
- Gachibowli junction to Kothaguda junction via Kondapur (4.7 km)
- Charminar to Chandrayangutta via Lal Darwaza and Falaknuma (5 km)
- Golconda Fort to Toll Chowki via Seven Tombs (3.5 km)
- Hand Symbol Junction Mehdiapatnam to Langer Houz (2.5 km)

#### NATIONAL HIGHWAYS (18.30 km)

- Ameerpet junction to Charminar via Nampally, M.J Market and Afzalgunj (11.8 km)
- Telugu Tali Junction to CTO junction via Tank Bund and MG Road (6.5 km)



**ART BEAT:** (Clockwise from top left) Hyderabad artist Srinivas and foreign artists Renate Verbrugge and Omar Toussoun pose with their sculptures. The GHMC, along with the artists of International Sculpture Symposium 2012, on Saturday identified spots across the city to display 15 stone sculptures especially made for the COP-11. According to P. Anuradha, GHMC additional commissioner (parks), sculptures will be placed at Afzalgunj crossroads, Lakdikapul junction, Raj Bhavan Road, Vengal Rao Park, Shilparamam, Hitex, opposite Gachibowli stadium, Outer Ring Road junction and the Biodiversity Park (HITEC City) by the third week of September. Around 15 Indian and international artists along with 32 sculptors from across the country participated in the symposium. — DC

*Deccan Chronicle, Hyderabad  
dated September 13, 2012*

## New power suggested for water

**JATINDER KAUR TUR | DC  
HYDERABAD, SEPT. 12**

One of the propositions in the Water Security Plan drafted by the Central government is the introduction of the concept that water should be treated as an economic good or commodity.

This will lead to the separation of land and water rights, which means the owner of a piece of land cannot claim sole rights over the groundwater. However, it has been clarified that water left after meeting basic requirements for human survival and sustenance of the ecosystem will be treated as an economic good.

Dr K. Venugopal, joint director of the groundwater department said that in Australia, land and water rights have been decoupled and water is a commodity for trading.

"Equitable distribution of water and sustainable water management is the need of the hour," he said. This is particularly significant of AP, which struggles with an ever increasing water shortage.

Water law reforms highlight use of water as an economic good, for which, rights over water access have to be revisited. "Water users will be bestowed with the water rights, as well as the responsibility for judicious use and man-



### Equal distribution

Land owner's sole right on groundwater will be challenged. Water user associations will be formed and vested with considerable powers. Groundwater councils at gram panchayat and district levels, with a state level panel to monitor, will ensure equitable distribution of water.

agement of water, something that the government control has failed to achieve all these years," said an official in the department. "The role of state will also change from that of a 'service provider' to a 'service regulator and facilitator'," he said.

Water law reforms also include the introduction of water user associations vested with considerable powers, and the setting up of local bodies or groundwater councils at gram panchayat and district levels, with a state level council at the apex for ensuring

active participation of users and equitable distribution of groundwater.

"This will eliminate the role of bureaucrats, while a similar set-up can be thought of for drinking water as well," said the official.

Further, the assertion over sole right to groundwater by land owners can be challenged as infringing on the basic human right to drinking water. Experts here are suggesting introducing principles like "polluter pays", framing rules pertaining to environmental aspects and even fixing certain criteria for volumetric allotment of water and payment of bills to ensure equitable distribution of water resources.

*The Economic Times, Delhi dated September 13, 2012*

## Emerging Kerala: PM Endorses Green, Sustainable Development

**OUR BUREAU KOCHI**

It was as though the Prime Minister Dr Manmohan Singh was endorsing the concerns raised by the greens within the State Congress in the run up to the 'Emerging Kerala' meet. Inaugurating the 'Emerging Kerala 2012' investor's meet here on Wednesday, Prime Minister Dr Manmohan Singh said that the development initiatives of the state should be "sustainable and mindful of environmental concerns".

Urging the state to draw maximum benefits from the central government initiatives like the National Skill Development Mission, the Prime Minister said that the state should promote labour intensive light manufacturing

and micro business enterprises. The UPA has "supported the efforts of Kerala to grow into a major investment hub", he said. "We would like the state to embark on a path of people-focused inclusive growth driven by knowledge and innovation and mindful of environmental concerns," he added. The Government is committed to improve the industrial infrastructure and "is seriously considering" the proposal to set up an IIT in the state, Dr Singh said inaugurating the Emerging Kerala 2012 meet. Earlier, the tone of the meeting was set by Defence Minister AK Antony when he said that the state government should accommodate different

shades of opinion if they are found reasonable.

While maintaining that unending debate about projects is hurting the state's interests, he expressed happiness that the state government is not taking a rigid stand. Calling for an atmosphere of give and take, he said that the people who criticise the state government should also be reasonable.

Aspirit of consensus prevailed when Kerala chief minister Oommen Chandy also announced that the state wanted to promote projects that are friendly to the people and the environment to achieve sustainable and inclusive growth.

*The Economic Times, Delhi dated September 14, 2012*

# Engineering a Green building



It needs structural, civil, electrical, mechanical and hydraulic engineering to work in harmony, says **Kamlesh Pandya**

**E**ngineering a Green Building is a holistic thought process, where one tries to ensure that the construction does not damage the environment – neither during the construction stage nor in the years when it is being used. 'Obviously, it is a challenge to successfully engineer such structures,' says architect Reetu Bajaj. 'It is not just about a 'check-box' approach, where you have a set of parameters which, if properly followed, get the structure a



*Solar panels atop a building*

certificate of being 'Green'. It has to be truly sustainable,' she says.

Ancient Indian architecture was in sync with Mother Nature, which can be codified with what we today refer to as 'Vaastu', says Reetu Bajaj. 'Engineering a Green Building largely is all about reinforcing eco-friendly methods of construction. It needs structural, civil, electrical, mechanical and hydraulic engineering to work in harmony, and create eco-friendly structures which are truly sustainable.' Tanveer Merchant, MD, Star Group, says engineering Green Buildings is primarily the aspect of environment friendly construction. Despite the higher cost of construction, Tanveer Merchant is all for Green Buildings, especially his pet project, Star Hub.

Going Green is more than just about individual buildings. Humankind is consuming energy/resources at a very fast rate. The 'Green' initiatives will help to create a sustainable environment," he adds. And it isn't just work-spaces: Tanvir Merchant's next residential complex will also be a Green construction. "We owe it to the future generations," he says. And no, he hasn't had to convince potential buyers about the additional cost of a Green construction – they understand future savings in terms of lower power costs and lesser quantum of fresh water to be taken from the MCGM water mains, he smiles.

Atul Modak, VP, Kohinoor City - Kurla, Mumbai, points out that energy consumption in Indian buildings is expected to increase significantly with economic growth, construction growth and human development. "This will lead to a substantial increase in carbon emissions. Buildings are one of the major pollutants that affect urban air quality and contribute to climate change. Hence, we need to engineer Green buildings." Architect Reetu Bajaj draws the parallel between engineering Green buildings and sustainability: very simply, one plan and creates the building in a way so that we use limited natural resources in such a way that we do not run out of them in the future. At present, a sustainable building is engineered by intelligent planning which provides airy, well-lit and ventilated interiors that reduce electricity consumption. Engineering a sustainable structure means bringing in the aspect of solar powered heating systems, windmill-based generating systems which power common area lighting as also rain water harvesting and STP plants.

*The Economic Times, Delhi dated September 14, 2012*

# Ramesh Launching Green Push for Rural Growth

Initiatives would be a key part of the government strategy of achieving a growth target of 8.2% in the 12th Plan period

**URMI A GOSWAMI**  
NEW DELHI

Rural development minister Jairam Ramesh, who shot into the limelight while handling the environment portfolio, is again launching green initiatives to ensure that part of the ₹99,000 crore the government spends on rural development and employment schemes is used to improve water bodies, soil quality and conservation of resources.

These initiatives would be a key part of the government strategy of achieving a growth target of 8.2% in the 12th Plan period. As a large proportion of the rural population is dependent on natural resources for their livelihood and subsistence, the government plans to improve the “green quotient” of its rural development interventions to make them sustainable. “Greening can stimulate rural economies, create jobs, and maintain critical ecosystem services vital to the economy and human health and well being, and can also strengthen resilience to climate-induced change particularly of the rural poor who are among the most vulnerable to the impacts of climate change and natural resources degradation,” rural development minister Jairam Ramesh said. “We are spending ₹99,000 crore this year on rural development programmes and it would be a shame if we don’t mainstream green objectives in these programmes,” Ramesh said.

Sustainable green development is one of

the priorities that the rural development ministry has set for the “flexi-fund” that it has proposed. To ensure that states are able to pursue rural development efforts with local imperatives, the ministry has proposed earmarking ₹40,000 crore over a four-year period as “flexi-funds”. States will be free to use this money to pursue local priorities,

**Greening is not a western plot to keep us in a state of permanent poverty but it is a domestic imperative needed to protect livelihoods, says Ramesh**

without being bound by national guidelines, as is the case with the central schemes. The ministry has set out some priorities like sustainable green development, rural infrastructure, and connectivity. There has been a certain resistance to the idea of a “green economy” seen mostly as an imposition by the developed and industrialised countries. Ramesh doesn’t agree. “Greening is not a western plot to keep us in a state of permanent poverty but it is a domestic imperative needed to protect livelihoods,” he said.

In May, Ramesh had reached out to the United Nations Development Programme, asking the multilateral body to suggest ways for ‘greening’ rural development schemes. The UNDP suggested efforts to strengthen “green” outcomes of the schemes by modifying guidelines, sharper definition, measurement and monitoring of green results.

*The Economic Times, Delhi dated September 14, 2012*

## Shoppers Stop Turns to Sun as Power Tax Hits Retailers

SAGAR MALVIYA  
MUMBAI

On the roof of Shoppers Stop's first department store in the suburbs of Mumbai, a green initiative is underway in the form of solar panels feeding power to the store. It's not just a drive to go green but also an effort to offset the skyrocketing cost of power.

"The company is trying to rework power consumption as mall owners and retailers will have to pay 12.5% service tax on electricity with effect from July this year according to a recent government notification," Govind Shrikhande, managing director at Shoppers

Stop, says. "The difference between solar power cost and our power bill will be minimal after the new tax."

The country's largest department store chain paid over Rs 70 crore on power bills last year.

While Shoppers Stop plans to use solar power at its four stand-alone stores, many other retailers and mall owners are looking for ways to lower energy usage to limit the impact of the new tax.

Dubai-based Landmark Group's departmental store chain Lifestyle, for example, plans to install energy saving lighting systems in its stores.

"There has been pressure on the profit and overall markets since

few years now. Imposing taxes like this puts retailers under pressure at the wrong point of time," Kabir

Lumba, managing director at Lifestyle International, says.

Mumbai-based Oberoi Mall is mulling various alternative fuel options. "Even water consumption is taxed. Hence, we started rain-water harvesting which has cut costs significantly," Nirzar Jain, vice-president at Oberoi Mall, says.

Investing in solar power is another option. "Not all will rely on rooftop solar power especially when stores in malls far outweigh stand-alone outlets

Retailers also plan to take up the issue with the government as the new tax is imposed at a time when consumer sentiment is down and companies' profitability is under severe pressure.

"When retailers are paying service tax on costs such as rentals and electricity, it should be ideally adjusted in sales tax. But retailers eventually will end up paying both sales and service tax," says Kumar Rajagopalan, chief executive of Retailers Association of India, a 400-member strong industry body. "It's a huge concern for a business that makes a net profit of just 3% on an average," he adds.

If the levy is brought in after the

start of GST, retailers would be able to avail of the setoff of service tax paid against the VAT liability on sale of goods, Rajagopalan says.

Electricity is the third most expensive for retailers after salaries and rent.

Recently, credit rating agency Fitch revised the outlook for Indian retail sector to negative from stable for the first half of the fiscal, saying same-store sales growth slipped across lifestyle and value-based formats in the quarter ended June. Last year, retailers had challenged the government's move to impose a service tax on commercial rentals but failed to secure a relief.

### Power Saving

Retailers, mall owners looking to lower energy usage to limit impact of 12.5% service tax on electricity

Retailers also plan to take up the issue with the govt as the tax is imposed at a time when consumer sentiment is down

Electricity is the third most expensive for retailers after salaries and rent

## Go Green campaign goes beyond borders

TIMES NEWS NETWORK

New Delhi: The Earth Care Awards' fourth edition this year moves beyond borders, drawing into its fold India's neighbours for the first time since the Times of India launched the Go Green India campaign in 2008 with these awards.

In association with the JSW Foundation, the JSW-TOI Earth Care Awards honour communities and corporate houses engaged in creating practices and processes towards sustainable living.

This year's eminent jury — including agriculture scientist M S Swaminathan — will judge green initiatives

from seven nations. United States, Australia and Germany. The sponsors of the annual awards are the JSW Foundation helmed by chairperson Sangeeta Jindal.

The evening will see several dignitaries from the region participate, including Saarc director M Sridharan and joint secretary Vikram K Doraiswami. High commissioners of Pakistan, Salman Bashir; Bangladesh, Ahmed Tariq Karim; and Maldives, Dnyaneshwar Mulay, will cheer for their contestants, while Nepal will have N Adhikari, charge d'affaires and political counsellor Tirtha Raj Wagle roof for their community participants, India's high commissioner to Pakistan Sharat Sabharwal will also be present.

The awards are given to NGOs, communities and corporate houses in three categories. Community-led action on fac-



ing climate change in terms of water resources, land use, changes in land-use and forestry is the primary category. The second category rewards industry for reduced emissions: large-scale and small-to-medium enterprises. The third measures the potential/ impact of innovative technical solutions to mitigate climate change.

The jury for the awards comprises renowned environment specialists and experts: UNEP's Rajendra Shinde, Kartikeya Sarabhai of the Centre for Environment Education, Aneta Benignier of the Centre for Development Studies & Activities, Anil Manekar of the Nehru Science Centre, William Dar of the International Crops Research Institute for the Semi Arid Tropics, IndAsia Fund Advisors' Pradip Shah, McKinsey's Rajat Gupta and Shailaja Chandra.

A book on the significance of conservation and greening of arid regions will also be released on the occasion. The book, 'Daroji — An Ecological Destination' chronicles the efforts and successes of the efforts of the Daroji Sloth Bear Sanctuary set up in 1994 on 55sq/km of Bilikallu East Reserve Forest to restore the environmental balance to the region.

The awards will be given out on Friday at a glittering ceremony hosted by partners ITC Maurya. Multiple stakeholders — aware citizens, political leaders, grassroots workers, corporate entities and government departments — will be present.

Minister of environment and forests Jayanthi Natarajan, chief guest on the occasion, will be joined by power minister Veerappa Moily as guest of honour. Planning Commission member Narendra Jadhav will be at the awards as will key stakeholders from other countries such as Japan, the

*The Times of India, Delhi dated September 14, 2012*

The Times of India Lucknow dated September 15, 2012

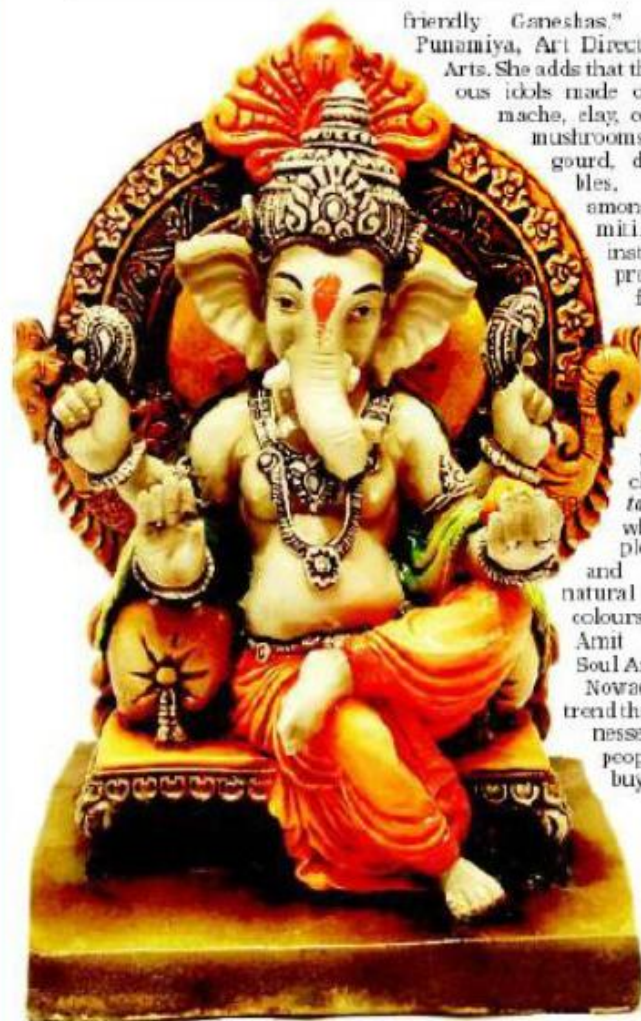
# CONCERN FOR GREENS

The demand for Ganesh idols made using environment-friendly materials is witnessing a steady year-on-year rise

## QUICK BITES

■ GENERALLY, ECO-FRIENDLY IDOLS ARE MADE USING CLAY AND MULTANI MITTI, WHICH IS COMPLETELY NATURAL AND PAINTED WITH NATURAL VEGETABLE COLOURS

■ NOW-A-DAYS, IDOLS ARE DESIGNED USING BIO-DEGRADABLE AND ENVIRONMENT-FRIENDLY MATERIALS THAT DO NOT ADD TO ANY FORM OF POLLUTION



friendly Ganeshas," says Mita Punamiya, Art Director, Nirmiti Arts. She adds that they have various idols made out of paper mache, clay, coconut shell, mushrooms, bottle-gourd, dried vegetables, card-board, among others. Nirmiti Arts has been instrumental in promoting eco-friendly idols for the past 15 years.

Generally, eco-friendly idols are made using clay and *multani mitti*, which is completely natural and painted with natural vegetable colours, informs Amit Tiwari, MD, Soul Art.

Nowadays, another trend that is being witnessed is that a few people prefer to buy a high-end



can range from Rs 100 and can go up to a few lakhs too. "The price varies with the material being used to design these idols," says Tiwari, adding that they offer idols made of wood, terracotta, brass, copper, resia and fibre.

There has been a steady year-on-year rise in demand for idols made using recyclable organic products. "There is, however, more scope for creating awareness about eco-friendly Ganesh idols though," says Tiwari.

With a growing awareness about environment concerns, there has been a slow but steady rise in demand for Ganesh idols made out of eco-friendly materials.

These idols are designed using bio-degradable and environment-friendly materials that do not add to any form of pollution. "Over the years, more numbers of people are understanding this concept due to a lot of awareness being created about eco-

Ganesh idol and do not perform the ritual of *visarjan*, informs Prakash Babani, Director, Satguru Arts & Crafts. "These individuals perform pooja during the festivities but do not do *visarjan*, they generally opt for an idol made out of gold or silver plating," he says.

The price of these idols

The Times of India Lucknow  
dated September 15, 2012

# ENERGY EFFICIENCY IN GREEN BUILDINGS

We have not inherited this earth from our parents; we are borrowing it from our children, says **DHRUV FUTNANI**

All of us have heard of the energy crisis the world is going through and this shortage of energy has resulted in power cuts, load-shedding and increased costs. India has approximately 1% of the world's energy resources and 16% of world population; this obvious shortfall will only grow in the coming years. Non-renewable energy sources constitute 80% of fuel used. It is said that our energy resources may last only for another 40 years or so, not to mention the fact that energy sources like coal have a major impact on pollution and global warming.

The most sustainable approach would be to reduce our dependence on conventional energy sources. Buildings have a major role to play in this regard. Statistics show that buildings in India consume nearly 30% of the energy produced. If all new buildings were required to meet stringent energy consumption codes, then the demand could be easily reduced by 20 to 30%, which would reduce the deficit and also the impact of development on our infrastructure in most cities.

## Energy Consumption in Buildings:

Energy is used in buildings for maintaining comfort conditions, both thermal and visual. To maintain thermal comfort, air-conditioning is used. In a typical air-conditioned office building in India, the system accounts for 50-55% of the total energy consumed by the building. Well-designed buildings, where the architect has paid attention to the climate of the site, can even achieve comfortable thermal conditions

without the use of air-conditioning, albeit only in a few locations. With regard to different climatic regions in the country, the key to reducing consumption in a building would be to reduce the amount of heat entering the conditioned space. Imitation of buildings from foreign countries with colder climates, where the goal is to increase heat gain, leads to buildings which are energy-inefficient and have higher operating costs.

Energy used to maintain visual comfort refers to artificial lighting. With the abundance of free natural light available in India, it is astonishing to see buildings where artificial lights need to be utilised during the daytime. The maximising of daylight in buildings has a savings potential of 10-15% of total energy consumption and a significant positive effect on its occupants' health.

**Green Buildings and the potential to save:**  
Green Buildings aim to achieve the

benefits of energy savings through efficient design. A Green Building can reduce energy requirements by 20-30%, by addressing issues of thermal and visual comfort. Buildings are designed to minimise heat gain through passive solar design and by utilising strategies like

proper orientation, solar shading by appropriate use of glazing, insulation and efficient HVAC systems. In terms of lighting, the role of the architect is critical, so as to achieve a fine balance between providing daylight and minimising heat gain through the glass component of the building envelope.

The incremental cost, if any, for green buildings are usually recovered within three years of operation, continued savings are enjoyed by the owner and a better indoor environment is provided for its occupants.

**Saving energy through green lifestyles:**

□ Use the cheapest lighting system in the world: daylight. When daylight is inadequate or unavailable, in



some spaces, use an efficient system like CFLs and LEDs, rather than incandescent bulbs. Sensors in toilets and storage rooms also help save energy

□ Use BEE (Bureau of Energy Efficiency) rated appliances, as these save tremendous amounts of energy

□ Request the company to do an energy audit to analyse and improve the energy efficiency of the office.

□ Turn off lights and unplug electronics after hours - computers and other electronics use energy while they're plugged in and even when switched off

□ Carpool or use public transportation

**Better Buildings: It is your Right!**  
The client and occupants of the building are the ones most influenced by the quality of design. When you insist on certified Green Buildings, it will, in turn, make the industry move toward these concepts and practices.

(The writer is a LEED certified architect and a green building consultant)





*The Times of India, Delhi dated September 16, 2012*

## OF INVENTIONS & INNOVATIONS THE WINNERS

### CATEGORY 1 | INNOVATION FOR CLIMATE PROTECTION

#### Power Pine

Avani | Uttarakhand

A 100-200KW power plant that generates electricity from waste pine needles via 'gasification'. The residual charcoal can be used as cooking fuel. The power can be sold to the state grid. Locals can sell pine needles and also work at the plant. Also a good way to remove a major source of forest fires.

#### Cutting Costs

Adya WiFi Metering | Andhra Pradesh

An innovation in power distribution, the prototype wifi reading meter has a pre-paid service with variable pricing; can integrate water, gas & other meters too. Has energy audit & accounting system. The 'smart city' meter cuts delivery losses to below 10%.

#### Making Sun Shine

GEDA | Gujarat

The Gujarat Energy Development Agency made the state the first to have a Solar Power Policy in 2009 and followed it with an effective roll-out strategy. It's made Gandhinagar a solar city and issues Renewable Energy Certificates that's a market-based tradable instrument. The city has a solar park, solar panels on the water canal etc. Geda's set up an Energy Transmission Company to provide grid connectivity.

#### Brute Jute

Coir Atlas | Jharkhand

Made from bamboo and jute, this is a separator for use in transportation and storage. Himanshu Sheth's product has passed tests by IIT Kharagpur, steel firms and transporters for utility, resilience and strength. Easy to make, it can replace the currently used single-use hard wood and self-help groups can manufacture it.

### CATEGORY 2 | GHG EMISSIONS MITIGATION

#### ■ LARGE SCALE

#### Big Energy Savings

ACC Cement | Gagal Cement Works

The unit at Bilaspur in Himachal wins for its focus on energy efficiency. Increasing capacity and production didn't stop Gagal from its focus on thermal & electrical energy savings. It promotes plantation and biodiversity drives. Monitoring led by team familiar with latest trends & technology.

#### High Tech, Low Cost

CenPEEP | NTPC

NTPC set up the Centre for Power Efficiency & Environmental Protection in Oct 1995. Its Ramagundum power unit wins for optimal performance in efficiency & reliability at coal-fired power stations. Week-long training per employee every year, thrust is on low cost and sustainable technology.

#### ■ SMALL TO MEDIUM

#### Clean Stay

Orchid Ecotel | Mumbai

The hotel adheres to Ecotel certification guidelines. Ecotel is an environmental certification specific for hospitality. Its practices involve the entire chain from owners, architects to staff and guests.

### CATEGORY 3 | COMMUNITY- BASED ADAPTATION

#### Zero Waste

Help-O | Sri Lanka

Started post-tsunami, the NGO, set up in Aug 1998 deals with waste management. It works in 200 locations in Galle city near the southern tip of the island nation.

#### Coastal Call

Min of Envmt & Forests | Bangladesh

A team of six works with forest, agriculture and fisheries depts to tackle coastal vulnerability. Bangladesh faces 'creeping' climate risks: increasing freshwater salinity, drainage congestions, damaged ecosystems. Their successful project in four coastal villages that balances livelihoods and lifestyles with eco-systems is being scaled up with international aid.

## Green March

Garhwal Eco Warriors | Uttarakhand

Started in 2004, the Eco Task Force 127's SMana project in the upper reaches of Uttarakhand is a unique partnership model between the Indian Army, state govt and the Forest Research Institute. It focuses on eco-restoration activities. The projects have been endorsed as ideal for border communities in the Himalayan range.

*Deccan Chronicle, Hyderabad  
dated September 17, 2012*

# Fridges now on pollution radar

**JATINDER KAUR TUR I DC**  
HYDERABAD, SEPT. 16

Disposal of refrigeration compressors containing chloro fluoro carbons (CFCs) and hydro chloro fluoro carbons (HCFCs) will now be brought on the radar of the Andhra Pradesh Pollution Control Board. Old and improperly discarded refrigeration and air-conditioning units are an environmental hazard due to the chemicals leading to depletion of the ozone layer and contributing to the greenhouse effect.

CFCs and HCFCs are used in refrigerators, freezers, aerosol sprays, air-conditioners and solvents. APPCB officials said that they have been receiving complaints pertaining to such compressors lying in the open and added that awareness must be created against such disposal.

The first step should be to remove the refrigerant with the help of technicians and then getting a scrap or recycling unit to remove any recyclable or economically significant parts.

"However, under no circumstances should the compressor be disposed at

**Old fridges and AC units are environmental hazards due to the presence of ozone-depleting chemicals**

municipal landfills with refrigerants inside the unit as the same may leak into the atmosphere," said an official. CFCs have also been used as blowing agents for foam insulation for refrigerating units. Chlorine from CFCs and HCFCs depletes the ozone layer in the stratosphere, which is vital for absorbing the harmful ultraviolet radiation and preventing the same from reaching the Earth.

"Developing nations have been given a deadline of 2030 to phase out CFCs and HCFC. Ultimately, HFCs will be used in automobile AC units," said an official adding that it be made mandatory to remove refrigerants and other chemicals from old refrigerators before retrieving recyclable parts.

Deccan Chronicle, Hyderabad  
dated September 18, 2012

# What is Google Green?

It is the search engine giant's way of becoming an energy efficient company

**DC CORRESPONDENT**

 The world has come to a point today where we can perhaps imagine a planet without greenery, but cannot imagine the Internet without Google. The search engine giant, however, hasn't forgotten its responsibility towards nature and has hence chalked out a plan called Google Green; which is Google's way of creating a world wide web that is better suited for the environment.

Energy issues have become a major priority for Google co-founder and CEO Larry Page. The carbon neutral company is now aiming at becoming the world's largest energy efficient company. It has pledged to reduce its carbon footprint to zero. Google is already investing heavily in wind and solar energy farms to minimise the harmful impacts of the rapid climate change.

Debleena Bose, co-founder of a technological firm, says, "Google has always been a visionary. It has been serving people for free, helping them communicate across the world. This project is in keeping with their original vision "change the world for good." She continues, "Now Google wants to build a virtual world that's free of impurities. It has designed its data centres, which are some of the world's largest, using features such as smart temperature controls. Google's 'free cooling' technique uses outside air and recycles water for cooling, to ensure minimum loss of energy."

The company is also encouraging the use of electric cars and is making its server farms more energy efficient. Shashwat Raj, media officer, Greenpeace India, says, "We conducted a leader board rating where Google ranked high among companies that address environmental issues. Such initiatives are economically beneficial in the long run as well, even though they require heavy investments initially."

Google has been heavily investing in wind farms, among other things, as part of the Google Green project. — AFP

PICTURE FOR REPRESENTATIONAL PURPOSES ONLY

The Times of India, Delhi dated September 18, 2012

# Clean river bed, green tribunal tells UP'

Neha Lakhandani | TNN

New Delhi: Six months after it directed Delhi and UP governments to stop dumping solid waste on the Yamuna river bed, the National Green Tribunal on Monday issued fresh instructions to the UP irrigation department to immediately remove all the debris from the river bank.

The order, issued by a bench of expert member Dr G K Pandey and acting chairperson Justice AS Naidu, has asked the irrigation department to "remove all the debris lying in the banks of Yamuna, within their jurisdiction, irrespective of the fact as to who has dumped it, more so because presence of debris in the locality not only causes pollution but is also hazardous to river eco-system and flow of water".

The NGT order has given seven days to the ministry of environment and forest, Delhi government, DDA, DPCC, and Yamuna River Development Authority (YRDA) and the irrigation department to stop encroach-



The land belongs to UP irrigation department, which says the debris cannot be removed during the monsoon

ment and dumping of solid waste on the riverbed.

"Dumping of debris has more or less stopped after the order, but au-

thorities were not clearing the mess. In fact, UP irrigation department said that the debris has not been removed so far due to the monsoon,"

said Manoj Misra, the petitioner.

The land in question, where tonnes of construction debris have been lying for the past several months, falls within the geographical boundary of Delhi but is owned by the UP irrigation department.

"We saw massive debris deposition along the Yamuna Pushta near Geeta Colony in the latter part of 2011. We wrote to the LG and YRDA to take action. The LG also wrote to agencies concerned and issued orders to DDA, PWD, irrigation and flood control and other civic agencies to ensure that no waste was dumped on the river bed but the agencies failed to react. Some measures to prevent trucks from entering the area were taken, but they were inadequate," said Misra.

While DDA had said that it would not be able to clean the area since the land belonged to the UP irrigation department. The latter had said that it would wait for the UP elections to get over. Now, it is waiting for the monsoon to end.

*Deccan Chronicle, Hyderabad  
dated September 19, 2012*

## BIODEGRADABLE RESINS, POLYMERS IN THE OFFING

**RAM KUMAR  
RAMASWAMY | DC**  
HYDERABAD, SEPT. 18

From cottonseed oil to cashewnut shells and neem extracts, Indian scientists are working on composite materials in paint technology that has superior properties in addition to being completely eco-friendly. A recent seminar held at the city-based Indian Institute of Chemical Technology had researchers deliberate on such important issues as biodegradable resins and polymers.

Manisha S. Pawar, researcher from Swami Ramanand Teerth Marathwada University, Nanded, with her team has attempted to develop a biodegradable epoxy resin from cottonseed oil, cheaply produced in India. In a bid to find alternatives to petroleum-based polymers, the team has effected 'epoxidation' reaction on cottonseed oil and processed the resin into products like free standing film, paper lamination etc. "While testing them in the lab, we found that these resins get absorbed by the soil after biodegradation in less than three years," she said.

Anu Sekhar, a researcher at Mahatma Gandhi University, Kottayam, presented an idea that biodegradable, eco-friendly polymers can be synthesised from cashew nut shell liquid. "In future, we will definitely see a day when nearly all plastics we use will be of biodegradable grade," Ms Sekhar said.

*The Times of India, Delhi dated September 19, 2012*

# Ban not official but govt cracks down on plastic

**Neha Lakhandani | TNN**

New Delhi: Even though the plastic bag ban in Delhi is yet to be formally notified, government agencies have stepped up their drive against it and also issued challans in some cases. The formal notification on the new ban that includes manufacturing of plastic bags as an illegal activity is expected to be issued within this week and will be enforced only seven days from the date of notification in accordance with a Delhi high court order.

Meanwhile, senior officials from the environment department said that in certain cases, like that of waste disposal, thinking of alternatives to plastic might be difficult and the department would brainstorm especially for such cases. "The matter of garbage disposal will have to be reconsidered. But this is especially for large bins. At the household level, people should seriously focus on waste segregation," said an official.

The department is also in touch with civic agencies for promotion of waste segregation and proper disposal. "We understand that nobody would like to go in for waste segregation at the household level if civic agencies are to later mix up the waste. But in order to reduce use of plastics at home, waste segregation is an essential step," added the official.

With one year to fully enforce the ban from the time of notification, the environment department is also considering involving resident welfare associations and market organiza-

tions to help in the enforcement of the ban. "Necessity is the mother of invention and there are several products available in the market that can be a useful substitute for plastic bags. However, if need be, the department will also distribute paper bags or other materials across markets," said sources.

The department also made it clear that the previous ban on use, distribution and storage of plastic bags was still in place, the only addition in the new ban



**BAGFUL OF TROUBLE**

being on manufacturing. Hence, prosecution on storage of plastic bags is still taking place. Teams from the municipal corporations have been doing the rounds of several markets, sending reports to the environment department on violations.

"The previous ban is still in place till the new one is officially notified. This makes use, distribution and storage of bags illegal even now. However, prosecution is not the only aim. We are also telling people to stop keeping plastic bags in view of the new ban and raising awareness of the new rules," said a government official.

The Times of India, Delhi dated  
September 21, 2012

## India Inc takes CSR route to expand biz

### Plans Rural Projects, Trains Village Youth

Namrata Singh | TNN

Mumbai: Nineteen-year-old Purshottam Malvi from Tarana in Ujjain district of Madhya Pradesh recently landed a job as a sales representative (SR) in Navbharat Fertilizers with a monthly income of around Rs 9,000. The job has brought in a steady income for his six-member household, which includes his parents who work as labourers. And Malvi, who is doing his graduation from Jai Jawan College in Tarana, credits the job to a course instituted by Godrej Consumer Products (GCPL). The course in question, which Malvi completed earlier this year, provides certain skills in sales to enable rural youth to get employed as SRs — the demand for whom is only going up.

Since skilled workforce is in short supply and existing distributors have little patience to impart on-the-job training to newbies, GCPL rolled out 'Project Vijay' with the intent of absorbing a significant number of the trained youth for its own requirement. The rest are assured placement in other companies with an average monthly salary in the Rs 5,000-7,000 range. Over 4,500 students have already been trained, around 30-40% of whom have been placed across FMCG sales, agri-sales and sectors like security, hospitality and retail.

Although the programme is being offered free of cost, GCPL maintains a bench of about 90% who would be certified at the end of the course. "After getting certified, there is a dramatic change in the confidence levels of the individuals. It also creates a lot of positive 'word of mouth' about GCPL itself," said Rahul Gama, VP (HR), GCPL, which is keen on setting up a future-ready sales organization.

From basic communication skills to customer interaction and personality development, students are taught how to deal with customers and the intricacies of making a sales call. The project has been rolled out in three states — Madhya Pradesh, Chhattisgarh and Orissa — and will be scaled up to 10-12 states by next year.

Godrej is not the only company keen on a corporate social responsibility (CSR) role with a clear business objective

#### BUILDING BHARAT

Thinkstock Photos/Getty Images

- ▶ Over 4,500 have benefited from GCPL's 'Project Vijay', which trains rural youth as sales reps
- ▶ M&M will build a dam in a 32-village project that will cover 10,000 hectares and 20,000 people in 4,000 households
- ▶ The dam is expected to raise construction and farming activity, doubling housing incomes and resulting in increased sales of commercial vehicles and tractors
- ▶ P&G's 'Shiksha' links its business with providing underprivileged children access to quality education
- ▶ Marico's Nihar Shanti Amla also contributes 2% of every Nihar bottle's proceeds to educating children
- ▶ HUL's Project Shakti has 45,000 'Shakti Ammas' in 15 states and accounts for 15% of rural sales



in mind. Others leveraging CSR for business benefits include Mahindra & Mahindra (M&M), Hindustan Unilever (HUL), Marico and Procter & Gamble (P&G). M&M's watershed project covering 32 villages in Damoh district, Madhya Pradesh, was set up with the primary goal of conserving water and soil. The dam covers about 10,000 hectares, 4,000 households and 20,000 people. M&M feels overall household income is expected to almost double as a result of the project.

So what's in it for M&M, which will bear all the man-

#### TREND Inc

agement and CSR-related costs of the project? "It is expected that farmers in the area will purchase tractors for cultivation and that farmers will adopt micro-irrigation for their fields. As the project involves high levels of construction activity, it is expected that local entrepreneurs will adopt construction equipment and work on projects locally. Local businessmen are expected to purchase commercial vehicles to cater to the needs of the area," said Anirban Ghosh, VP, strategic planning and new business development, farm equipment sector, M&M.

A growing number of corporates are looking at CSR as a do-good practice that will eventually help improve sales. In its eighth year now, P&G 'Shiksha' is structured to directly link its core cause (providing access to education to underprivileged children) with the business. With a simple purchase, Shiksha empowers consumers to lead the social change. "Shiksha is

resourced with a dedicated team and measured just as any other P&G brand. The initiative helps drive trial for all our brands. Our latest consumer study tells us that 51% of the consumers who are aware of Shiksha are influenced to purchase the P&G product that would help them contribute to the cause," said a P&G spokesperson.

Similarly, Marico's CSR initiative linked to Nihar Shanti Amla has proposed that every time a woman buys a Nihar bottle, 2% of the proceeds will be contributed to the cause of children's education. The initiative will be fund 19 projects across Uttar Pradesh, Madhya Pradesh, Rajasthan and other regions, where each project will touch 25-30 villages within these geographies. "The initiative is expected to draw a lot of empathy among our target group, especially the Hindi heartland where average literacy level is slightly lower. The positive rub-off will not be restricted to the brand alone. It will also help in our rural expansion programme," said Saugata Gupta, CEO (consumer products), Marico.

For those companies which started on the journey of marrying CSR with business objectives a decade ago, the results are visible. HUL's Project Shakti, which started as a rural distribution initiative in a few pilot villages of Andhra Pradesh in 2000, today has 45,000 'Shakti Ammas' across 15 states. It catalyses rural affluence even as it benefits business. Shakti, it is understood, contributes 15% to HUL's rural sales today, which would be roughly about Rs 1,500 crore.

Deccan Chronicle, Hyderabad dated September 24, 2012

The Times of India, Delhi dated September 24, 2012

## AP government on save energy mission

DC CORRESPONDENT  
HYDERABAD, SEPT. 23

The state government has worked out a permanent mechanism to save energy through conservation measures. All key government departments like energy, municipal administration and urban development, agriculture and co-operation, industries and panchayat raj, among others, will be involved in achieving the targets. The aim: Huge energy savings through efficiency measures to provide some relief to the sector and electricity consumers in particular.

"A circular has already been issued to all the employees of government departments to conserve energy by switching off unnecessary lights and fans, apart from non-usage of air-conditioners for the

**Employees of various government departments were asked to conserve energy by switching off unnecessary lights and taking similar steps**

next six months to set an example to others. Also all heads of departments have been advised to strictly implement the energy conservation measures," said principal secretary (energy) M. Sahoo, in a statement.

Steps like implementation of Perform Achieve and Trade (PAT), Demand Side Management (DSM) measures, energy audit, promo-

tion of non-conventional energy sources, utilisation of solar water heaters, star-rated appliances, usage of fans rather than ACs, replacement of incandescent lamps with compact fluorescent lamps, light emitting diodes and allowing natural light are part of the permanent mechanism that has been established.

At present, around 2,200 MW capacity of gas-based stations are idle in the state due to short supply of natural gas from KG D6 basin, GAIL, etc. The inadequate coal supplies from Mahanadi Coal Fields in Odisha are affecting the state and NTPC thermal generation to a large extent. Adding to the trouble, the hydel generation is also reduced to an average of around 20 MU as against the maximum possible hydel generation of 95 MU.

The Times of India, Delhi dated September 24, 2012

## Use CSR levy for public health, says Plan panel

Kounteya Sinha | TNN

New Delhi: The Planning Commission is pitching for earmarking a part of the proposed 2% corporate social responsibility (CSR) allocation by companies for funding public healthcare facilities, in a move that is aimed at making more resources available for the sector.

► **Med college corpus, P 9**  
► **Plan chapter on crony capitalism may go, P 11**

The Companies Bill, introduced in Parliament last year, had proposed that companies with a turnover of Rs 1,000 crore, net profit of Rs 5 crore or a net worth of Rs 500 crore mandatorily spend 2% of their profits on CSR, while leaving it to companies to decide where to spend the funds.

The 12th plan document states that once the bill is passed, all publicly-funded healthcare facilities would be allowed to receive donations and funding from companies under the CSR head.

## Solar power for 25 govt schools, 10 hospitals

Neha Lalchandani | TNN

New Delhi: The Delhi environment department has identified 25 government schools and 10 government hospitals that will get independent solar power systems.

The pilot project is looking at generating 500kW of power through rooftop solar photovoltaic cells under the Jawaharlal Nehru National Solar Mission. Environment secretary Sanjiv Kumar said the department had sent a

proposal to the union ministry of new and renewable energy (MNRE) and was expecting financial support from it under the off-grid decentralized scheme. "If the project is approved, MNRE will finance 30% of the cost and the rest of the expenditure will be borne by the Delhi government," he said.

proposal to the union ministry of new and renewable energy (MNRE) and was expecting financial support from it under the off-grid decentralized scheme. "If the project is approved, MNRE will finance 30% of the cost and the rest of the expenditure will be borne by the Delhi government," he said.

Officials said each of the government schools would get a 10kW panel while the hospitals will get a 25kW panel each. The school and hospital projects will cost Rs 6.75 crore each, bringing the total cost to Rs 13.14 crore. "If MNRE approves the project, it will assist us to the tune of Rs 3.8 crore. We should get the approval in another month or so and will be able to finalize the project soon after that. From that point, it will take us eight-odd months to set up the panels and start producing power," said an official.

Officials said the project would be executed by the energy department of the Delhi State Industrial and Infrastructure Development Corporation (DSIIDC) named DSIIDC Energy Ltd.

Some of the hospitals that have been shortlisted for the project include Chacha Nehru Bal Chikitsalaya, Deen Dayal Upadhyay Hospital, Jag Prवेश Chandra Hospital, Guru Nanak Eye Centre and Dr Jagjivan Ram Hospital.

neha.lalchandani@timesgroup.com



Pilot project is looking at generating 500kW of power through rooftop solar photovoltaic cells

proposal to the union ministry of new and renewable energy (MNRE) and was expecting financial support from it under the off-grid decentralized scheme. "If the project is approved, MNRE will finance 30% of the cost and the rest of the expenditure will be borne by the Delhi government," he said.

According to officials, Delhi does not have much scope in renewable energy and, therefore, rooftop solar pro-

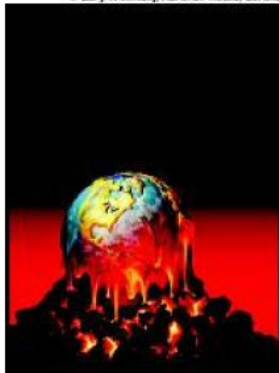
*The Times of India, Delhi dated September 27, 2012*

# Climate change risk: 100m deaths by '30

## Developing Countries To Bear The Brunt If The World Fails To Act Fast, Says Study

London: More than 100 million people will die and global economic growth will be cut by 3.2% of gross domestic product (GDP) by 2030 if the world fails to tackle climate change, a report commissioned by 20 governments said on Wednesday. As global average temperatures rise due to greenhouse gas emissions, the effects on the planet, such as melting ice caps, extreme weather, drought and rising sea levels, will threaten populations and livelihoods, said the report conducted by humanitarian organization DARA.

It calculated that five million deaths occur each year from air pollution, hunger and disease



THE HEAT IS ON

as a result of climate change and carbon-intensive economies, and that toll would likely rise to six million a year by 2030 if current patterns of fossil fuel use continue.

More than 90% of those deaths will occur in developing countries, said the report that calculated the human and economic impact of climate change on 184 countries in 2010 and 2030.

It was commissioned by the Climate Vulnerable Forum, a partnership of 20 developing countries threatened by climate change. "A combined climate-carbon crisis is estimated to claim 100 million lives between

now and the end of the next decade," the report said.

It said the effects of climate change had lowered global output by 1.6% of world GDP, or by about \$1.2 trillion a year, and losses could double to 3.2% of global GDP by 2030 if global temperatures are allowed to rise, surpassing 10% before 2100.

It estimated the cost of moving the world to a low-carbon economy at about 0.5% of GDP this decade. Responding to the report, Oxfam International said the costs of political inaction on climate were "staggering".

"The losses to agriculture and fisheries alone could

amount to more than \$500 billion per year by 2030, heavily focussed in the poorest countries where millions depend on these sectors to make a living," said executive director Jeremy Hobbs.

British economist Nicholas Stern said earlier this year investment equivalent to 2% of global GDP was needed to limit, prevent and adapt to climate change. His report on the economics of climate change in 2006 said that without any action to tackle climate change, the overall costs and risks of climate change would be equivalent to a cut in per-capita consumption of perhaps up to 20%. REUTERS

*Deccan Chronicle, Hyderabad dated September 27, 2012*

# Bio-pesticide to be shown

**U. SUDHAKAR REDDY | DC**  
HYDERABAD, SEPT. 26

Developed by the city-based Directorate of Oilseeds Research, BT (*Bacillus thuringiensis*), a bio-pesticide, will be showcased at the CoP-11 biodiversity conference, it was informed.

BT extract is used to kill pests such as pod borer, castor semi-looper and other insects that affect the rice crop, castor and pigeon pea and other oil seeds. Instead of trans-

genic crops, which give rise to serious apprehensions on bio-safety, scientists say the BT extract bio-pesticide is a safer alternative.

Stating that DOR would exhibit its technology at CoP-11, Dr K.S. Vara Prasad, project director, said: "Our bio-pesticides are given to entrepreneurs so that they reach farmers. We don't modify or insert any genes. The BT available in nature is isolated and used as bio-pesticide to eliminate pests."

He said DOR has developed the culture methods

and process, and that the technique is "very safe".

He said DOR has also developed two other bio-pesticides. DOR Bt-1 (*Bacillus thuringiensis serovar kurstaki*) is used against castor semi-looper on castor, pod borer in pigeon pea and stem borer and leaf folder in rice. The technology has been licenced to 37 bio-pesticide entrepreneurs. *Beauveria bassiana* liquid formulation developed by DOR is used against the *Helicoverpa armigera* pest on sunflower and pigeon pea.



*The Times of India Lucknow dated September 28, 2012*

# Green award for eco activists

Neha Shukla | TNN

Lucknow: If you are environmentally conscious and have done your bit to conserve the flora and fauna in UP, your effort can fetch you handsome returns. The UP has instituted a green award to encourage the people of the state to take up the cause of environment. The 'Veer Abdul Hamid Van, Vanyajiv and Paryavaran Sanrakshan Puraskar' will carry Rs 1 lakh cash award for individuals and Rs 2 lakh for organisations, and be given annually starting this year.

Although this award was notified on September 4, it had been conceptualized by the Mayawati government in the name of the party's patriarch Kanshi Ram, the SP government has rechristened it after the legendary war hero, Param Veer Chakra winner Abdul Hamid. "The terms and conditions of the scheme are more or less same," said sources in forest department.

From this year on, wildlife activists and conservationists will be awarded by the state government under the scheme.

The motives behind introducing the award is to develop a public connect with forest, wildlife and environment.

An individual or a group of individuals and organisations which have worked for the cause of forest, wildlife and environment in the state will be felicitated under the scheme.



The chosen ones will have to meet the eligibility conditions laid down for the award. The eligibility will be decided on the basis of three broad points - individuals or organisations should have done something innovative to increase forest cover; they should have assisted in conservation of wild animals or should have contributed in environment protection.

This one could be the state's first such award, given the fact that 'Vrikshabandhu' award announced in 2007 could not get approval. Announced under the 11<sup>th</sup> Five Year Plan, the Vrikshabandhu award was scrapped after it failed to get government's approval. The officials, however, restrained from commenting on any parallel between the two awards.

The details on the website proclaim that individuals and organisations who find themselves eligible for the award, can obtain the application form from the divisional offices or download it from official website (<http://forest.up.nic.in>).

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