# Sustainability Forum @ IIML

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## Business Sustainability News — International

## Climate study predicts a watery future for New York, Boston and Miami

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

For nearly 80 US cities, the watery future would come much sooner, within the next decade. Photograph: Joe Raedle/Getty Images

More than 1,700 American cities and towns – including Boston, New York, and Miami – are at greater risk from rising sea levels than previously feared, a new study has found.

By 2100, the future of at least part of these 1,700 locations will be "locked in" by greenhouse gas emissions built up in the atmosphere, the analysis published in the Proceedings of the National Academy of Sciences on Monday found.

The survey does not specify a date by which these cities, or parts of them, would actually fall under water. Instead, it specifies a "locked-in" date, by which time a future under water would be certain – a point of no return.

Because of the inertia built into the climate system, even if all carbon emissions stopped immediately, it would take some time for the related global temperature rises to ease off. That means the fate of some cities is already sealed, the study says.

"Even if we could just stop global emissions tomorrow on a dime, Fort Lauderdale, Miami Gardens, Hoboken, New Jersey will be under sea level," said Benjamin Strauss, a researcher at **Climate Central**, and author of the paper. Dramatic cuts in emissions – much greater than Barack Obama and other world leaders have so far agreed – could save nearly 1,000 of those towns, by averting the sea level rise, the study found.

"Hundreds of American cities are already locked into watery futures and we are growing that group very rapidly," Strauss said. "We are locking in hundreds more as we continue to emit carbon into the atmosphere."

A recent study, also published in PNAS by the climate scientist Anders Levermann found each 1C rise in atmospheric warming would lead eventually to 2.3m of sea level rise. The latest study takes those figures, and factors in the current rate of carbon emissions, as well as the best estimate of global temperature sensitivity to pollution.

For the study, a location was deemed "under threat" if 25% of its current population lives below the locked-in future high-tide level. Some 1,700 places are at risk in this definition. Even if bar is set higher, at 50% of the current population, 1,400 places would be under threat by 2100.

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## Cameras, Weather Models Help Predict Wind Farm Performance

*SustainableBusiness.com News*

The intermittent nature of solar and wind power resources makes it difficult for utilities to forecast exactly how much clean energy they can generate on any given day.

But a powerful new modeling service from IBM, called Hybrid Renewable Energy Forecasting (HyRef), harnesses sensors and analytics technologies for far more accurate forecasts.

The solution - already being used in China on wind turbines - uses sky-facing cameras to track the movement of clouds and collect information about weather conditions. Sensors on the turbines monitor wind speed, temperature and direction.

Using that combined data along with Big Data analytics resources from IBM, plant operators can generate local weather forecasts in 15-minute increments and make projections for conditions as far as one month into the future.

This level of insight should make it easier to manage the electricity being generated, or to forecast how much can be redirected to the grid versus how much might need to be stored.

"Utilities around the world are employing a host of strategies to integrate new renewable energy resources into their operating systems in order to reach a baseline goal of a 25 percent renewable energy mix globally by 2025," says Dennis McGinn, president and CEO of the American Council On Renewable Energy (ACORE). "The weather modeling and forecasting data generated from HyRef will significantly improve this process and in turn, put us one step closer to maximizing the full potential of renewable resources."

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# Australian skiing: an industry coming in from the cold?

**By Oliver Milman,** *for theguardian.com*

If you had ventured to an Australian ski resort in recent weeks, you might have noticed that a vital ingredient was missing: the snow.

Last week, snow depths, as measured by Snowy Hydro, reached a top of 68cm at Thredbo in New South Wales, with the measurement for Three Mile Dam, near Australia's highest town Cabramurra, barely struggling past 25cm.

The Perisher resort in NSW has a comparatively lush 65cm, although even this is short of the metre-deep snow that the industry considers ideal for skiers and snowboarders.

Snow business: a fresh fall in Perisher in May this year. Photograph: Perisher/AAP

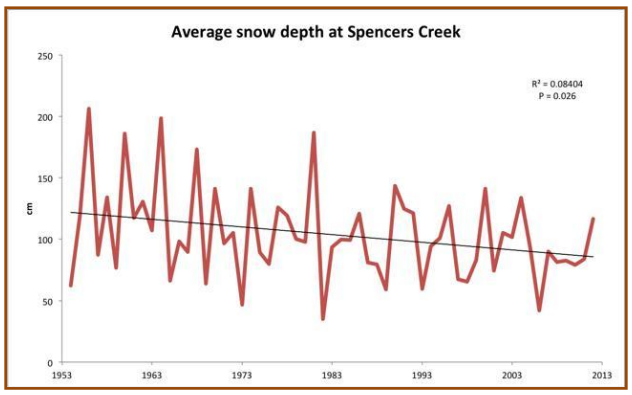
"We are faring OK compared to other resorts, but it's not as good as last year," said Neil Thew, business development manager at Perisher. "It recently rained across all of the Snowy mountains which didn't help, but we then got 50cm on top of that to bring us back into good shape. We've spent $22m in the last seven years on snowmaking infrastructure, which has helped too."

Victoria's alpine region is also suffering what the ski industry has admitted has been a "terrible" year for snowfall, with skiing reduced to a narrow strip for beginners on Mount Baw Baw, prompting one visitor, surveying the idle chairlifts, to call the resort a "ghost town".

The lack of snow – Mount Baw Baw, Mount Buller and Dinner Plain in Victoria currently have no natural snow cover at all – has taken its toll on the industry, which estimates it will attract 1.9m visits this season, down from last year's record of 2.3m visits.

New projections have reignited the debate over whether this is down to natural year-by-year variation or a long-term decline in the viability of skiing in Australia, driven by climate change.

A paper produced by academics from New Zealand, the US and Australiashow that Australian ski resorts could lose nearly half of their natural snow depth by the 2040s, with nearly three-quarters disappearing by the end of the century. This would mean that there could be just 81 days a year when natural snow depths in Australia reach a ski-worthy minimum of 30cm by 2040.




Average Snow depth at Spencer's Creek, in the Snowy Mountains

Dr Ken Green, alpine ecologist with the NSW national parks and wildlife service, has collected snow depth data that has shown a steady, amid the year-by-year fluctuations, decrease in snow depth in the Snowy mountains since the 1960s.

Green said there had been several seasons worse than 2013 for snow depth, but that the current year was in the bottom 16% recorded.

"There is actually no seasonal trend and the climate change trend I observe in my field work is only really seen in the total snow amount over the season, which is now significantly less, and the thaw date which is now significantly earlier," he said.

Kevin Hennessy, principal research scientist at the CSIRO, co-authored a report in 2003 which predicted that it was likely that the average snow season would shrink by 30 to 40 days by 2020 and urged ski resorts to adapt.

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## Tips:

There is news related to sustainability almost every day in newspapers. People are becoming more and more aware, and concerned towards issues that involve wastage, conservation, pollution, recycling etc but still there is long way to go. The conditions are deteriorating at a rapid pace therefore each of us has to adapt such habits and practices that affect sustainability positively. Some practices that may yield good results are:

- Avoid purchasing items with excessive packaging, and consider buying in bulk to reduce individual packaging.
- Buy larger packs of the items that can be refilled like hand wash, detergents. Doing so will save unnecessary packaging.
- Do not accumulate clutter like beverage cans, glass bottles, paper, cardboard, rejected furniture etc contact vendors who may reuse or recycle it.
- Travel small distances by your bicycle instead of fossil fuelled vehicles. This will help reducing air pollution on one hand and on the other save petroleum product too.
- Use alternative transportation including Mass Rapid Transport System, public transportation, carpools, walking
- Plant trees on the vacant land and if such land is not available grow plants in flower pots.
- Use energy efficient lightings (CFL/ LED) of required wattage only, in your room at home or in the office.
- Take the stairs instead of the elevator whenever possible.
- Unplug appliances with phantom loads, plug them into a surge protector, and switch it off when appliances are not in use. A phantom load is wasted energy that plugged in appliances use while they are in standby mode.
- Buy recycled and organic products from ecologically responsible organizations.
- Go for environment friendly cleaning and other products of personal and domestic use.
- Rain water tank should be made in the community housing schemes and that water may be used for watering kitchen garden etc.

# Big oil attacks ethanol industry with misleading claims

By Sadhbh Walshe, for theguardian.com

Traffic jam in New York. Photograph: Ray Stubblebine/Reuters

A battle that has been fought for more than 90 years has erupted again in the US, with the American Petroleum Institute (API) accused of seeking to kill off the re-emerging ethanol industry.

The API recently rolled out an aggressive new campaign called **"Fuel for Thought"**, calling on lawmakers to set limits on the amount of ethanol and other renewable fuels that can be blended with gasoline.

The campaign makes sweeping claims that ethanol, or at least too much of it, is bad for the economy, bad for the environment and even bad for cars. These claims are already causing controversy and are staunchly denied by leaders in the ethanol industry who say that the API is simply trying to kill off the competition so they can retain their long held monopoly on transportation fuel.

The battle between the two fuels dates back to the prohibition era when gasoline took over from ethanol as the main fuel used to run cars. The first car Henry Ford ever built was designed to run on pure ethanol and in 1906, when the liquor tax was repealed, Ford declared that ethanol was the fuel of the future.

But his idea was effectively killed off by 1920 when Standard Oil founder John D Rockefeller got the temperance movement to ban the manufacture of alcohol for any purpose. So the ethanol fuel industry died in its infancy only to come back to life again in 2005 when the Renewable Fuel Standard (RFS) Programme was established.

The RFS programme mandates that every gallon of gasoline must be blended with a certain percentage of renewable fuels. It was signed into law by President George W Bush, who cited national security concerns and the need to reduce our dependence on foreign oil as his main motivation. Creating more American jobs was also advanced as a reason to nurture the ethanol industry, which last year supported 383,000 direct and indirect jobs.

As a result of the mandates established under the RFS, almost 95% of gasoline sold at pumps today contains 10% ethanol (E10) and in June of last year, the Environmental Protection Agency (EPA) authorised the sale of E15, a blend that contains 15% ethanol.

Until recently most of the ethanol that is on the market has been produced from food crops, usually corn. This "first generation" fuel has drawn a lot of opposition, however, because of its environmental impact and because of the argument that using crops for fuel drives up food prices.

So the industry has been working hard to develop second and third generation fuels such as cellulosic ethanol made from biomass, which is a much cleaner and more sustainable form of the fuel than its **corn**-based counterpart.

Three major corporations, Poet-DSM Advanced Biofuels, Dupont Industrial BioSciences and Abengoa Bioenergy have broken ground on new plants that will produce millions of gallons of cellulosic ethanol in the next few years. These industry leaders credit the RSF mandates with making this technological leap possible.

"There would be no market for cellulosic ethanol or other advanced biofuels without those mandates," says Jan Koninckx, Global Business Director for DuPont. "Of course the API want the mandates repealed because they know that as the production capacity for clean fuels increases, their monopoly is under threat".

Indeed it does not seem coincidental that the API is stepping up their anti-ethanol campaign now just as the food versus fuel argument is losing its legs and just as a much cleaner and more sustainable form of the fuel is on the cusp of commercialization. It's also interesting to note that neither of these facts gets a mention in the API's "fuel for thought" campaign. Instead, the campaign focuses on the same tired arguments about food prices, pollution and new misleading claims about engine damage.

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# Coca-Cola rewards customers that pledge to recycle

By **BusinessGreen Staff**

Coca-Cola Enterprises will launch a fresh campaign this week designed to help boost the U.K.'s recycling rates by offering discounts to families who reuse or recycle their plastic bottles.

The "Don't Waste. Create" campaign will be launched Wednesday, asking customers to submit recycling pledges to receive a 50 pence (77 cents) voucher off their next purchase of Coca-Cola bottled drinks, including Coca-Cola, Fanta, Sprite and Dr Pepper.

The campaign website also will suggest ways of reusing old plastic bottles, such as turning them into bird feeders or self-watering plant pots, in a bid to raise awareness of plastic waste and keep children occupied during the summer holidays.

"By asking [customers] to reuse and then recycle plastic bottles, 'Don't Waste. Create' encourages families to think more sustainably while having fun, giving them a tangible way to help reduce their household waste," said Nick Brown, associate director for recycling at Coca-Cola Enterprises.

Coca-Cola is keen to increase recycling rates to help feed the plastic bottle recycling plant that it co-owns with ECO Plastics in Hemswell.

*Coca-Cola camera image by Ian Muttoo via Flickr*

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# With forthcoming IPCC report, the contrarians finally agree we are changing climate

By John Abraham, for theguardian.com

The next UN IPCC report is due out in September. Photograph: Joshua Lott/REUTERS

We are weeks away from the much-anticipated release of the 5th climate report from the Intergovernmental Panel on Climate Change(IPCC). This organization has worked very hard to summarize the latest science on climate change, with thousands of donated hours from scientists around the globe. Although there are many other climate reports that synthesize the science, the IPCC is the largest and most comprehensive.

I know many of the scientists who taken on leadership author roles, without pay, to produce this document. We owe them our gratitude and congratulations.

So, what will the report say? I will admit that I have not read the report (it hasn't been released). Early drafts have been leaked, primarily by people trying to disrupt the process. These early drafts allow us to predict what will be contained within the report. An alternative approach is to review the immense body of literature from which the report is drawn. Based on the literature I've reviewed, I will predict the central themes of the IPCC report.

First, readers will likely find that this report is very similar to the last report (which was released in 2007). There will be slight changes to our confidence in certain observations. Climate models will have improved slightly, particularly in how they handle atmospheric particulates and cloud formation. A major effort since the last report has been the use of climate models to predict changes at the regional level. The report will likely say that this endeavor has had mixed success.

The new report will describe how climate changes are continuing without abatement. In particular, temperatures are rising, oceans are heating, waters are rising, ice is melting, the oceans are acidifying, heat is even moving to the deepest parts of the oceans. Just as importantly, the report will show that these changes are largely human-caused.

Some items are worse than we thought. In the last report, ice loss, particularly from Greenland, was a minor issue. Now, it is clear that not only Greenland, but also Antarctica are melting and this melt is raising sea levels. Furthermore, Arctic sea ice is being lost faster than previously reported.

The new report will likely have continued questions. For instance, how will hurricanes change in a warming world (the most powerful hurricanes are becoming even more powerful, but the change in frequency is not known) is still an open question.

Extreme weather will be a mixed bag. Some extreme weather has certainly increased (heat waves for instance, drought in certain areas, and heavy precipitation events). Changes to tornadoes and thunderstorms? That is one area that is highly uncertain.

So, in short, since 2007 we have developed better tools, and we are more certain about how we are changing the climate. Other areas still vex us. But, it is clear we certainly know enough to take action to stop the coming changes to our climate.

How does this square with my title? One continuing question is, how much and how fast will the climate change. Are we going to be in a "slow simmer" or a "fast boil"? The answer to this question rests on how sensitive the climate is. If the climate is not very sensitive, it means the Earth's temperature will change more slowly. A more sensitive Earth will have a more rapid temperature change.

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# Carbon Trust directory highlights suppliers with lower emissions

By Sustainable Business News

Carbon Trust has launched a resource for organizations seeking accredited suppliers of energy efficiency equipment and related technologies that can help meet corporate carbon reduction targets.

The Green Business Directory already covers more than 40 suppliers that specialize in lighting, automatic metering and targeting, HVAC (heating, ventilation and air conditioning), building controls, compressed air, solar photovoltaics (PV), biomass, uninterruptible power supplies, hand dryers and voltage management devices.

Each featured company was assessed and audited through the Carbon Trust Accredited Supplier program.

The Carbon Trust standard certifies that organizations have measured, managed and reduced carbon emissions across their own operations, and that they are committed to ongoing reductions themselves.

In the last year alone, Carbon Trust worked with more than 6,000 companies and organization to help them deliver about $840 million in cost savings related to gas, electricity and fuel use. Cumulatively, Carbon Trust has helped its clients reduce carbon dioxide emissions by 43 million tons.

Hugh Jones, managing director of business advice at Carbon Trust, says recent research conducted by his organization shows that energy efficiency technologies top the list of green technology investments planned by businesses.

But only 51 percent of those surveyed were confident about manufacturer energy efficiency claims, and 58 percent said they would benefit from an independent database of suppliers.

*Checklist image by Melpomene via Shutterstock*

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# Can voluntary pollution prevention programs make an impact?

By **Keith Boisvert**

Last year in Virginia, more than 450 facilities reported impressive environmental and economic performance: a combined savings of over $107 million. Energy use was reduced by 676,424 MMBtus, waste disposed was reduced by over 32,000 tons and total water usage went down by over 2.5 billion gallons.

What's even more impressive is that those companies achieved the savings through a program run by the Virginia Environmental Excellence Program (VEEP), run by the state Department of Environmental Quality (DEQ). Companies must apply in order to participate. All facilities also must have a sustained record of regulatory compliance.


VEEP's mission isn't to set goals for a facility to meet, but to help a facility meet its self-defined goals. Participants aim for continuous improvement of its environmental performance. No predetermined goal must be reached to complete the program.

Luck Companies, one of the nation's largest producers of crushed stone, sand and gravel, was one of the first members to join the VEEP program. Its quarry division has 19 facilities.

"The most important advantage of the program is the close relationship that has developed between our facilities and the regional offices of DEQ," said Mark Williams, environmental manager for Luck Companies. "The ideas that we share with other members and the staff at the (DEQ) Central Office have saved us energy, fuel, water and money."

The 13-year-old program organizes the companies it works with into three tiers based on the robustness of its Environmental Management System (EMS): Environmental Enterprise (E2), Exemplary Environmental Enterprise (E3), and Extraordinary Environmental Enterprise (E4) for the most sophisticated systems.

To become a member, a facility must have an EMS equivalent to the level for which it is applying. The E2 level only needs a few basic components focused on environmental improvement. The E3 level needs to have a fully implemented EMS and E4 facilities must have a third-party certified EMS, must document environmental outreach efforts and must have adopted a commitment to sustainability.

Once a facility's application and compliance record meet VEEP requirements, the facility must report annually on at least one, two or three commitments for E2, E3 and E4, respectively. It is required to report on these commitments for three consecutive years. After three years it must reapply to the program. Usually this improvement is incremental. Facilities are encouraged to report on more than the minimum commitments, and many do.

Over the years, DEQ has developed an online reporting system that helps track actual and normalized data. The system was developed with stakeholder input so as best to be able to capture and represent data. It is regularly updated.

But over time, voluntary environmental programs that fail to help improve environmental performance often fall prey to entropy at participating companies. Facility priorities or personnel can change. In order to avoid complacency, VEEP facilities submit an annual report about participants' progress. DEQ staff review and approve the report.

The report includes numerical data on reporting commitments such as air emissions, water conservation and energy use, and narratives on awards won, EMS progress and possible compliance issues. Reports that lack continuity are flagged and the facilities are contacted.

Image of raised hands provided by bluelake via Shutterstock.

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# Green Technology Spotlight: Thin Glass For Energy Storage?

*SustainableBusiness.com News*

Researchers at Penn State University are working on a new type of thin glass capable of storing energy, a material that could help make electric and plug-in hybrid vehicles more affordable and reliable.

Photo: Penn State Postdoctoral researcher Mohan Manoharan unspools a ribbon of 10-micron-thick, flexible glass for energy storage.

Thin and flexible glass has already been widely commercialized for computer and electronic displays. An even thinner version – about one-tenth the thickness of typical displays – can be manipulated to store energy at high temperatures and for high-power applications, such as electric vehicles, wind turbines and grid-tied solar photovoltaics, according to Penn State's Materials Research Institute.

The researchers came to this conclusion after testing a variety of alkali-free glass compositions and thicknesses, and comparing their energy density with the commercial polymer capacitors used today in electric vehicles to send energy from the battery to the electric motor.

Because those capacitors require a separate cooling system, they are large and bulky. But the 10-micron-thick glass tested by Penn State (and made by Nippon Electric Glass) retains a very high charge-discharge efficiency at temperatures up 356 degrees Fahrenheit, without requiring that extra cooling component.

The researchers worked in collaboration with Strategic Polymer Sciences to produce the glass in thin sheets, using the same roll-to-roll process used by leading glass manufacturers -- which means the material should be relatively straightforward to manufacture.

The glass was then coated with polymers that increased the energy density by 2.25 times and made them less subject to sudden failures, says Penn State post-doctoral researcher Mohan Manoharan, who lead the study.

"These flexible glass capacitors will reduce weight and cost if replacing polypropylene capacitors," says Manoharan. "They could be used in any high energy density capacitor application -- not only in electric vehicles, but in heart defibrillators or weapons systems such as the electric railgun the Navy is developing."

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# 'March of the incinerators' threatens drive to recycle more rubbish

**By Jamie Doward and Taytula Burke,** *for The Observer*

Workers sort recycling at Greenstar Recycling facility at Aldridge near Walsall. Building more incinerators could be a disincentive to such efforts.
Photograph: David Sillitoe for the Guardian

A rush to build incinerators to burn waste and break the UK's reliance on landfill is threatening the country's commitment to increase its recycling rates.

As new figures reveal that recycling rates have fallen for the first time in 30 years, experts warn that the UK is in danger of building far more incineration capacity than it needs. The controversial waste disposal systems are used to produce electricity and heat for homes and industry. But there are fears that the "march of the incinerators", as some have called it, will act as a disincentive for councils to recycle waste.

Historically, the UK has used landfill as its preferred method for waste disposal and, as a result, has been slower to adopt incineration than other EU states. However, an obligation to meet EU directives has meant that in recent years the UK has been forced to find alternative means of disposal. The directives are yielding results. Just under 47 million tonnes of waste was sent to landfill last year, compared with just over 84 million tonnes in 2001.

This has given a significant fillip to the incineration industry both in the UK and abroad. Much of the UK's waste that ends up being incinerated currently goes to Germany or the Netherlands, where it is burned and used to heat homes. The process is often cheaper than seeking landfill sites in the UK.

Experts said the use of incinerators had consequences for recycling as local authorities were forced to divert waste to feed the plants. "The choice to invest in thermal treatment can hold back recycling efforts," Adam Baddeley, principal consultant at Eunomia, said. "At one level, the money invested in such plant simply isn't available to put into building recycling plants or collection infrastructure. And once you've built an incinerator or gasifier, there's a strong incentive to keep it fed with waste, even if that means keeping on collecting as 'black bag' rubbish, material that would be economically practicable to collect separately for recycling."

Charmian Larke, technical adviser for Cornwall Waste Forum, which unsuccessfully opposed a large incinerator in the south-west, questioned the planning process that resulted in incinerators being approved. "Some of them [planning officers] have spent their entire careers trying to get this incinerator so they are wedded to the idea," Larke said. "But if the council members understood how bad these contracts were, the officers would lose their jobs."

Larke claimed that many of the incinerators were built in poorer areas. "There's a feeling that people who are downtrodden have a harder time getting their act together to object, and hence it's easier to place nasty things next to them."

Julian Kirby, waste resources campaigner at Friends of the Earth, described incinerators as a 19th-century technology used to treat a 20th-century problem. "The growing success of recycling and food waste collections – and the potential to redesign products to cut waste and boost reuse and recycling even more – mean there are few things more pointlessly parasitic on cash-strapped councils than incinerators," Kirby said.

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# Ford expands bio-based part list with rice hulls

By **BusinessGreen Staff**

Rice is the latest sustainable ingredient to be added to Ford's F-150 pick-up, the best-selling truck in America.

The manufacturer announced this week that the 2014 Ford F-150 will use plastic reinforced with rice hulls, a byproduct of rice grain, in the truck's electrical harness. The hulls will replace a talc-based reinforcement in a polypropylene composite developed specifically for Ford.

The company said it will use at least 45,000 pounds of hulls, sourced from farms in Arkansas, in the first year of production. The hulls add to the soybeans and the significant amount of recycled materials already in the F-series production process.


More than 650,000 F-Series trucks are sold each year in the U.S., with the fleet pioneering a host of green materials.

For example, Ford uses around 10 million pounds of recycled cotton a year in F-series truck upholstery. Ford estimates every 2014 F-150 contains enough recycled cotton to make the equivalent of 10 pairs of jeans.

In addition, some F-150 trucks have cylinder head covers made with EcoLon, a nylon resin produced from 100 percent post-consumer recycled carpet; seat covers made from soybeans; and shields, underbody covers, wheel liners and interior panels made from recycled bottles, tires or plastics.

The new F-150 also will offer a factory-installed package that allows the engine to operate on either natural gas or petrol, potentially reducing emissions of both CO2 and harmful particulates and gases.

"The 2014 F-Series exemplifies our continued efforts to use recycled content in our vehicles," said John Viera, Ford global director of sustainability and vehicle environmental matters. "We can have greater impact in this case because of the size and sales volume of this product."

*This article originally appeared on BusinessGreen and is reprinted with permission.*

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# UK calls for 'good' biofuel plants

By Fiona Harvey, *for theguardian.com*

The UK will play host to one of the first large scale demonstration of plants for advanced biofuels — liquid replacements for petrol made from waste materials — under plans to be unveiled by the coalition today.

The government is to offer £25m as the prize for a competition to come up with the most viable demonstration plants for liquid fuels made from waste organic material, such as straw or wood waste.

The use of rapeseed, above, to make biodiesel has come under criticism as it takes away agricultural land available for food production. UK wants researchers to develop fuel from non-food plants or from wood or straw waste. Photograph: Andreas Rentz/Gett

Advanced biofuels — which avoid the controversial problems of existing biofuels, which are made from products such as wheat or maize that could also be used as food crops — are an important goal for environmentalists who want to reduce the carbon emissions from the transport industry. Attempts to manufacture liquid fuels from waste have been going on since the late 1960s, but while experiments and lab bench tests have met with limited success, none has yet borne fruit at the level needed to be commercially viable.

Ministers believe that research has now reached a stage where advanced biofuels will be commercially possible. The department for transport said its initial soundings from industry had indicated there are potential projects and a good deal of interest, and it expected "high quality" bids for the 25m on offer, which would be matched by private sector investment.

Norman Baker, the Liberal Democrat transport minister, told the Guardian: "It's hugely important that we decarbonise transport. We have been up hill and down dale on biofuels in the past few years. What we need to do is distinguish between good biofuels and bad biofuels, and this competition will produce good biofuels."

The first step will be a feasibility study that will set out the design of the competition and the criteria that need to be met by any bidder. This stage is expected to take four or five months, after which bids will be accepted. A winner could be announced within a year, but the process could take longer depending on the bids lodged.

Any potential methodology or feedstock will be considered, as long as they can be proved to produce carbon savings over conventional fuels and come from feedstocks that are environmentally sustainable.

Though there are demonstration plants for such fuels in countries such as the US, there are no advanced biofuels yet in widespread production. First generation biofuels, using grains or oil-bearing plants such as palm oil, have come under severe fire from environmental groups, who accuse their manufacturers of putting fuel before food, and raising the prices of staple foods such as bread because of the competition for fertile agricultural land between food and fuel crops.

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# The smelting company that became an urban mining pioneer

By Oliver Balch, *for theguardian.com*

When Marc Grynberg joined Umicore 17 years ago, it was a high-polluting, unprofitable metal smelting business. Today, it's something else entirely: a high-skilled, €2.4bn (£2.05bn) revenue conglomerate operating at the frontiers of the cleantech economy.

Belgium-born Grynberg has had a ringside seat throughout the entirety of company's radical transformation, first as group controller then via various C-Suite roles until becoming chief executive in 2008.

"We wanted to move away from the company we were in the past – a company that was seen as a polluter, and for valid reasons. Instead, we wanted to create businesses that are sustainable and that do not create a negative environmental legacy," he explained.

Umicore's business model now involves urban mining – recycling old phones, laptops, etc. Photograph: Alamy

### 360-degree turn

Easier said than done, you might think. And you'd be right. First off, Umicore had to divest itself of its existing assets, which primarily focused on loss-leading copper and zinc smelters. That meant getting them into "good shape" so the company could guarantee a successful exit, which it did in two spin-off deals in 2005 and 2007.

But what comes next? Umicore had extricated itself from one industry, but it needed to enter another. The Brussels-based company opted not for one industry but four. Today, it provides specialist materials for automotive catalysts, lithium-ion batteries and photovoltaic technologies. It's also established itself as a leader in "urban mining", recycling old phones, laptops and the like.

None of these new investments and acquisitions were taken lightly, Grynberg insists. His transition strategy was based on two core principles: one, stick to what the company is already good at, and; two, identify the clean technology sectors that are set to take off in the near future.

"We had a number of competencies that we had accumulated over the years in material science, chemistry, metallurgy, etc., and we decided to make use of these to address a certain number of market opportunities that we had identified," he explained.

See the business today and it all looks like a very tidy fit. Regulations around tailpipe emissions are set to get progressively tighter, for example, driving demand for Umicore's low-carbon catalyst technologies. Likewise, its recycling business stands it in good stead to take advantage of increasingly resource scarcity, especially for precious metals.

Its commitment to a closed-loop business model, whereby it seeks to recover, recycle and reuse raw materials wherever possible, appears to be delivering too. Under Grynberg's watch, the company has reduced the impacts of metal emissions on air and water by 37% and 44%, respectively.

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# Sustainable tourism: the rise of the eco-boutique hotels

*Boutique hotels are embracing the zero-carbon trend. But it's about profit as well as planet, writes Elisabeth Braw*

By Elisabeth Braw, *theguardian.com*

Hotel Landgut Borsig, 40km from Berlin, is an (almost) carbon zero

At the four-star Hotel Landgut Borsig in Nauen, some 40km from Berlin, guests sleep on luxury mattresses, eat gourmet meals sourced from local ingredients and can opt to relax in the sauna or attend bread-making classes. But their rooms lack mini-bars.

That's because Landgut Borsig is (almost) a zero-carbon hotel. "We produce our energy ourselves," owner and manager Michael Stober explains. "We actually produce more energy than we need. We've bought the forest surrounding the hotel as well, and it absorbs nearly all our emissions. We're adding more trees now to make us completely CO2-neutral."

Sound more flower power than business? Think again. "Zero-carbon hotels have become a big trend in the past 10 years," reports Willy Legrand, who teaches hotel management at the International University of Applied Sciences, Bad Honnef-Bonn. "Now there are even plus-carbon hotels, which sell their surplus to others." According to Legrand, co-author of Sustainability in the Hospitality Industry, the main reason is skyrocketing energy costs: in many countries, energy is now hotels' largest expense, second only to staff. In a survey conducted by Legrand, 74% of hotels reported investing in energy savings to reduce costs.

"When I started, I had no idea whether this would take off", admits Michaela Reitterer, owner and manager of Vienna's Hotel Stadthalle, the world's first CO2-neutral city hotel when it opened in 2008. "But I'm convinced CO2 neutrality is good business. This is a way of differentiating yourself, and it's good PR. If I just ran an ordinary three-star hotel, you'd never have called me."

Hotel chains discovered sustainability as a selling point long ago. Many display signs in their bathrooms inviting guests to help preserve the environment by keeping their towels for more than one day. "But the big chains are not serious about sustainability", claims Frank Naumann, whose company, Dibella, supplies hotels with organic bed linen and towels, made from organic cotton and manufactured by adult workers who are paid proper wages. "Keeping your towels a day longer is not going to make a big difference, but the big chains are not willing to pay more for organic textiles."

Instead it's boutique hotels like the Stadthalle that are driving the new zero-carbon, super-sustainability trend. Among the standard offerings: organic bedsheets and towels, toilets that only use rain water, and food items with labels that trace ingredients back to a specific field. Some, like Landgut Borsig, even feature mattresses made from natural ingredients such as cocoa fibre, natural rubber and horsehair. "We supply and purify our own water, we use solar panels, solar cells and thermal heat, and serve smaller portions so as to reduce food waste", reports Anders Törnroth, sales director at Sweden's zero-carbon Sånga-Säby hotel and conference centre. "And we offset our guests' and employees' CO2 emissions getting here."

"There's no doubt that current best practices are in small hotels," explains Legrand, who also teaches at universities in Singapore and the Middle East. "That's because boutique hotels are often operated by their owners and reflect their owners' personality. Of course, they don't have the global impact that similar practices in large chains would have." Though they don't go as far as zero carbon, several chains, including InterContinental, Ritz-Carlton and Hyatt, do have serious sustainability programs.

"My wife and I run the hotel because it's our passion and yes, it's more expensive," explains Stober, who opened his hotel last year. "But we get guests who are willing to pay more, and are on track to becoming profitable by next year. Just the other day, the largest companies on the German stock exchange hosted a sustainability conference here." Sånga-Säby, says Törnroth, breaks even thanks to corporate guests "who choose us to ease their environmental conscience".

At the 80-room Hotel Stadthalle, Michaela Reitterer reports an average occupancy rate of 83%. "It's not just about being CO2-neutral," she explains. "It's about the whole concept, and as owner you have to be willing to pay a bit more for some things. And the guests appreciate that. Sure, there are some people who don't come back because we don't have minibars or air conditioning, but most people are fine with that." Besides, Reitterer points out, the EU's 20-20-20 binding climate change policy leaves EU businesses no choice but to cut carbon emissions.

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# Solar Panels Return to White House

*SustainableBusiness.com News*

A solar system is being installed on the White House this week, three years after the President promised to do it to show his commitment to renewable energy.

How much solar is being installed isn't clear, other than it will consist of 20-50 solar panels, but it will at least be a strong symbolic gesture, reversing President Reagan's removal of them when he moved in.

A solar hot water system will also be installed as well as an energy retrofit of the first family's residence.

We also don't know which company's solar panels are being deployed, only that they are made in America.

President Jimmy Carter announcing installation of the first solar system on the White House in 1979.

The project "will help demonstrate that historic buildings can incorporate solar energy and energy efficiency upgrades, and is estimated to pay for itself in energy savings over the next eight years," a White House official told the *Washington Post.*

<Source>

# Revealed: how UK water companies are polluting Britain's rivers and beaches

By Damian Carrington and Sophie Barnes, *for The Observer*

The most persistent and frequent polluters of England's rivers and beaches are the nation's 10 biggest water companies, an *Observer*investigation has revealed.

The companies, which are responsible for treating waste water and delivering clean supplies, have been punished for more than 1,000 incidents in the past nine years, but fined a total of only £3.5m.

The revelations have raised concern that the financial penalties are far too low to change the behaviour of an industry that generates billions of pounds in profits and shareholder dividends. The charge is backed by the Sentencing Council for England and Wales, which is proposing major hikes in penalties.

Beaches and rivers are being polluted by the 10 biggest water companies. Photograph: Neil Setchfield/Alamy

Pollution incidents, which have included sewage illegally pouring into a harbour for more than a year, and managers destroying records, show no sign of declining, according to data obtained from the Environment Agency (EA) under freedom of information rules. Only a third of the 1,000 incidents led to a fine (of an average of just £10,800); the rest resulted in cautions.

"In law, the 'polluter pays' principle is supposed to deter companies from damaging the environment, but in this case the penalties appear to be so pitiful that water companies seem to be accepting them as the price of doing business," Joan Walley MP, chair of the Environmental Audit Committee (EAC), told the *Observer*. "The sentencing council must ensure that courts take into account the profits made from environmental crimes, and that fines have a sufficient deterrent effect."

Simon Hughes MP, deputy leader of the Liberal Democrats, said: "These figures are another indictment of the failings of our privatised water companies in England. Many of them make large profits, pay huge dividends, increase prices and pay little tax. When, in addition, these figures show they don't deliver clean water, the public is entitled to say that our monopoly water providers are neither good corporate citizens nor good stewards of our precious environmental assets."

In November, the *Observer* revealed that three of Britain's biggest water companies paid little or no tax on their profits in 2012 while generously rewarding their executives and investors. The water industry was paid £10.5bn by customers in 2010-11, according to the latest Ofwat figures available, while making pre-tax profits of £1.7bn and paying dividends of £2.2bn, a 42% year-on-year rise. In 2013-14, water bills are rising by 3.5%, above both inflation and average pay rises.

One in three of the pollution incidents involved sewage. Karen Gibbs of the Consumer Council for Water said: "Sewer flooding is particularly distressing for customers, and something we have pressed the companies to address as a priority."

The cleanliness of England's beaches has declined in recent years, after improvements in the decades before, and most water bodies currently fail higher-level European water regulations.

The EA data, obtained by the Request Initiative and analysed by the*Observer,* showed the most heavily fined company in 2005-2013 was Thames Water, which paid £842,500 for 87 incidents.

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# Holly Fowler: Sodexo can be a sustainability game-changer

By **Chrissy Coughlin**

Nature of Business radio, created and hosted by Chrissy Coughlin, is a weekly show on business and environment.

Sodexo increasingly views food as part of the larger sustainability discussion. And in this space, Sodexo has the potential to be a game changer.

Sodexo's sustainability strategy adopted in 2009 – The Better Tomorrow Plan -- lays out a continuous improvement approach aimed at guiding individual actions by connecting the environment, nutrition, health and wellness, and local communities. The goal is to educate employees about best practices at all sites and work through the conversation with clients.

For Holly Fowler, Sodexo's senior director of sustainability and CSR, the major challenge involves effectively embedding these topics into the daily lives of Sodexo's 130,000 employees and the locations in which it operates, including schools, health care facilities, colleges, corporate offices and government institutions.

Sodexo has a huge responsibility to carefully source food and manage energy, water and waste at client locations, Fowler said. It also must wield its influence responsibly over decision-making, both upstream with its suppliers and downstream with clients and customers.

"It's helping to negotiate all of those conversations and influence folks to practice in ways that are going to have a more sustainable result," Fowler said.

For Holly Fowler Every company, Sodexo included, faces growing pressure for transparency as people increasingly demand information about where their food comes from and how it was produced. But in reality, no system is in place to provide the kind of traceable data that consumers want.

This may be one of the main reasons that Fowler is such a proponent of strategic partnerships -- to find creative ways to get at the information they need in the most expeditious manner possible.

Fowler sees vast improvement in people's behavior, particularly with employee engagement. The sustainability message is being further spread through a variety of methods, such as consistent facilitated forums.

But the real change in behavior takes place when it gets personal. Fowler hopes corporations are ready to go when individuals catch up.

George Papoulias edited this podcast.

*Images courtesy of Sodexo.*

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# Can CSR thrive in big firms with vast buyer power?

By Sarah Weldon

One of the most commonly used models for business strategy is called Porter's Five Forces. This model outlines the forces that shape industry competition: the rivalry among existing competitors, the dual threats


of new entrants and substitute products or services and the bargaining power of both suppliers and buyers.

The Five Forces premise is strategy analysis for a company to gain advantage through power dynamics, assume more leverage over other players and use weaknesses against them. A disconnect among this model and CSR and ethics is not often discussed.

The ethical question is whether there are boundaries to how much power can be ethically exerted by powerful multinationals when negotiating contracts with smaller developing manufacturers. What are the boundaries of responsibility? In today's social media era, are the consequences of overstepping power more severe?

### Buyer power

The most dominant of Porter's forces may be buyer power. A perfect example would be Walmart, with its strategy and success dependent upon its behemoth purchasing power. By building its brand reputation around the delivery of low prices, Walmart drives prices down throughout its supply chain by flexing this power.

But power and responsibility go hand in hand. Companies are coming to terms with the fact that those in the millennial generation, who are becoming professionals in the social media era, have different expectations of corporate responsibility boundaries than the baby boomers who, for the most part, still lead the world's top companies.

It used to be that a company's responsibility could rise and set with delivering shareholder value. Now every company must view its reputation like the British Empire; the sun never sets, it just changes location. Even though Walmart also is known for dictating a large number of environmental requirements throughout its supply chain, it found itself among a group of notable companies blindsided by the 2012 Tazreen factory fire in Bangladesh because its management was not even aware its products were being manufactured there.

Walmart image by Walmart Corporate via Flickr.

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# Tom's of Maine eyes potatoes for biodegradable packaging

By Sustainable Business News

Tom's of Maine is studying the viability of using non-GMO potatoes that otherwise would be tossed in the garbage as a feedstock for biodegradable packaging.

Potato starch can be used to form polylactic acid(PLA), a plastic resin that could be used for mouthwash bottles or deodorant canisters, two products initially targeted under the company's initiative.

The research is part of a partnership that includes the University of Maine and the Sustainable Bioplastics Council of Maine, which are seeking ways of recapturing local agricultural waste.

Potatoes are the biggest commodity in the state's $1.2 billion annual agricultural industry. The potatoes that Tom's of Maine proposes using normally would be destined for landfills.

"One interesting finding from our research is that for the initial plant, we don't need to take potatoes away from use as food to meet the needs for bioplastic production," said Kate Dickerson, a researcher with the University of Maine.


Other companies are experimenting with ways to turn plants into plastics, but most of those efforts tend to use corn.

Coca-Cola's PlantBottle, for example, uses sugarcane ethanol from Brazil. Other PLA feedstocks include wood, waste paper products, sugar, grasses and grains.

PepsiCo has considered more radical uses for potato waste, such as churning it up into compostable packaging for its U.K. snack brand, Walkers. Elsewhere, champagne company Veuve Clicquot has used biodegradable paper made partially out of potato starch to keep its bottles cool.

Tom's of Maine has adopted other innovative packaging options. Two years ago it eliminated aluminum toothpaste tubes in favor of laminate, which is lighter, less energy intensive and cuts steps out of the manufacturing process.

At least 40 percent of the materials used in Tom's of Maine's packaging is sourced from recycled materials.

*This article originally appeared at Sustainable Business News.*

<Source>

# How Kroger turned food waste into warehouse-powering energy

By Jonathan Bardelline

Every day, some 300 Ralphs and Food 4 Less grocery stores produce 150 tons of food waste. Until recently, all that food would get trucked to a distribution center in Compton, Calif., where it was combined and sent to a composter 100 miles away.

But now that food waste, which used to represent a cost in terms of both money and emissions, is providing cheap, clean energy for the distribution center.

Ralphs and Food 4 Less, a division of Kroger, installed an anaerobic digestion system at the center, which takes in food and puts out biogas, providing power for the campus where the center is located.

“Anything that can't be sold or donated comes into the system,” said Kendra Doyel, a spokesperson for Ralphs and Food 4 Less.

The system, designed by Feed Resource Recovery, has been in the works during the last four years. It allows Kroger to turn a waste stream into an energy resource for the 49-acre campus, which includes a creamery and corporate offices for Ralphs and Food 4 Less, along with the 650,000-square-foot distribution center.

### From waste to resource

The process starts when food is brought to the center and put through a blending system that removes any inorganic material -- namely packaging, such as plastic, metal and glass -- and liquefies the food. What's left is just organic material that's mixed with wastewater from the creamery.

That mixture goes into an anaerobic digester, an oxygen-free piece of equipment full of microbes that break the food down, producing biogas and a mix of nutrients and minerals. The biogas is then compressed and purified on its way to the campus' microturbines and boilers, where it takes the place of nearly all of the natural gas that the center previously used. That biogas now provides 20 percent of the campus' power and has delivered an 18 percent return on investment for the project so far.

All the water that's left gets purified and released. The remaining physical material -- the minerals and nutrients -- is concentrated into a form that can be used as a fertilizer. Kroger and Feed Resource Recovery sell the feed to some local partners that refine it and sell it as compost, but they're also working on turning it into an actual product to put on the market, according to Nick Whitman, Feed Resource Recovery's president.

In addition to pulling energy out of waste, the system eliminates a large chunk of truck traffic. In the last 10 years, the center was sending food waste to a Bakersfield composter in multiple truckloads every day. Kroger estimates that the system will help avoid about 500,000 miles of diesel truck trips a year, saving money that used to pay contractors to move the waste around.

Kroger is Feed Resource Recovery's first client to take on a system such as the one at the Compton distribution center, but now the company has been in touch with other supermarkets and non-grocery companies interested in the system.

“The model we're talking about is very similar to how (some companies) treat cardboard and other recyclable materials,” Whitman said. “They use their infrastructure to bring that material back to distribution center and aggregate it.”

### Making systems work

While the main aspects of the technology are fixed, the surrounding details can be tweaked, Whitman said.

“Depending on how much material (a company is) generating and what they are generating, we can alter the process,” Whitman said.

Some companies may need to use different containers, bring in waste more or less frequently and may have different energy needs, such as a higher demand for natural gas.


Whitman said that because Ralphs and Food 4 Less stores already were sending food waste to the Compton distribution center and aggregating it, there wasn't a huge difference in how employees had to handle the material. “It was obviously a slight difference,” Doyel said, “Just taking it through a different system.”

*Apple image by Luke via Flickr, all other images courtesy Feed Resource Recovery and Kroger*

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# Xcel, Interior Department add almost 2 gigawatts of wind power

By **Sustainable Business News**

For nine years, Xcel has been the leading utility for wind power and it's about to acquire a lot more.

It's buying 600 megawatts (MW) of wind energy from two planned wind farms in Minnesota and North Dakota and taking ownership of another being built in Minnesota by RES Americas Development.

The deal increases the utility's wind portfolio in the Upper Midwest by a solid third, its single largest increase there. When they come online by 2015, 180,000 more homes will be powered by wind.

Xcel gets energy from 50 wind projects in Minnesota, both large and small, adding up to 1,800 MW for the region. Minnesota is spending $1 billion to upgrade its transmission system this year as part of a $2.2 billion overhaul, enabling a lot more wind power to connect to the grid.

Wind prices are so competitively priced right now that Xcel expects customers to save $180 million compared to conventional power plants.

"Wind power is simply the cheapest resource available right now, and we are taking the opportunity ... to further shape our systems for the future," says Ben Fowke, CEO of Xcel.

Last week, Xcel made a similar announcement for the southwest: It will buy 700 MW of energy from three new wind farms in Oklahoma, Texas and New Mexico, and has plans to significantly expand in Colorado.

Meanwhile, the Department of Interior has greenlighted the 500 MW Mohave County Wind Farm in northwest Arizona, which will supply energy to 175,000 homes.

BP Wind Energy will build the project, deploying 243 turbines across 38,000 acres of public land. If that sounds big, it's actually 20 percent smaller than originally conceived to protect golden eagle habitat and provide a buffer for the Lake Mead National Recreational Area. No turbine will be closer than a quarter-mile to private property.

This is the 46th utility-scale renewable energy project -- solar, wind and geothermal -- approved for public lands since 2009. In all, they will power over 4.4 million homes and support 17,000 construction and operations jobs.

Fourteen more project proposals will be reviewed over the next two years as part of Interior's "Smart from the Start" program, which identifies the most suitable areas in advance.

Some 192,100 acres of public land in Arizona alone have been approved for large solar and wind projects. Last year, the DOI released its final plan for large scale renewables development on public lands, which covers six states: Arizona, California, Colorado, Nevada, New Mexico and Utah.

*Wind turbine image CC licensed by lawmurray via Flickr*

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# Corporate governance: why the board must lead on ethics

By ***Nicole Dando***

***Business ethics are good for company performance, but the tone has to be set from the top***

Much is written about the role, indeed duty, of the board in setting the ethical values of the organisation. A board is responsible for determining, articulating and communicating the values and standards of the business, and for ensuring that the policies, procedures and controls in place act to embed, rather than hinder, ethical values throughout the business.

But can boards demonstrate that they are committed to ethical standards and their application to the way they govern and conduct themselves?

The business case for business ethics has been well demonstrated through the costs and impacts of the repeated high profile cases of corporate greed and misconduct. Often those integrity failures are a result of senior individuals crossing ethical boundaries as well as ignoring or circumventing the rules set out in law.

In today's environment, stakeholders have high expectations that companies should be run in accordance with good corporate governance practices – it is the directors which bear ultimate responsibility for the business. So if corporate governance lies at the very heart of the way businesses are run, it is imperative that ethical values should be part of what makes those hearts beat.

### The right choices

Questions of ethics, or the "right way to run a business", are inherent in all aspects of corporate governance and in every board decision and action. These include the discretionary decisions a board takes to deliver on its duties as set down in law, and demanded by shareholders and other stakeholders. And the choices a board makes within the core business strategies that they pursue and the way they direct the business as a whole.

Boards take decisions which have far-reaching consequences and directly affect the lives of their employees and other stakeholders, a recent example being tax avoidance.

But business ethics also includes the way the board conducts itself and the way board members choose to behave in carrying out their role. The culture of an organisation will be strongly influenced by the nature as well as the quality of the leadership shown by the board.

It should go without saying that members of boards should have personal integrity, as well as being champions of the company's values.

### Principles and terminology

The imperative for ethical behaviours and practices within the boardroom has arguably never been more important. But new research from the Institute for Business Ethics – A Review of the Ethical Aspects of Corporate Governance Regulation and Guidance in the EU – has found that explicit reference to ethical principles and terminology has generally been absent from corporate governance guidance and regulation both at the EU level and within most member states.

Although the research found similarities in general corporate governance principles and requirements, a comparison of explicit ethics drivers was not actually possible as they were not evident. This lack of explicit engagement and encouragement, if not requirement, for ethical standards would seem to undermine the imperative for integrity, honesty and accountability in the boardroom.

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# A new carton recycling plant could mean an end to shipping waste overseas

*As the UK's only carton recycling factory opens, **Tim Smedley** takes a tour and asks if it's the beginning of the end for shipping waste to China*

By Tim Smedley, Guardian Professional,

A worker sorting through plastic waste in a dump in Shenyang. China is increasingly clamping down on foreign waste that doesn't meet quality standards. Photograph: Mark/EPA

I am standing in what will soon be the UK's only carton recycling facility in Stainland near Halifax, Yorkshire. In front of me are huge bales of wastecartons - Tetra Pak, to you and me – waiting to be recycled. I wonder where they're from. "That one's from the Nottingham hub", answers Fay Dashper, recycling operations manager, ACE UK, pointing at a bale seemingly indistinguishable from any other. "You can tell from the shape of the bale and the quality of the material... I'm a bit of a carton geek".

It's Dashper's job to be a carton geek. While Tetra Pak has become the colloquial term for the plastic-coated cardboard that packages fruit juice and pureed tomatoes, there are two other manufacturers – Elopak and SIG Combibloc. ACE UK (the Alliance for Beverage Cartons and the Environment) represents all three. It has teamed up with recycling company Sonoco Alcore to create this processing plant to stop cartons being shipped overseas or, worse, to landfill. This one factory alone will process up to 40% of the UK's cartons when officially operational in September, turning them into "coreboard" tubes with uses from carpet rolls to clingfilm.

By bringing new recycling capability to the UK, ACE is hoping to promote the environmental credentials of its product. "Because we are opening this recycling facility, a lot of local authorities are very interested in bringing cartons here", informs Dashper. "We are talking to one group of seven Local Authorities right now that are going to start taking cartons at kerb-side because this facility is opening, and we expect several more will follow."

Cartons, ACE UK believes, have had some unfair press. Three types of virgin wood go into one carton (recycled fibres aren't strong enough): spruce, pine and birch. They are lined with polyethelyne and/or aluminium (not wax, as some believe). Until recently the majority of local authorities didn't accept them for recycling, so they went to landfill.

ACE UK argues that councils have previously had no incentive to find recycling outlets for cartons. Local authority recycling targets are weight-based, with the effect of huge increases for food and garden waste recycling but not for the lightweight carton. With plenty of carton recycling factories overseas but none in the UK, some councils' ethical "no export" policy has even had the perverse effect of sending recyclable material to landfill. ACE UK attempted to counter this by installing their own Bringbank recycling banks for eco-conscious consumers to take their cartons to, which were then shipped to Europe. However, the success of the scheme was limited. Dashper tells of one Bringbank found with two prosthetic legs jammed in it. One still had a slipper on.

The story of cartons is not dissimilar to that of UK recycling at large. We currently produce more recyclate (the industry term for recyclable waste) than we have the capacity to recycle domestically. In part this is because we've got much better at collecting it – we now recycle 43% of household waste compared to just 14% ten years ago.

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# No Plugs Required For Sun-Charged Notebook Computer

*SustainableBusiness.com News*

Laptop computers use just 50-75 kilowatt-hours (kWh) of electricity a year, about a third of what's required by their desktop cousins.

But most still can't run for an entire work day on a single battery charge.

While many high-tech manufacturers, notably Samsung, have talked about produced solar-powered models for years, so far no one has managed to pull it off.

That's why the technology press is abuzz this week with details about a forthcoming solar-powered, rugged notebook computer series intended for emerging markets or far-flung field locations that don't have reliable access to the grid.

It's called SOL, and it was developed by a Canadian company called WeWi Telecommunications based in London, Ontario.

Sporting a solar array on the back of the display, SOL runs 8-10 hours on a charge - it takes about two hours to recharge in the sunlight.

This isn't some barebones computer that has been stripped of useful features. It is rugged and waterproof, designed mainly for emerging markets or field locations where grid power isn't readily available.

"We've taken care to introduce performance-enhancing capabilities into SOL, so it's not only pretty, but probably the most powerful machine for its price," says the company on its website. "In harnessing the power of the sun into a long-lasting battery SOL is not only a green machine, but also a powerful device built for people who have no access to electricity. The optimized core and the computer's architecture were designed to work with a battery so that you can work all night and achieve more than ever on a single charge."

According to the specifications listed, SOL includes Intel's energy-efficiency Atom microprocessor technology, a hefty 320-gigabyte hard drive, a 13.3-inch liquid crystal display, multimode wireless communications features, and a 3-megapixel camera. It weighs 5.02 pounds.

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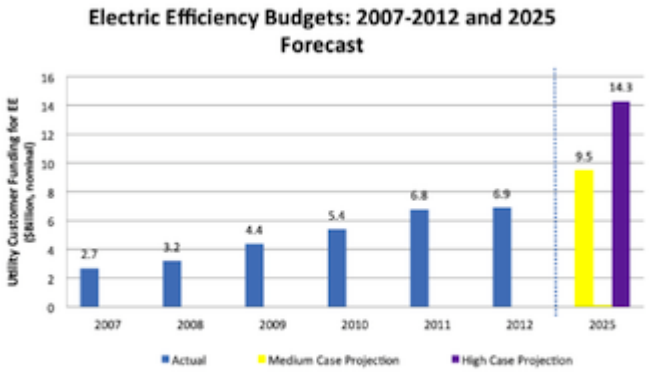
# $6.9 Billion For Energy Efficiency

*SustainableBusiness.com News*

State-level support for encouraging utilities (and by association their rate payers) to become more energy-efficient continues to grow, reports Innovation Electricity Efficiency (IEE), part of the Edison Foundation.

Budgets for these programs rose 27% to $6.9 billion last year and could exceed $14 billion by 2025, reports IEE.

“Supportive regulatory frameworks are the key to expanding the electric power industry’s already large commitment to electric efficiency even further,” says IEE Executive Director Lisa Wood. “Through them, the power industry provides integrated programs to help customers manage energy use, more fully utilize flexible demand resources on the power grid making it more efficient, and serve as a consistent and comprehensive point of contact to support all customer energy needs.”




Source: IEE, Summary of Ratepayer-Funded Electric Efficiency Impacts, Budgets, and Expenditures (2011-2012), March 2013.

Three types of regulatory mechanisms are critical for supporting energy efficiency investments: direct cost recovery, fixed-cost recovery, and performance incentives, says IEE. Here's a summary of their intent:

Direct Cost Recovery helps utilities recoup costs related to administration, marketing and the actual cost of product rebates.

Fixed Cost Recovery allows utilities to decouple their revenue models and expectations from the amount of electricity sold. Since the goal of efficiency programs is to reduce consumption, this allows them to recover fixed operating costs in a more timely manner.

Performance Incentives reward utilities for reaching certain efficiency goals, and, in some cases, impose a penalty for performance that falls below agreed-upon goals.

The IEE report, "State Electric Efficiency Regulatory Frameworks (July 2013)," finds that 32 states offer a fixed-cost recovery mechanism to align utility fixed costs with investments in energy efficiency programs, up from 27 states in last summer's report.

Here are some other highlights.

28 states have performance incentives in place, up from 23. Mississippi, Montana and West Virginia are considering them.

18 states offer lost revenue adjustment mechanisms, including Missouri and Louisiana, and another two are awaiting regulatory approval, Mississippi and Virginia.

14 states support electric decoupling, including Washington; Delaware is awaiting a decision on its own legislation.

When it comes to the effectiveness of energy efficiency initiatives, Massachusetts has led for the past two years, edging out California for that distinction.

Both Massachusetts and California have established energy efficiency as the state's 'first-priority' energy resource. Utilities must offer rebates and other incentives encouraging ratepayers to upgrade lighting, air conditioning, and industrial equipment to more efficient models whenever those incentives cost less than generating the electricity it would take to power their older, less-efficient equipment. Massachusetts was among the first states to support decoupling utility rates from sales volume.

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# Cycling is sustainable and healthy so why aren't more of us on our bikes?

*Safety fears and lack of employer engagement are holding back a cycling revolution, writes **Wayne Visser***

**By Wayne Visser,** *Guardian Professional*

In March 2013, London mayor Boris Johnson – already feted for his pay-as-you-go Boris bikes introduced in 2010 – announced plans for the longest. This is part of a £1bn bid to double the number of Londoners who cycle over the next decade.

This is certainly welcome news for a city that hopes to reduce its carbon footprint by 60% by 2025. Currently, the average Londoner emits 9.6 tonnes of CO2 per year, which is lower than New York (10.5 tonnes), but almost three times Stockholm (3.6 tonnes), despite Sweden having a far colder climate. Cycling is one obvious way to make a dent on our carbon footprint in the west. But are we convinced?

According to the CTC, the UK national cycling association, a person making the average daily commute of four miles each way would save half a tonne of carbon dioxide per year if they switched from driving to cycling per year. If the UK doubled cycle use by switching from cars, this would reduce Britain's total greenhouse emissions by 0.6m tonnes, almost as much as switching all London-to-Scotland air travel to rail.

There are obvious health benefits from cycling as well. One classic studyfound that, while people are killed each year in the UK while cycling (in 2012, 122 cyclists died), many others die prematurely because of lack of exercise. The study estimated that regular cycling provides a net benefit to personal health that outweighs its risk of injury by a factor of 20 to one. If anything, the situation is more extreme today, with estimates that, if things don't change, 60% of men and 50% of women will be obese by 2050.

The charity, Please Cycle says the benefits of cycling are demonstrated with some handy statistics. It reports that 79% of employees wish their employers had a more positive outlook on cycling and a 20% increase in cycling by 2015 could save £87m in reduced absenteeism. The charity also claims there is up to 12.5% difference in productivity between exercising and non-exercising employees and regular cycling can reduce a person's all-cause mortality rate by up to 36%.

Even the economic benefits are compelling. The specialist economic consultancy SQW showed that, an increase in cycling by 20% would release cumulative saving of £500m by 2015. A 50% increase on current cycling rates would unlock more than £1.3bn, by reducing the costs of congestion, pollution and healthcare.

So why aren't more of us cycling? Surely it's not that we're all just lazy? This is where I believe we can learn some lessons from other countries – the Netherlands in particular. The Dutch have turned cycling into a national pastime and the bicycle into a cultural icon: wherever you go in the country, there are swift-flowing rivers of cyclists.

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# Wind Turbines Generate Clean Water For Developing Nations

*SustainableBusiness.com News*

An estimated 1 billion people worldwide lack access to affordable clean drinking water and community desalination plants are cropping up in developing nations to address these shortages. The downside is they rely heavily on fossil fuels.

Wind4Water, a social enterprise based in Plymouth, Mass., proposes a cleaner, more sustainable approach in the form of pre-engineered, wind-powered desalinization facilities.

There are four configurations: the smallest produces about 379,000 gallons of fresh water daily, the largest generates more than 1.5 million gallons per day.

Each plant combines 750-kilowatt wind turbines supplied by Aeronautica Windpower of Plymouth with reverse osmosis desalination technology manufactured by Water Management Group of Coral Gables, Fla. Associated Wind Developers, also based in Plymouth, provides the engineering, construction management and long-term maintenance services for each project.

Depending on the amount of water required, the systems use 1, 2, or 3 wind turbines to produce electricity and trigger the desalinization process. The systems are managed with special software that prioritizes the amount of water processed depending on the wind conditions.

"When the wind is blowing strongly, proprietary controls automatically create extra fresh water, which is stored in over-sized tanks," explains Wind4Water on its Web site. "When the wind is blowing at lower speeds, electricity is used just to pump water around the system, or for delivery. The system is sized so that the wind can stop completely for up to a day while water is drawn from fresh water tanks before additional electricity is drawn from either the grid or an on-site generator."

The first Wind4Water project is slated for Cape Verde, a small island off the west coast of Africa that has little groundwater.

"We are excited about what this means for communities that have historically gone without affordable fresh water," project co-founder Bob Kuhn told WindPower Engineering. "With low-cost access to safe sources, communities can avoid many of the diseases associated with inadequate supply, liberate women and children from fetching water, and achieve a new level of economic and natural resource sustainability."

The plants can be located near oceans, inland seas, lakes, rivers and existing wells. They are best suited for areas with moderate wind resources greater than 11.2 miles per hour (mph) on average a year. "This results in lower water prices immediately, and well into the future," says Wind4Water. "As fossil fuels continue to escalate in price, wind power will remain a lower priced solution because the main 'cost' of the equipment, its cost of financing, was 'locked in' when the project started."

<Source>

# European Investment Bank, Ex-Im Bank Move Away From Coal Financing

*SustainableBusiness.com News*

The EU's public financing arm, the European Investment Bank (EIB), has joined the World Bank in pledging to limit funding for new coal-fired power plants.

The bank says it wants to help the European Union reduce pollution and meet ongoing climate reduction targets.

But like the World Bank, the EIB board of directors stopped short of turning its back on coal entirely, leaving several loopholes.

It will still consider loans to new or refurbished coal plants that emit less than 550 grams of carbon dioxide per kilowatt-hour. This could be accomplished if coal plants co-fire with biomass or add either combined heat and power (CHP) or carbon capture and storage technologies.

(Photo credit: Mauri Rautkari, WWF-Canon)

And the board also added two exemption clauses that will allow it to approve projects that contribute to Europe's "security of supply" or that would contribute to poverty alleviation or economic development in other regions.

"Adoption of the new lending criteria represents an important step forward in the European Investment Bank's commitment to energy investment that supports EU policy and reflects the urgent investment challenges currently facing the energy sector," says Mihai Tanasescu, the EIB vice president responsible for energy lending.

All this will be reconsidered in fall 2014, with an eye toward whether the EU's climate targets or emerging technologies justify adopting an even lower emissions threshold, EIB press officer Richard Willis told Renewable EnergyWorld.

“When considering at what level to set the EPS we looked at the nature of emissions across a range of technologies," says Willis. "We’ve set a standard unanimously agreed by all Member States which fully reflects current policy, but the guidelines haven’t been issued yet because we were asked that we would review and also tighten the limited exceptions that are in place to make sure we focus primarily on renewables, grids and energy efficiency."

Approximately 90% of EIB's future investments will focus on renewables, energy efficiency and grid networks, says Willis.

Given that EIB puts an estimated $14.5 billion into energy projects every year, its decision should have a huge impact and has been greeted with cautious optimism by environmental organizations including the World Wildlife Fund (WWF).

“The move by the EIB is very welcome but more needs to be done,” says Sebastien Godinot, economist at WWF’s European Policy Office. “To have a serious chance at staying within the 2 degree Celsius climate change limit in Europe by 2050, the EIB should strengthen its standards and eventually phase out its support for all power supply based on fossil fuels.”

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# Can Solar Energy Help Mainstream Hydrogen Fuel Production?

*SustainableBusiness.com News*

Researchers at the University of Colorado, Boulder (CU-Boulder) have dreamed up a radical approach to mainstream hydrogen fuel production.

Hydrogen could be the ultimate clean energy source for powering cars and homes, but the costs associated with it are still enormous.

CU-Boulder's idea is far from commercial viability, but it is intriguing. Scientists propose using a massive solar-thermal system to drive the chemical reaction, simplifying the process of splitting water into its primary components, oxygen and hydrogen.

“We have designed something here that is very different from other methods and frankly something that nobody thought was possible before,” says CU-Boulder Professor Alan Weimer, research group leader, and a member of the university's chemical and biological engineering department. “Splitting water with sunlight is the Holy Grail of a sustainable hydrogen economy.”

The design (pictured below) uses an elaborate system of solar towers and mirrors - basically multiple solar tower concentrating plants. Solar energy is concentrated onto a point at the top of a central tower several hundred feet tall, heating it to temperatures as high as 2,500 degrees Fahrenheit.

The tower acts as a conduit, redirecting the heat into a reactor chamber filled with metal oxides – a combination of iron, cobalt, aluminum and oxygen. This, in turn, causes a chemical reaction that releases the oxygen from the compound.

The next step involves the “addition of steam to the system — which could be produced by boiling water in the reactor with the concentrated sunlight beamed to the tower — it would cause oxygen from the water molecules to adhere to the surface of the metal oxide, freeing up hydrogen molecules for collection as hydrogen gas,” the team notes.

One big difference between CU-Boulder's approach and conventional methods is that both reactions can happen at the same temperature, which saves considerable time, say the researchers.

"The conventional approaches require the control of both the switching of the temperature in the reactor from a hot to a cool state and the introduction of steam into the system,” says Charles Musgrave, an associate professor who is part of the research team. “One of the big innovations in our system is that there is no swing in the temperature. The whole process is driven by either turning a steam valve on or off.”

The amount of hydrogen produced for fuel cells or for energy storage would depend on the amount of metal oxides used, the number of working towers designed into the solar-thermal system, and how much steam is introduced, says the research team.

Weimer is also the executive director of the Colorado Center for Biorefining and Biofuels (B2B2), an arm of the Colorado Energy Research Collaboratory that works with industry and public agencies to commercial renewable energy technologies.

CU-Boulder's research is supported by the National Science Foundation and the US Department of Energy.

<Source>

# Buzzword is Electric For Future of Aviation

*SustainableBusiness.com News*

After attending the Air Paris Show where aviation vendors show off their latest innovations, Frost & Sullivan have some exciting developments to report.

Major industry players have novel solutions they say, which could catapult the aviation industry to an all-electric revolution - with all-electric aircraft.

"The buzz word is "electric," says Alix Leboulanger, Frost & Sullivan Aerospace & Defence Analyst. "The key attractions at the Air Paris Show were the electric prototypes from big industry players."

All-electric airplanes could take off by 2035-2040, she predicts.

A couple **of innovations are:**

**Green Taxiing** (Safran and Honeywell), which allows an aircraft to taxi autonomously from the airport gate to the runway without the use of engines.

**TaxiBot** is a tug vehicle that allows a plane to move on the ground without using engines. It's developed by Israel Aerospace Industries, Airbus, TLD Group and LEOS.

Here's what a taxibot looks like:

Besides reducing the industry's emissions and noise pollution, these innovations make aircraft more easily available and extend the life of engines. By reducing fuel use, airlines are less affected by rising and volatile oil prices, which aids profit margins and cuts passenger fares, they say.

A Boeing 747 can go through a ton of fuel at a cost of over $1000 (while emitting several tons of carbon) during an average 17-minute taxi to take-off, says the Economist. And when the aircraft lands, there's another long drive to the passenger gate. The world's airlines spend about $7.5 billion a year just taxiing between passenger gates and the runway, Yehoshua Eldar of Israel Aerospace Industries, told the Economist.

The aviation industry currently produces 3% of world emissions and is under pressure to bring them down. The industry committed to carbon-neutral growth by 2020, and is currently mostly focused on biofuels, where there's lots of activity.

Back in 2006, Sir Richard Branson conceived of many innovations for the industry.

On the electric side, the focus is primarily on replacing aircraft pneumatic and hydraulics systems to make airplanes lighter and faster, but engineers are working on how electric drives can provide better efficiency than mechanical transmissions.

The final and golden milestone will be a completely electric power system and thrust. "As soon as aircraft propulsion becomes fully electric, biofuels, heat engines, and combustion steel and aluminum, will be by-gone memories of the 20th century," she says.

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# 12 States Lead the Way On Solar

*SustainableBusiness.com News*

Home to just 28% of the population, 12 states account for 85% of all solar capacity in the US, reports Environment America.

In terms of solar capacity per capita, the top states are: Arizona, Nevada, Hawaii,New Jersey, New Mexico, California, Delaware, Colorado, Vermont,Massachusetts, North Carolina and Maryland.

"The progress of these states should give us the confidence that we can do much more. Being a leader in pollution-free solar energy means setting big goals and backing them up with good policies," says said Rob Sargent, energy program director with Environment America.

It's not availability of sunlight that sets these states apart, it's the degree to which state and local governments have created effective public policy that's resulted in strong take-up of solar.

**Table 1. Cumulative Solar Electricity Capacity per Capita**[46]

| State | Solar Electricity Capacity per Capita (Watts/person) | Rank |
|---|---|---|
| Arizona | 167 | 1 |
| Nevada | 146 | 2 |
| Hawaii | 137 | 3 |
| New Jersey | 110 | 4 |
| New Mexico | 91 | 5 |
| California | 76 | 6 |
| Delaware | 69 | 7 |
| Colorado | 52 | 8 |
| Vermont | 34 | 9 |
| Massachusetts | 30 | 10 |
| North Carolina | 23 | 11 |
| Maryland | 19 | 12 |

Here's a summary of what these states are doing right:

11 have strong net metering laws that allow customers to lower electric bills by sending solar to the grid, receiving reliable and fair compensation for their excess electricity;

11 have Renewable Portfolio Standards that require utilities to source a percentage of power from renewable sources;

9 include specific targets for solar as part of the Renewable Portfolio Standard, known as a "solar carve-out."

10 have strong statewide interconnection policies that make it easy for solar to get hooked up to the grid;

Most encourage various financing options to make solar installations affordable, such as Solar leases and Property Assessed Clean Energy (PACE) financing, which allow the cost to be paid back slowly as part of real estate taxes.

These states benefit from having to install fewer transmission lines and from more of the power generated being delivered to the grid, rather than being wasted. Since solar excels most at producing energy during peak demand times, they also benefit from fewer blackouts during the summer.

Based on what's working for the "Dazzling Dozen," Environment America urges the federal government to continue key tax credits for solar - such as the Investment Tax Credit - to encourage responsible development of prime solar resources on public lands, and to support research, development and deployment efforts that reduce installation costs and make grid interconnection easier.

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# New technology and better strategy could cut data centre emissions by 88%

*Server farms could revolutionise sustainability with easy steps, claim researchers as Apple reveals pioneering solar farm*

**By Elisabeth Braw**, *Guardian Professional*,

With a population of 3,048, Yerington, Nevada, may not strike most people as very important: the town's foremost claim to fame is that several Japanese fire balloons landed there during the second world war. But that's about to change: Yerington is home to a vast new solar farm owned by Apple.

Google's data centre in Hamina, Finland, where the company has renovated an old paper mill to take advantage of the building's infrastructure and its proximity to the Gulf of Finland's cooling waters. Photograph: Google

"The project will not only supply renewable energy for our data centre [in nearby Reno] but also provide clean energy to the local power grid, through a first-of-its-kind partnership with NV Energy. When completed, the 137 acre solar array will generate approximately 43.5m kilowatt hours of clean energy, equivalent to taking 6,400 passenger vehicles off the road per year," Apple wrote in a recent statement to the Nevada public utilities commission.

This means computer server farms, the backbone of every email, document and internet search, can be made more sustainable. 88% more sustainable, to be precise. And clean energy is only a small part of the equation. According to a new report by researchers at Stanford University, Northwestern University and the Lawrence Berkeley National Laboratory, published earlier this summer in Nature Climate Change, server farm greenhouse gas emissions could be cut by 80% if companies used state-of-the-art IT equipment. Because data centre cooling consumes large amounts of energy as well, an additional 8% of greenhouse gas emissions could be cut if companies moved their server farms to cooler locations.

That's exactly what some major companies are doing. "Big cloud-computing companies like Google, Facebook, Yahoo and Apple have consolidated sustainability matters so there's one group, one responsibility," says Jonathan Koomey, a research fellow at the Steyer-Taylor Center for Energy Policy and Finance at Stanford University and a co-author of the study.

"Moving towards server farm sustainability is not always cheaper, but these companies still see it as beneficial because they can put a strategic issue behind them."

According to Google spokeswoman Kate Hurowitz, it can be cheaper too: "Our data centres use 50% less energy... We do this by building extremely efficient facilities that measure power usage, manage airflow, adjust the thermostat and use free cooling. Over the years we've saved over $1bn in energy costs."

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# Innovative development financing

*How can more resources be applied toward development in the world's poorest countries? Recent research has pointed to some promising ideas.*

By Eytan Bensoussan, Radha Ruparell, and Lynn Taliento

Of all the efforts devoted to improving economic and social conditions in developing countries, the most prominent has been the United Nations' Millennium Development Goals (MDGs), which set targets for reducing poverty and improving education, gender equality, health, and sustainability by 2015. As is true with any type of development, meeting these targets depends on resources, and a large part of the resources devoted to the MDGs come from developed countries' pledges for what is called Official Development Assistance (ODA). However, since peaking at $128.7 billion in annual net ODA in 2010, the annual total paid in ODA has declined for two years running, standing at $125.6 billion for 2012.1

Clearly, more funds will be needed if the development goals are to be met. Moreover, market inefficiencies—such as unnecessary transaction costs, misaligned incentives, and lack of performance measures—often prevent the financial assistance that is available from achieving desired results.

Given the level of need, the uncertainty in the general macroeconomic environment, and the pressures on all government budgets, we looked into potential financing mechanisms and sources to complement traditional ODA.2 We assessed a number of innovative ideas that we think merit further investigation and discussion. In this context, "innovative" refers to finance mechanisms that might mobilize, govern, or distribute funds beyond traditional donor-country ODA. Some have already been tried, others have not, and still others may carry new risks. The point of this article is not to recommend any specific solution but to shine some light on a collection of ideas we found particularly exciting as a way to either raise new funds or unlock value as society works to achieve the MDGs. Many of the ideas have the added benefit of creating a much-needed bridge for new actors, such as individuals, corporations, and emerging economies, to deeply integrate themselves into the development community.

In seeking out innovative sources of development financing, we looked across a wide range of potential contributors, including citizens, corporations, governments (of both developed and developing economies), and multilateral institutions. However, the reality is that even when other contributors are involved, most aid still flows through governments because they have the scale and responsibility to execute meaningful development-aid programs. Since we believe innovative financing should complement, rather than substitute for, government funding, our focus in this paper is on solutions in which governments are still a core part of the solution. However, we recognize there are also many good ideas that require minimal or no government involvement, such as citizen-focused fund-raising initiatives like Product RED or business-driven solutions such as bottom-of-the-pyramid ventures. Four ideas rose to the top when we screened our list based on the size of the opportunity (for example, the ability to unlock a meaningful level of additional financing or to meaningfully engage multiple actors), the technical feasibility of implementation within a short- to medium-term time frame, the potential to gain significant political momentum, and the existence of a clear and compelling role for government: unlocking value from diaspora flows, stimulating private-capital flows, encouraging private voluntary contributions through matching funds, and tackling sector-specific inefficiencies.

## Unlocking value from diaspora flows

For years, people who have emigrated from developing countries have been sending remittances to support family and friends in their native homelands. Around $325 billion of remittances flow to developing countries every year. There are opportunities to unlock significant additional value from these flows.

First, the use of diaspora bonds could be expanded. The issuance of government bonds specifically targeted at a country's emigrant population is a time-tested but underused way to raise money for development. For instance, the pioneers of diaspora bonds, Israel and India, have leveraged them over time to raise more than $25 billion and $11 billion, respectively.3 For sub-Saharan African countries, the World Bank has estimated that these instruments could raise as much as $5 billion to $10 billion annually, but so far their potential has been almost completely untapped.4 One could imagine exciting uses for these bonds, such as the funding of education or infrastructure. To assist this expansion, donor-country governments could give their counterparts in developing countries reliable demographic data that would facilitate the marketing of bonds to diaspora. Customizing the regulatory framework for the creation and sale of bonds in foreign countries at the international level could also help spread their use by lowering the costs of compliance across multiple jurisdictions and speed up the regulatory-approval process.

Second, data collected by the World Bank show that the average cost of sending money to a person's home country is about 9 percent. At their 2009 summit in L'Aquila, the G8 countries made a commitment to cut the global average cost of these transactions down to 5 percent. Given the volume of annual remittance flows, each percentage point of lowered remittance costs could unlock as much as $3.3 billion per year for developing-country recipients. All players could continue efforts toward lowering these costs. For example, governments can eliminate exclusivity clauses with money-transfer providers to encourage competition, while the private sector can continue to launch mobile-phone payment systems, learning from programs in countries such as Kenya and the Philippines.

## Stimulating private-capital flows

Private capital is an enormous source of global wealth that has not historically played as significant a role in development as its scale would suggest. This is not for lack of interest. Private capital is constantly seeking investment opportunities.5However, it only commits to those prospects that meet its appetite for risk and reward. Due to a variety of factors, many opportunities in developing countries are often perceived as overly risky or uncertain for the majority of investors. Institutions that offer to guarantee portions of loans made for such investments help investors rebalance their assessments of risk and reward and subsequently unlock capital into developing countries. For example, in the past decade, the World Bank has approved 28 guarantees worth a total of $1.4 billion. These guarantees have stimulated more than five dollars of private capital for every dollar spent by the World Bank.6 Yet this type of support remains a very small portion of the bank's approach to financing in developing countries. Since the G20 summit in London in 2009, multilateral development banks have stepped up efforts to do a better job of leveraging private capital. There is an opportunity for the G8, the G20, or individual governments to use their influence and encourage multilateral development banks—and potentially bilateral agencies—to create innovative instruments that stimulate private flows. Since guarantees may be more difficult to get through national budget processes than traditional financing, a starting point could be to work on ways to address these institutional barriers. One exciting way for private capital to contribute to development is by fueling the growth of small and medium-size enterprises (SMEs) in developing economies. Such companies are often underfunded in these regions because they typically are too small for commercial lending but too large for microcredit financing. There could be an opportunity for multiple players to collaborate in the creation of a set of financial instruments to serve this segment. Local commercial banks could provide the capital and deliver the funds when sharing some of the risk with large multilateral organizations or major foundations that provide first-loss guarantees.

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# Offices are turning their roofs into edible gardens and bee sanctuaries

***The urban roof gardens aim to increase city sustainability and engage employees, writes Tass Mavrogordato***

By Tass Mavrogordato, *Guardian Professional*,

The edible roof garden on top of the Bloomsbury Street Hotel. Photograph: in midtown

Green roofing – the practice of planting vegetation on a building's roof or terrace – is the ultimate in urban landscaping, making the most of extremely limited space to bring a flash of greenery to a cityscape.

For inmidtown, the Business Improvement District for Bloomsbury, Holborn and St Giles, it's about more than making London's roofs easy on the eye though.

The business benefits are significant, yet largely untapped. From improved

The Bloomsbury Street Hotel, before and after. Photograph: inmidtown.

employee engagement and productivity; to reduced carbon emissions, green roofs could save businesses millions in energy costs. They can improve a property's value too, and even reduce noise entering the building.

The environmental benefits are just as clear. In addition to improving insulation and thereby reducing carbon emissions and energy costs, they're an intelligent solution for businesses that hich want to adapt to climate change, which means that rainfall bursts will become shorter but more intensive, especially in summer.

Green roofs can help to contain flash flooding and improve the quality of water run-off, with Environment Agency research noting that both nitrogen and phosphorus can be reduced through green roofs. Furthermore, green roofs provide a habitat for wildlife, support the local environment by helping to lower urban air temperatures, and improve air quality. Growing fruit and vegetables, which can be used by businesses to supplement produce they buy, is the latest evolution of London's green roofs.

As part of inmidtown's bid to make the area London's most sustainable commercial district, it recently launched two organic fruit and vegetable edible gardens across central London businesses. In addition to the host of environmental benefits already discussed, these gardens support hyper-local production of produce, and enable businesses to reduce the food miles associated with their usual orders, so offer yet another incentive.

The green roofs scheme is currently supported by organisations in the area such as law firm Olswang, and the Bloomsbury Street Hotel, which are growing edible roof gardens, whilst on a further two green roofs, law firm Mischon de Reya and the Trade Union Congress are growing wildflowers to support the local bee population

The amount of upkeep needed for these roofs is minimal. The companies have established gardening clubs to maintain them, which are great for employee engagement too. Olswang's gardening club not only ensures that employees can take a proper lunch break, but also that people from different areas of the business mix together. A gardening club offers an ideal, organic, opportunity for staff from all areas of the business to unite for a common goal.

Green roofs provide a good place to pop outside for a quick break for hard-working employees, and are also great for client entertainment. Olswang gave clients honey produced by its own bees last Christmas. The inmidtown Urban Bee Project encourages local businesses to give homes to hives and provide small areas of forage in the area for bees, another component to its bid to make the area London's most sustainable commercial district.

The process of installing green roofs is streamlined, all the businesses involved in the scheme use pocket habitats, which are a series of small modular sacks filled with soil and planted. This is a far tidier, cheaper and quicker method than planting a full roof, and has the added benefit of providing form and structure to an area.

Each pocket habitat is an independent unit composed of variously textured and coloured recycled substrates and wildflower seed. The composite felt material is specifically engineered to optimise drainage to ensure plants do not become waterlogged. Drainage is a key function of green roofs – inmidtown's project was partly funded by a £15,000 grant from Drain London, and the five roofs alone will re-use nearly 87,000l of rainwater.

Furthermore, pocket habitats can be tessellated to create mosaic that specifically allows for biodiversity. They are also easily portable, which is ideal for our roofs growing vegetables, as these can be seasonally harvested and then re-used.

Green roofs are a crucial development for London's businesses, if we want to create and promote ourselves as a low-carbon city and a global leader in sustainability. Utilising the collective strength of its members, the inmidtown BID aims to establish an effective and practical model that can, and with any luck will, be replicated across the city.

<Source>

# China and India 'water grab' dams put ecology of Himalayas in danger

By John Vidal, *for The Observer*

e Ranganadi hydroelectric project in Arunachal Pradesh, India. Photograph: Alamy

The future of the world's most famous mountain range could be endangered by a vast dam-building project, as a risky regional race for water resources takes place in Asia.

New **academic research** shows that India, Nepal, Bhutan and Pakistan are engaged in a huge "water grab" in the Himalayas, as they seek new sources of electricity to power their economies. Taken together, the countries have plans for more than 400 hydro dams which, if built, could together provide more than 160,000MW of electricity – three times more than the UK uses.

In addition, China has plans for around 100 dams to generate a similar amount of power from major rivers rising in Tibet. A further 60 or more dams are being planned for the Mekong river which also rises in Tibet and flows south through south-east Asia.

Most of the Himalayan rivers have been relatively untouched by dams near their sources. Now the two great Asian powers, India and China, are rushing to harness them as they cut through some of the world's deepest valleys. Many of the proposed dams would be among the tallest in the world, able to generate more than 4,000MW, as much as the Hoover dam on the Colorado river in the US.

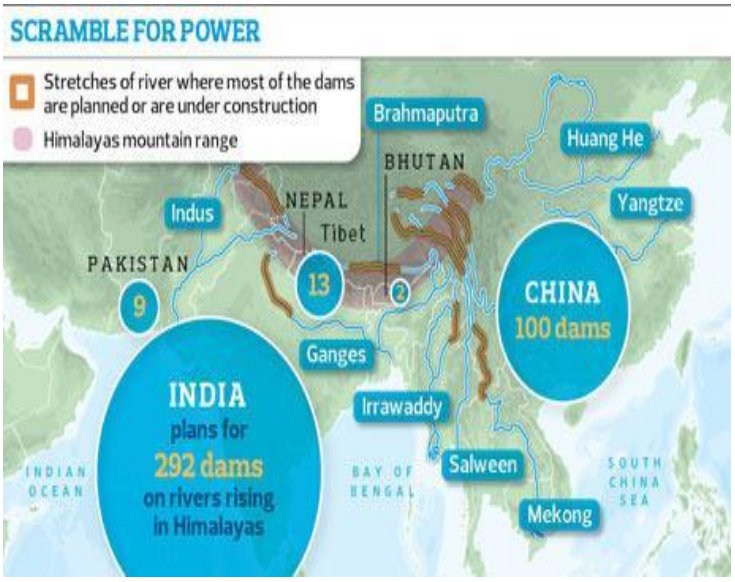
The result, over the next 20 years, "could be that the Himalayas become the most dammed region in the world", said **Ed Grumbine, visiting international scientist** with the Chinese Academy of Sciences in Kunming. "India aims to construct 292 dams ... doubling current hydropower capacity and contributing 6% to projected national energy needs. If all dams are constructed as proposed, in 28 of 32 major river valleys, the Indian Himalayas would have one of the highest average dam densities in the world, with one dam for every 32km of river channel. Every neighbour of India with undeveloped hydropower sites is building or planning to build multiple dams, totalling at minimum 129 projects," said Grumbine, **author of a paper in *Science***.

China, which is building multiple dams on all the major rivers running off the Tibetan plateau, is likely to emerge as the ultimate controller of water for nearly 40% of the world's population. "The plateau is the source of the single largest collection of international rivers in the world, including the Mekong, the Brahmaputra, the Yangtse and the Yellow rivers. It is the headwater of rivers on which nearly half the world depends. The net effect of the dam building could be disastrous. We just don't know the consequences," said **Tashi Tseri**, a water resource researcher at the University of British Columbia in Canada.

"China is engaged in the greatest water grab in history. Not only is it damming the rivers on the plateau, it is financing and building mega-dams in Pakistan, Laos, Burma and elsewhere and making agreements to take the power," said Indian geopolitical analyst **Brahma Chellaney**. "China-India disputes have shifted from land to water. Water is the new divide and is going centre stage in politics. Only China has the capacity to build these mega-dams and the power to crush resistance. This is effectively war without a shot being fired."

According to Chellaney, India is in the weakest position because half its water comes directly from China; however, Bangladesh is fearful of India's plans for water diversions and hydropower. Bangladeshi government scientists say that even a 10% reduction in the water flow by India could dry out great areas of farmland for much of the year. More than 80% of Bangladesh's 50 million small farmers depend on water that flows through India.

Engineers and environmentalists say that little work has been done on the human or ecological impacts of the dams, which they fear could increase floods and be vulnerable to earthquakes. "We do not have credible




environmental and social impact assessments, we have no environmental

**Graphic: Observer**

compliance system, no cumulative impact assessment and no carrying capacity studies. The Indian ministry of environment and forests, developers and consultants are responsible for this mess," said Himanshu Thakkar, co-ordinator of South Asia Network on Dams, Rivers and People.

China and India have both displaced tens of millions of people with giant dams such as the Narmada and Three Gorges over the last 30 years, but governments have not published estimates of how many people would have to be relocated or how much land would be drowned by the new dams. "This is being totally ignored. No one knows, either, about the impact of climate change on the rivers. The dams are all being built in rivers that are fed by glaciers and snowfields which are melting at a fast rate," said Tsering.

<Source>

# India passes world's first corporate responsibility law

By Sustainable Business News

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

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

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

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

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

Some elements are quite progressive, according to First Post Business:

Companies will be audited each year on these efforts and face penalties if they don't comply.

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

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

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

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

<Source>

# How mobile phones help bring water to India's thirsty

By Kavitha Rao, *for theguardian.com*

Most urban Indians have mobile phones. Yet, most urban Indians do not have enough water. An innovative startup, NextDrop, is turning this imbalance into an advantage. This social enterprise is using text messages as a launchpad for what it calls a "water smart grid lite" data system, which helps bring water more efficiently to consumers.

NextDrop began operations in 2010, in Hubli-Dharwad, twin cities in the southern state of Karnataka. The nearly 1 million people of Hubli get water only every three to five days, for about four hours a day, a situation not unusual in water-starved India. Water is released by valvemen at odd times throughout the day, which means consumers often have to wait by their taps for hours. Most can't afford large tanks or wells to store water.

NextDrop's solution was deceptively simple, so simple that it's almost ludicrous that no one thought of it before. With the help of local government, it devised a mobile phone system which connects valvemen to engineers and customers. Valvemen measure the level of water in reservoirs every day, and then NextDrop calls them every hour to get information on the levels. NextDrop sends the information to the engineers, who decide which areas should get water at what times, and how much, depending on supply. They then text the valvemen, who in turn text the customers, letting them know exactly when water will be released.

With searing temperatures, India is struggling to keep the domestic water supply going and many Indian residents are having to rely on water trucks to get enough supply for their homes. Photograph: Daniel Berehulak/Getty Images

This apparently straightforward solution is far more complicated than it looks. Water in India is managed by a complicated maze of private contractors and government utilities, which NextDrop has had to navigate. Training the valvemen continues to be a challenge, given many are poorly paid and undereducated. Then halfway through the pilot, bulk text messages were blocked by the government during a series of riots in Karnataka, bringing down the whole system.

Most crucially, though, smart data has always been treated as unimportant by government. "The engineers had no information on how much water there was, which pipes were leaking, which area got more water, or which area was deprived," says NextDrop CEO Anu Sridharan. "The only way engineers could figure out supply problems was when customers called and yelled at them. They were operating in the dark," she adds.

But Sridharan has unexpected praise for the way local government in Hubli has partnered with her to get valvemen and engineers on board. "I have had investors asking me. 'Why do you work with the government?' I have had problems getting funding, because people wonder why I am working with someone everyone loves to hate. Actually, the local utilities have been really keen to work with us. If you give government the tools they don't have, they can do a good job."

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# Science for the environment conference

**3-4 October 2013**

**Aarhus, Denmark**

The **Science for the environment conference** is being organized at Aarhus University Campus in the city of Aarhus, Denmark. Themes of the conference are Climate action- mitigation and adaptation, Resource efficiency - natural resources, ecosystems, raw materials and Green economy - eco-innovation. Researchers, scientists, students, administrators, managers, representatives of industry and non-governmental organizations as well as decision-makers working within these topics are invited to participate in the conference and to take stock of and assess the scientific progress towards tackling environmental challenges. And to apply the outcome to provide input to the European Commission on the knowledge gaps and future research needs in Horizon 2020.

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# International Conference on Environment Pollution and Prevention (ICEPP 2013)

**October 5-6 2013**

**Melaka, Malaysia**

The 2013 International Conference on Environment Pollution and Prevention (ICEPP 2013) will be held in Melaka, Malaysia during October 5-6, 2013. This International Conference is the premier forum for the presentation of technological advances and research results in the fields of Environment Pollution and Prevention. ICEPP 2013 is aimed at bringing together leading engineers and scientists in Environment Pollution and Prevention from around the world. This conference shall provide opportunities for the delegates to exchange new ideas and application experiences in person, to establish business or research relations and to find global partners for future collaboration.

Topics of interest for also include, Air pollution and treatment, Biofuels, Environmental Protection, Environmental Sustainability and Development, Pollution Prevention, Greenhouse Effect, Global Warming, and Climate Change, Oil Spills, Renewable and Non-Renewable Energies, Soil Pollution and Treatment, Wastewater Management and Treatment, Water Pollution and Treatment.

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## 3rd National Conference

**on**

# Environment and Biodiversity of India

**6th October 2013**

**Pune, Maharashtra**

3rd National Conference on Environment & Biodiversity of India is being organized by North East Centre for Environmental Education and Research, Imphal in association with PE Society's Modern College of Arts, Science & Commerce, Pune. The conference is scheduled to take place on October 6th, 2013 at Shivajinagar, Pune**,** Focal themes of the conference also include Climate change, Environmental pollution, E-waste & Solid waste management and Environmental laws & policies.

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# India International Cleantech Summit 2013

**October 8-10, 2013**

**New Delhi**

FICCI is launching the first **India International Cleantech Summit 2013** – *first ever platform for Cleantech ecosystem in India* – on October 8-10, 2013 in New Delhi, to bring policy dialogue on Cleantech to the forefront and provide visibility to the Cleantech community as well as Cleantech market opportunities in India.

The three-day event is designed to cater to the entire Indian and Global Cleantech Ecosystem consisting of Industry, Cleantech Innovators, Developers, Suppliers, Financiers, as well as Users. It would also bring together Governments, Multilateral and Bilateral Organizations, Research Institutes as well as Services sector that provide critical support to the Cleantech ecosystem. The summit deliberations will focus on three important pillars for clean technology – policy, financing, and markets.

The sessions of the India International Cleantech Summit are designed to brainstorm on prospects, policy, regulatory framework, barriers and enablers for clean technology investment, research, development, deployment and diffusion. The three-day summit will comprise of high-level panel discussions, conversations, networking and business-to-business meets. There would be showcasing opportunity for select global and Indian success stories of Cleantech applications which can bring about a paradigm shift and are replicable and scalable in the Indian context.

The event is being organized: 1. to facilitate an enabling policy and regulatory environment for a holistic Cleantech ecosystem in the country, and address barriers to and solutions for Cleantech investment, development, deployment and diffusion. 2. To showcase market opportunities in India for clean technology as well as global best practices in clean technology innovation, investment and adoption and 3. To provide a platform for global Cleantech companies and investors to interface with the Indian Cleantech community and end users to explore partnerships

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## GREENHOUSE 2013

**08 - 11 October 2013**

**Adelaide Convention Centre**

**South Australia**

Green House 2013 is a joint event of Australia and New Zealand which is taking place during October 08 and 11, 2013 in Adelaide, South Australia. The latest in climate change science, communication and policy from leading presenters from Australia and around the world.

GREENHOUSE 2013 will feature briefings on the contents of the IPCC 5th Assessment Report. The Working Group 1 (science) Summary for Policymakers will be released shortly before our conference. This event is designed for researchers, representatives from all tiers of government, industry and NGOs. Topics of conference include Atmosphere, oceans, biosphere and the land, Climate modelling and projections, Climate variability & extreme events, Impacts, adaptation & mitigation, Communication & policy.

This event will be particularly beneficial for researchers, representatives from all tiers of government, industry and NGOs.

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## 2013 3rd International Conference

***on***

## Petroleum and Sustainable Development (ICPSD 2013)

**12th to 13th October 2013**

**Paris, France**

The aim objective of the International Conference on Petroleum and Sustainable Development (ICPSD) is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Petorleum and Sustainable Development. The 2013 3rd International Conference on Petroleum and Sustainable Development (ICPSD 2013) will be held in Paris, France during October 12-13, 2013. This conference provides opportunities for the delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration.

Topics of the conference cover various areas of environment, green energy, pollution, conservation, sustainable development, engineering and other related topics of importance.

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## Shale Gas Environmental Summit

**22nd to 23rd October 2013**

**London, UK**

The **Shale Gas Environmental Summit** is being organized by **SMi group during 22nd and 23rd October, 2013**. Shale Gas Environmental Summit will focus on legal landscapes, manageable policy solutions, monitoring & mitigation methods, safe & sustainable extraction technologies, management of environmental risk and research on pollution and seismic activity.

The objective of the summit is to:

- sort the myths from the facts surrounding pollution and seismic activity
- Debate legislation currently in place and the evolution of policy for better regulation
- Evaluate the technological advancements in environmentally sustainable fracking solutions
- Analyse public-private awareness & engagement initiatives
- Discuss environmental risk management
- Assess the reality of shale gas as an economically viable alternative to meet the UK and Europe's increasing energy consumption.

<Brochure>

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*The Times of India, Delhi dated July 26, 2013*

# Arctic meltdown to cost global economy $60tn

Kounteya Sinha | TNN

© Paul Souders/Corbis

'ECONOMIC TIME BOMB'

London: The melting Arctic is now being called an "economic time bomb". Economic modelling shows methane emissions caused by shrinking sea ice from just one area of the Arctic could come with a global price tag of $60 trillion — the size of the world economy in 2012.

Researchers from Cambridge and Rotterdam have for the first time calculated the potential economic impact of a scenario some scientists consider increasingly likely: that methane from the East Siberian Sea will be emitted as a result of the thaw. This constitutes just a fraction of the vast reservoirs of methane in the Arctic, but scientists believe the release of even a small proportion of these reserves could trigger possibly catastrophic climate change.

"The global impact of a warming Arctic is an economic time-bomb," says Gail Whiteman, a professor of sustainability, management and climate change at Erasmus University in Rotterdam, the Netherlands. "The imminent disappearance of the summer sea ice in the Arctic will have enormous implications for both the acceleration of climate change and the release of methane from off-shore waters which are now able to warm up in the summer. This massive methane boost will have major implications for global economies and societies."

The research also explored the impact of a number of later, longer-lasting or smaller pulses of methane and the authors write that, in all these cases, the economic cost for physical changes to the Arctic is "steep".

# Badly planned city offers wrong travel choices

TIMES NEWS NETWORK

New Delhi: Transport contributed almost half of the carbon dioxide in the city and if nothing is done about it, then the gas emissions will rise by a massive 526% by 2030, says a study by Delhi IIT. Experts also say that Delhi government's focus on car-centric infrastructure in the form of flyovers and signal-free corridors, is adding more vehicles on the roads.

At a conference on transport and climate organized by the Centre for Science and Environment, experts said that badly designed cities promote the wrong travel choices, in the form of personal vehicles, which is highly detrimental to the environment.

Delhi is suffering from poor planning. As more and more flyovers and roads are being added to the capital, the number of vehicles, especially private ones, have recorded an exponential growth. The road network went up from 28,508 km in 2000-01 to 32,663 km in 2011. The number of vehicles went up from 31.64 lakh in 1999-2000 to 74 lakh in 2011-12.

CSE says that the urban design of Delhi has led to an increase in travel distances. "Delhi has the most sparsely populated central core compared to all prominent global

FOCUS ON CAR-CENTRIC INFRASTRUCTURE

cities. New Delhi's density is more than six times lower than the core regions of New York and Madrid. Delhi has a population of about 17 million, about 1% of which lives in Lutyen's Delhi," it adds.

Since density control bars more construction in the core area, travel distances and car dependency have increased. Improved planning in the core and increased density can free up a lot of valuable urban land also in the hinterland.

Research shows that a walking trip replaced by a car trip near the Nehru Place flyover, because of the detours, can lead to as much as 434 gm/person trip of carbon dioxide emissions.

In Gurgaon, replacement of direct walking access to metro stations at IFFCO Chowk or MG Road can increase walking distance by as much as 800m. If replaced by a motorable trip, travel distance increases by almost 5 times and the resultant gas emissions go up to 504 g/person trip.

Sunita Narain, CSE's director general said: "We often tend to ignore the design of the city when we talk of urban issues. How we design our cities decides how we travel to our offices and homes. Getting the design of the urban space right is crucial especially now when India is urbanizing very rapidly, promoting sprawl, making gated communities, forcing longer travel distances and putting enormous pressure on farmlands."

toireporter@timesgroup.com

# *Burger with lab-grown meat is ready to eat*

Kounteya Sinha | TNN

©the food passionates/Corbis

MOUTH-WATERING

London: The first laboratory-grown hamburger developed using bovine muscle stem cells would be unveiled in London next week. Professor Mark Post of Maastricht University in Netherlands has utilized existing technology for growing muscle cells and used 3,000 cell strands to create enough meat for a single hamburger.

Scientists say cultured beef will greatly reduced need for livestock and address the increasing global demand for food.

"The project could also be the answer that feeds the world, saves the environment and spares the lives of millions of animals. It will lead the way to environmentally friendly meat production, sustainable meat sources and cruelty-free meat production," the scientists involved in the project said in a statement. It said meat and other staple foods are likely to become luxury items thanks to the increased demand for crops for meat production unless a sustainable alternative is found.

Post said current livestock meat production is not sustainable from an ecological point of view or in terms of volume. "Right now we are using more than 50% of all our agricultural land for livestock. It's simple maths. We have to come up with alternatives. If we don't do anything meat will become a luxury food and be very, very expensive."

Experts say cultured beef will allow scientists to eradicate human disease contracted from livestock and control the level of fat content of meat products. It would also be eco-friendly as keeping livestock for food produces 39% of all emitted methane and 5% of carbon dioxide.

Further, pigs and cows transform only 15% of vegetable proteins into edible animal proteins, but occupy more than 70% of all arable land. Currently to produce 1 kg of beef requires up to 15,000 litres of water, according to UN figures.

*The Times of India, Delhi dated July 26, 2013*

# Pollution tests under cloud

## Many PUC Checking Centres Flouting Test Norms: CPCB

TIMES NEWS NETWORK

New Delhi: Diesel vehicles are five to seven times more polluting than petrol vehicles, but enforcement on keeping their emissions low is the weakest in the capital. In an inspection carried out by the Central Pollution Control Board, officials have found that more than one-third of the diesel pollution under control (PUC) checking centres were not following the test procedures. Of the 75 checked for petrol testing, two were found to be flouting the procedures.

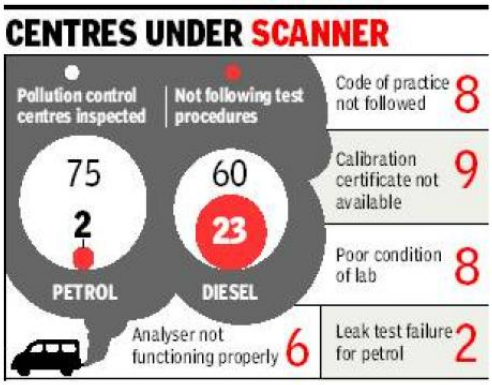
While PUC certificates were being given out by unauthorized persons at some centres, several others were flouting basic norms of calibrating instruments etc. Major violations were found in centres located at or near the Delhi border.

"Major irregularities were seen in checking diesel vehicles. In cases where the vehicle was failing under standard testing procedures, PUC certificates were being issued after recording false figures. Even the sample probe was not being inserted in the exhaust tail pipe of the vehicle in such cases. This irregularity was found mostly in the centres located in the border areas of Delhi," said the report.

In the case of CNG and other than Bharat Stage-II vehicles, pass certificates are being awarded even if value of oxygen is being found too high due to a broken silencer. "Calibration of instruments and analyzers is an important requirement for assessing reliable and accurate data. In most centers, operators were not aware about the importance of calibration even though they had training certificates for the same. Most operators were aware about the operation of instruments but some were not able to respond to basic questions pertaining to PUC norms, lambda prescribed value, leakage tests," said a CPCB official.

Some centres, the report says, did not have adequate space for checking big vehicles like buses and trucks. Some centres had been sublet to the sub-contractors. The sampling probe was dirty and choked at some centers, which affected the actual emission measurement. During inspection, it was also found that some of the operators near Tikri Border were using pirated software to simulate values of petrol and diesel analyzers without having to insert the probe inside the vehicle and simply taking photos for issuing the pass PUC certificates.

Some centers had not been visited by transport department officials in the last four to five months. Anumita Roychowdhury, associate director of the CSE said: "This study is looking at the challenges of enforcing proper testing but the problem with the existing PUC norms is that they are extremely weak for in-use diesel vehicles. Even if the tests were being implemented as per rules, it doesn't make a difference to diesel vehicles. In any case, they are only being tested for smoke density and are permitted to emit three times more oxides of nitrogen than petrol vehicles. If the test itself is ineffective, the investment that has gone into setting up this huge infrastructure will go waste."




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

# Found: Alternatives to bottled water

Amit Bhattacharya | TNN

Tel Aviv: The demand for bottled water keeps growing despite the industry being fuel-consuming and highly polluting. A new Israeli company believes it has an alternative to this pressing environmental problem — kiosks that dispense water as safe as the bottled variety without adding to the plastic menace.

Woosh is a startup that uses a patent-pending, ozone-based disinfection system at its kiosks for killing microorganisms just before the water is dispensed.

There are slots in these easily-identifiable kiosks to disinfect reusable bottles without the use of hands and multiple payment options.

"The idea is to have a network of such kiosks in a city so that people can refill their bottles on the go without worrying about contamination. Our first pilot is currently on in Tel Aviv," says Dani Oren of Woosh.


© Westend61/Corbis

SAY NO TO PLASTIC

Israel has been called 'startup nation' for a culture of entrepreneurship that encourages young people to bet on new ideas. The country's water sector is a good example of this trend, with a number of tyros bringing in innovation to address a range of needs.

Like Woosh, SmarTap is a small startup that believes it's on to a big idea. SmarTap has developed a digital shower system that gives users precise control over water temperature and flow.

The company seeks to target the hotel sector with the promise of big savings on their water bills. "There are embedded controls in the system through which flow rates can be reduced for water and energy savings without spoiling the shower experience," says Ran Zarivatch, the company's business development manager.

Water-Gen has a more established presence. The startup produces water from air, among other things. These water production units, mainly designed for combat vehicles, turn out 30-60 litres per day of potable water from humidity in the air. The water is dispensed cold from a tap installed inside a tank or other military vehicles.

"Troops need water wherever they go. In Afghanistan, for instance, 50% of Nato movements take place for supplying water to troops. Our patented heat-exchange technology produces water at the point of use, doing away with a major logistics headache," says Water-Gen CEO Arye Kohavi, himself a former soldier.

The Israel government backs such innovations by organizing a water exhibition every two years.

*The writer visited Israel at the invitation of the Israeli government*

*The Times of India, Delhi, Dated July 30, 2013*

# Quakes add to global warming

Berlin: Earthquakes may contribute to global warming by releasing methane, a highly potent greenhouse gas, from the ocean floor, according to a new study.

An international team of scientists investigated the aftermath of a magnitude 8.1 earthquake that took place in the Northern Arabian Sea in 1945. They postulated that this event caused the release of about 7.4 million cubic metres methane, into the ocean. In 2007, during a research cruise off the coast of Pakistan, the scientists obtained several sediment cores.

One of these cores contained methane hydrates, a solid ice-like structure of methane and water, just 1.6 metres below the sea floor. Investigations of these enabled the scientists to relate the 1945 earthquake to the concomitant release of methane, researchers said.

Scientists from the MARUM Institute at the University of Bremen, the Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research in Bremerhaven, and the ETH Zurich investigated hydrocarbon cold seeps at the Pakistani continental margin.

During their expedition with the research vessel METEOR, the researchers extracted sediment core samples, which they closely investigated in the lab.


© Tom Bean/CORBIS

HEAT IS ON

"Based on several indicators, we postulated that the earthquake led to a fracturing of the sediments, releasing the gas that had been trapped below the hydrates into the ocean," said first author Dr David Fischer

The conservative estimate of the methane released since the earthquake, not taking into account how much was discharged directly after the quake, is equivalent to roughly 7.4 cubic metres of methane gas at standard conditions at the earth's surface, which equals 10 large gas tankers. PTI

*The Times of India, Delhi, Dated August 01, 2013*

# CSR Not Just a Photo-op Anymore, It's Driving Social Transformation


(From Top) Jez Frampton, global CEO of Interbrand, talking about the study. Keki Dadiseth, chairman, Omnicom India, at the power-packed roundtable. Tanya Dubash, executive director, Godrej Industries, making a point.

**OUR BUREAU**
MUMBAI

The occasion was the unveiling of the first edition of Interbrand-'The Economic Times 'Best Indian Brands', an India-focused version of Interbrand's first ever league table of the most valuable Indian brands. With representatives of some of the top performers in this league present, the brand value of the room could well be the subject of another survey.

But the debate went beyond just the league pecking order — a round-table discussion featuring Jez Frampton, global CEO of Interbrand, Prakash Nedungadi, head of consumer insights and brand development, Aditya Birla, Keki Dadiseth, the chairman of Omnicom India, Tanya Dubash, executive director and chief brand officer, Godrej Group, and N Rajaram, chief marketing officer, Bharti Airtel, was also on the agenda.

One important point that emerged was the relevance of sustainability and the changing paradigms of corporate social responsibility (CSR) – up to and including the supply chain of any company's suppliers.

Nedungadi, was of the opinion that sustainability has to be intrinsic to the business. Setting the context Keki Dadiseth, pointed out, twenty years ago CSR was only a photo-op, today it is about areal opportunity. He, however, felt that "as corporates we often don't talk enough about the charity being done." Tanya Dubash, meanwhile, added, "CSR is no more about offsetting the bad being done by corporates, it is genuinely helping the social transformation."

The other issue that was top-of-mind – and in a way, on everyone's fingertips – was social media. N Rajaram, pointed out that Airtel, the leading Indian telecom brand keeps a close track on Facebook, Twitter and more, to monitor conversations about it happening in real time. After all, the brand is committed to the 18-year plus age group as the consumer who will guide them in the future and this group incidentally is very unforgiving, he added.

"The response to the Best Indian Brands 2013 was delightful in many ways. From the recognition of value creation possibilities with brands leading businesses rather than following them, to focused master brand building that may resolve the inherent challenges of the typical diversified conglomerates; the discussions involving the top 30 Best Indian brand owners were very rich and useful."said Ashish Mishra, MD, Interbrand India.

*The Times of India, Delhi, Dated August 02, 2013*

# It's a car, it's a cycle: It is a blend, an organic bike

Reston (Virginia): Mark Stewart turns quite a few heads as he zips through the streets on his neon green ELF, or "Organic Transit Vehicle." With each pedal, his feet take turns sticking out from the bottom while a gentle motor hums in the background.

What he's driving looks like a cross between a bicycle and a car, the closest thing yet to Fred Flintstone's footmobile, only with solar panels and a futuristic shape.

It's a "green" option for today's commuters.


AP

GREEN RIDE: The ELF bike is the closest thing to Fred Flintstone's footmobile

Stewart, a 65-year-old family therapist and school psychologist from Cambridge, took the summer off to drive his new ELF bike more than 1,200 miles on trails and roads using the East Coast Greenway, a bike and pedestrian trail that runs from Canada to Key West. The ELF can go up to 30 mph, combining both pedal and electric power, and reach 20 mph on electric power alone. AP

*The Times of India, Delhi, Dated August 03, 2013*

# Global warming tied to rise in human conflicts

**Kounteya Sinha** | TNN

London: Melting ice fields, increasing vector-borne diseases and erratic weather patterns have been the direct result of climate change. But scientists have now linked it to worldwide violence too saying climate strongly affects human conflict. The results were published on Friday in the journal Science.

They say a global temperature rise of 2 degrees Celsius as envisaged over the next half a century could increase the rate of inter-group conflicts such as civil wars by over 50%. The study data covers major regions of the world and shows similar patterns of conflict linked to climatic change, such as increased drought or higher than average annual temperature.

Examples include spikes in domestic violence in India and Australia, increased assaults and murders in the United States and Tanzania, ethnic violence in Europe and South Asia, land invasions in Brazil, police using force in Holland, civil conflicts throughout the tropics and even the collapse of Mayan and Chinese empires.

Researchers from the University of California, Berkeley and Princeton University say shifts in climate are strongly linked to human violence around the world, with even relatively-minor departures from normal temperature or rainfall substantially increasing the risk of conflict in ancient times or today.

© Judith Wagner/Corbis

SPARKING VIOLENCE

*The Times of India, Delhi, Dated August 03, 2013*

# Green expert on transport project panel

TIMES NEWS NETWORK

New Delhi: The Nationa Green Tribunal has directec UTTIPEC, the transport plan ning body in Delhi, to have ar environmentalist and a forest department official on its com mittee to clear transport pro jects. The order was passec while hearing a case on the construction of an elevatec corridor along Outer Ring Road after applicant Aditya N Prasad said environmental is sues were not considered.

Asking for status quo to be maintained on the project til the next hearing, a five-mem ber NGT bench constituted a committee comprising the conservator of forests, an en vironmentalist, an engineer and an architect nominated by the director-general of CPWD to visit the site again and re port if it was possible to save any trees based on the current project plan.

*The Deccan Chronicle, Hyderabad dated August 04, 2013*

# Fukushima water may break through barrier

**Tokyo, Aug. 3:** Radioactive groundwater at the crippled Fukushima nuclear plant has risen to levels above a barrier being built to contain it, highlighting the risk of an increasing amount of contaminated water reaching the sea, Japanese media reported on Saturday.

*The Asahi* newspaper, citing data from a Friday meeting of a task force working on the Fukushima clean-up at Japan's nuclear regulator, estimated

that the contaminated water could swell to the ground surface within three weeks.

The latest revelation underscores the hurdles facing Tokyo Electric Power (Tepco) two-and-half years after the quake tha destroyed the plant.

One of Tepco's bigges challenges is to contai radioactive water tha cools the reactors as i mixes with some 40 metric tons of fres groundwater pourin into the plant dail Tepco has been injec ing a chemical into th ground to build barr ers to contain th groundwater.

But the method ca solidify the groun from 1.8 metres belov the surface. — *Reuter*

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

# Lifestyle, pollution aid Vit D deficiency

Malathy Iyer | TNN

**Mumbai:** A recent study that ties Vitamin D deficiency with high BP has severe implications for India, where every fifth grown-up has hypertension. Besides modern lifestyles that cause children and adults to spend most of their time indoors, doctors say the quality of sunlight in smog-hit cities may also play a role in causing the deficiency.

Researcher Vimal Karani of University College London looked at 35 studies, covering 1.5 lakh people across Europe and North America and found that for every 10% increase in 25(OH)D concentrations, the risk of developing hypertension decreased by 8.1%. A prehormone, 25-hydroxyvitamin D (25(OH)D) or calcidiol, is produced in the liver when Vitamin D3 is synthesized (a blood test to determine its levels is also an indicator of Vit D levels).

Dr Siddharth N Shah, editor-in-chief of JAPI (Journal of the Association of the Physicians of India), said, "The association of lower levels of Vitamin D and high BP can, in part, be associated with increasing number of hypertensives in India.

Delhi-based endocrinologist Anoop Misra, though, pointed o that hypertension has a strong her itary component. "We know that sa smoking, obesity and heredity a the causes for hypertension. We c at best consider Vitamin D deficien as a fifth contributor," he said.

The theories about Vitamin deficiency and its various implic tions have gained importance the past decade. One reason cou be easy availability of diagnost tests. "When we started offeri the test about 15 years back, would get 5 to 10 cases a month said Dr Vipla Puri from Hindu Hospital, Mahim. Now her labor tory performs 1,500 tests a month

Why the sudden focus on Vitam D? Endocrinologist Shashank Jos from Lilavati Hospital, said, "The are over 200 Vitamin D receptors the body. Previously, we thought Vi min D only affected skeletal aspe of the body." It is only now that t world is learning that it is connect to the body's entire metabolism.

*For the full report, log on www.timesofindia.c*

*The Times of India, Delhi, Dated August 05, 2013*

# Soon, sun to power air-conditioned train coaches

V Ayyappan | TNN

Chennai: Soon, solar power will likely be used to light up and cool air-conditioned train coaches. The Integral Coach Factory (ICF) has kicked off a project in association with IIT-Madras to design coaches that will draw power from the sun for interior lighting and cooling.

This is the first time that the Railways is attempting to tap solar power. Being the world's biggest railway system, it plans to use innovative technology to tap alternative sources of energy to reduce dependence on fossil fuel and the power grid. The Railways sees a huge demand for air-conditioned coaches in the coming years. This demand could lead to increased spending on diesel to power the coaches. In other countries too, it is rare to use solar power on trains.

There are two ways to source power for air conditioning — power cars that use diesel and AC coaches that generate power from the speed of a train. Power cars are attached to trains like Shatabdi Express, Duronto and double-decker trains while AC coaches of other trains

Sanjay Hadkar

UNLIMITED ENERGY ON TRACKS

have self-generating systems.

"We have asked IIT-Madras to find ways to tap solar power and use it for interior lighting and air conditioning. An MoU was signed a month ago. We have started preliminary discussions with professors to work out different modalities to develop a feasible model to use solar power in running trains," said a senior ICF official.

If the project is successful, the Railways may be able to do away with power cars. "We are yet to know if power cars can be eliminated because we have to find out the extent of power that can be drawn from solar panels and how much of that can be stored effectively. These issues will be looked at by the developers he added. It is not clear how long will take to complete the project.

Powering an air-conditione coach efficiently has become a hug challenge as trains run across di ferent climate zones on a single tri

AC compartments often hav trouble with the battery syste needed to power the self-generate fixed near the wheels of the coach

The ICF has already turned renewable energy to meet its nee and has set up a few windmills generate power in the southern di tricts of the state.

# Fukushima water leaked into ocean: N-panel chief

**Tokyo, Aug. 5:** Highly radioactive water seeping into the ocean from Japan's crippled Fukushima nuclear plant is creating an "emergency" that the operator is struggling to contain, an official from the country's nuclear watchdog said on Monday.

This contaminated groundwater has breached an underground barrier, is rising toward the surface and is exceeding legal limits of radioactive discharge, Shinji Kinjo, head of a Nuclear Regulatory Authority (NRA) task force, said.

Countermeasures planned by Tokyo Electric Power Co are only a temporary solution, he said.

Tepco's "sense of crisis is weak," Mr Kinjo said. "This is why you can't just leave it up to Tepco alone" to grapple with the ongoing disaster.

"Right now, we have an emergency," he said. Tepco has been widely castigated for its failure to prepare for the massive 2011 tsunami and earthquake that devastated its Fukushima plant and lambasted for its inept response to the reactor meltdowns. It has also been accused of covering up shortcomings. — *Reuters*

***The Deccan Chronicle, Hyderabad dated August 06, 2013***

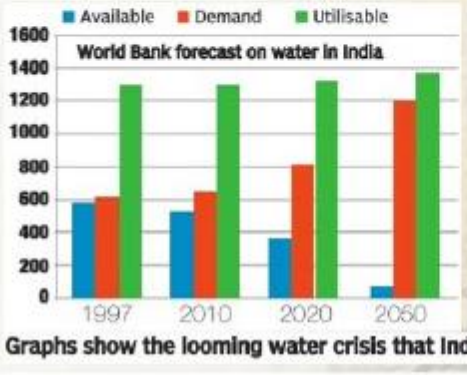
IN SEARCH OF BLUE GOLD ■ Pakistan worst hit in South Asia followed by India and China

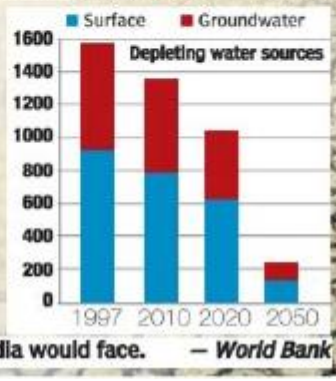
# India could face a major water crisis

**London, Aug. 5:** In an Asian Development Bank (ADB) report released last week, Pakistan was pinpointed as "one of the most water-stressed countries in the world, not far from being classified, "water-scarce".

India also doesn't fare better with children in over 100 million homes having limited access to water.

Estimates by the Indian ministry of water resources indicate that by year 2050, India's overall water demand will double, growing at a compound annual growth rate (CAGR) of 1.5 per cent. The country has about 16 per cent of the world's population as compared to only four per cent of its water resources. It receives an average of 4,000 billion cubic metres of rainfall every year, of which 48 per cent end up in the rivers. Due to lack of storage and crumbling infrastructure, only 18 per cent can be utilised. On the groundwater level scenario, India possesses about 432 Billion Cubic Metres (BCM) of groundwater replenished yearly from rain and river drainage, but only 395 BCM is utilisable. Meanwhile, Pakistan's Hafiz Saeed, the founder of Lakshar-e-Taiba has unequivocally blamed India for Pakistan's water crunch, accusing the Indian government of committing "water terrorism." The situation in China is also grim with as many as 6 million Chinese facing acute water shortage since mid-June due to drought that has caused direct economic losses of $1.98 billion, the Communist government said on Monday. — *Agencies*




Graphs show the looming water crisis that India would face. — *World Bank*

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

# Poll-bound govt sends back air pollution agenda

TIMES NEWS NETWORK

New Delhi: The much awaited 'Agenda for Air Pollution Control', which seeks to meet the ambient air quality standards in Delhi by 2017, came up before the cabinet chaired by chief minister Sheila Dikshit on Monday but was sent back to the drawing board.

While Dikshit has allegedly asked for a sharper plan with a clear roadmap to ensure implementation, it is also evident that the government wants to tread carefully and not stir up controversies on parking, urban transport and traffic just months before the elections.

While environment department officials prepare to sharpen the plan, chances of the agenda making it back to the cabinet for a final decision before the code of conduct for the assembly polls comes into effect seem low. Sources in the department said they did not have the mandate to issue directions to other departments and, hence, the proposal was generic or "open ended".

**The environment department will now work to make the agenda sharper, more focused and look at specific actions**

"The cabinet needs to clear it first before specific directions to other stakeholder departments can be issued. However, we will now work towards making the agenda sharper, more focused and look at specific actions that can be taken under each of the 10 action points," said a senior official.

With over 74 lakh vehicles in the city, transport is a major issue under consideration in the agenda. More than 55% of Delhi's population is living within the influence zone of roads and is highly vulnerable to toxic vehicular fumes. To reduce vehicular emissions, it has been proposed that Euro V and VI fuel emission standards should be introduced for new vehicles.

For on-road vehicles, stricter pollution control norms and establishment of centralized emission testing centres has been proposed. Border checks on overloading vehicles, diversion of non-destined trucks, fast-tracking of expressway construction and chalking out an inter-state public transport plan are also on the cards.

A public transport plan to reduce number of vehicles in the city has also been proposed and is to be framed by officials of DTC, transport department, DDA, DMRC, UTTIPEC, environment department, DPCC and EPCA. This committee will also conduct traffic impact assessment for projects requiring an environmental clearance. The agenda has also focused on an effective parking policy.

Besides spreading awareness, the agenda has also proposed transit-oriented zones and pro-poor mobility systems through zonal plans for implementation of a non-motorized transport network.

The agenda has also proposed the adoption of dust control regulations for the construction industry and vehicular traffic.

# Green panel notices on concretization in Gzb

Ayaskant Das | TNN

Noida: The National Green Tribunal on Monday issued notices to the Union urban development ministry, the Ghaziabad Development Authority (GDA) and Ghaziabad Municipal Corporation taking cognizance of mindless concretization in urban areas which is significantly reducing the green cover in the city.

The notices were issued following an application filed with the tribunal by a Ghaziabad-based environmental activist. The applicant had alleged that rampant civic concretization works by municipal and other authorities is not only raising temperatures in cities, but is also preventing rainwater from percolating beneath the soil.

PLEA TO SAVE GREENERY

The notices were issued by the principal bench of the tribunal headed by chairperson Justice Swatanter Kumar. Notices have also been issued to the Union environment ministry, the UP government and the National Disaster Management Authority.

It has also been contended in the application that the unbridled concretization activity is raising atmospheric carbon levels, a major greenhouse gas leading to atmospheric warming. Rapid reduction of open soil areas in cities, resulting from tiling and concretization works, is also preventing groundwater recharge and leading to wastage of up to 90% of rainwater, says the petition.

Besides, issues have also been raised in the petition as to how mindless civic concretizing activities by city development agencies is destroying green cover, choking trees to death and eliminating any further possibility of planting new tree saplings.

*The Economic Times, Mumbai,*
*Dated August 06, 2013*

# No Riverbed Sand Mining Sans Environmental Okay

OUR BUREAU
NEW DELHI

The National Green Tribunal on Monday ordered a stay on all sand mining activities in riverbeds that do not have requisite environmental clearance. The interim order came on a petition filed by the National Green Tribunal Bar Association in response to the suspension of IAS officer Durga Shakti Nagpal, who initiated a drive against illegal sand mining in Gautam Budh Nagar district of Uttar Pradesh. The petition raised the issue of "illegal and impermissible mining activity" in Uttar Pradesh, particularly on the banks of the Yamuna, Ganga, Chambal, Gomti and Revati.

"Uttar Pradesh authorities have failed and/or have intentionally not taken appropriate legal action against the project proponents and thus have abetted and willfully connived in allowing such illegal sand mining to take place in complete violation of environmental and other applicable laws," the petitioners alleged.

A bench headed by tribunal chairperson Swatanter Kumar decided to widen the scope of the petition to the entire country

as it "raises substantial environmental issues and questions arising directly from the implementation of the Environment Protection Act, 1986 and other Act."

The interim order by the green court doesn't go beyond the Supreme Court ruling of February 2013, but instead focuses on its implementation.

"This removal of minerals from the river beds is causing serious threat to the flow of the rivers, forests upon river banks and most seriously to the environment of these areas," the order said, adding that "besides violations of law, the mining activity is being carried out on a large scale, causing state revenue loss, which may be running into lakhs of crores of rupees."

The green court reiterated that the Supreme Court's February judgment makes environmental clearance mandatory for mining of minor minerals, including sand from riverbeds even in areas less than 5 hectares. The apex court ruling was clear that sand mining on either riverbank, up stream and in stream is a cause of environmental degradation and threat to biodiversity, therefore requiring monitoring and regulatory oversight.

The Supreme Court ruling has been opposed by several state governments such as Maharashtra and the construction lobby, who see mandatory environmental clearance as a hurdle.

The petition before the green court argued that a major portion of the sand mining activity is carried out without any licence or clearance from the environment ministry or state environmental impact assessment authorities. All these mining activities are in violation of the country's green laws — the Environment (Protection) Act, 1986, Air (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control of Pollution) Act, 1974.

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

With growing greens becoming a viable business option, start-up helps NGO plant 300 saplings on a 1,000sq m plot in a city school

# MINI FOREST IN BACKYARD

Jayashree Nandi | TNN

An NGO has decided to make the most of the heavy monsoon this year. Instead of a regular plantation drive, they commissioned a start-up to create a mini-urban forest in the backyard of a school in Dwarka. Tree plantations, which are usually low input and fairly easy, are undergoing a makeover. The NGO signed up the start-up because they wanted to ensure thick foliage and biodiversity value of a real forest on a small patch.

A small 1,000-sq metre land that would seem tiny even for a lawn was used to plant 300 saplings of various indigenous varieties in very close proximity to each other. Swechha conducts a "monsoon wooding" plantation drive every year around this time. This year it got a unique Bangalore-based start-up company, Afforestt, to give them technical expertise on making an urban forest for a price of about Rs 1.5 lakh.

Afforestt has created 27 urban forests in eight cities. But it is not a landscaping company; it creates patches that mimic how nature would have created a forest, says entrepreneur Shubhendu Sharma who founded the company.

Shubhendu, an industrial and production engineer who worked with a leading automobile company, quit his job in 2010 to become an urban forest entrepreneur. He had assisted noted Japanese scientist and naturalist Akira Miyawaki in developing a mini-forest in Bangalore for the automobile company he worked for.

The experience inspired Shubhendu so much that he decided to make a living out of developing forests. It took Shubhendu a couple of years to make the idea of commissioning forests instead of gardens popular with clients. But it did work eventually.

"Miyawaki's method is based on a theory called potential natural vegetation. It basically means that when a piece of land is deprived of human intervention, a forest will grow. The trees that grow in forests are all native varieties. So Miyawaki's method makes self-sustaining miniature forests," said Shubhendu, explaining the six steps that he follows while growing a forest. He also claims that the urban forests they create grow ten times faster than regular plantations. The saplings have a survival rate of about 92% through this method.

"The forest grows very fast because we create a condition that is conducive to its growth. There is enough organic matter in the soil and it's moist most of the time because of the leaves, husk and coco peat that is used. The saplings are planted in very close proximity interspaced with 'light loving' species and 'shade loving' species so that both can thrive. After about 12 months, you will notice that there is no light reaching the floor of the forest," adds Shubhendu.

The most important aspect of the exercise is to source native species. For the plot at St Mary's School in Dwarka, native saplings were sourced with great difficulty as they were not available at all nurseries. Some of the tree species that were used are amaltas, jamun, champa, goolar, maharokh, ber, shaphal, karonda, chandan (sandalwood), imli (tamarind) and kadamb.

The students and volunteers who helped are excited about the new idea. "We are expecting the saplings to be one feet high by January. It's amazing how these saplings have already started growing so fast," says Karan Desai, a Swechha volunteer. Shubhendu also clarifies that landscaping involves design and aesthetics but a forest doesn't so the clients cannot expect a manicured set of trees.

On how he sold the idea of urban forests, Shubhendu says that there was space to develop it as a business idea. "People are slowly realizing the value of forests as opposed to monocultures. I am providing them a service like any other service," he says. The largest forest that his firm has created is 5,000 square metres at a cost of Rs 30 to 40 lakh in Indore, Madhya Pradesh.

jayashree.nandi@timesgroup.com

## SIX STEPS TO YOUR OWN GREEN PATCH


### URBAN FORESTS CREATED SO FAR BY THE START-UP

| SMALLEST | LARGEST |
|---|---|
| 1,000 square metres | 5,000 square metres |

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

# No sand mining nod in two years: UPPCB

Ayaskant Das | TNN

Noida: The regional office of UP Pollution Control Board in Noida has written to the union environment ministry that it has not accorded clearances to any sand mining lease in the district in the last two years. The information

**FOREST CLEARANCE NOT ISSUED EITHER**

has been provided to the ministry, reportedly in response to a number of queries put forth to the board over issues related to sand mining in Gautam Budh Nagar.

The pollution control board informed that a letter in this regard has already been issued to the ministry. As per UPPCB, sand mining leaseholders are required to procure no-objection certificates from it before embarking upon any excavation work on river beds.

"The board has not received any application in the last two years seeking clearance for sand mining in the district. The union ministry has been duly informed about this matter," said Atulesh Yadav, regional head of UPPCB. The UPPCB said that while it did not receive any application seeking NOC in 2012-13, no such applications have been received this fiscal.

The forest department of Gautam Budh Nagar also informed it has not accorded clearances for sand-mining in one year: "Mining is not permitted without clearances from the forest department. The department has not received any application asking it to verify that the lease area does not overlap forest areas," said Ashok Kumar, DFO (in-charge), Gautam Budh Nagar.

*Deccan Chronicle, Hyderabad, Dated August 10, 2013*

# Japan N-plant crisis worsens

## 300 tonnes of toxic water leaking daily

**Tokyo, Aug. 9:** The nuclear crisis in Fukushima has deepened with reports that the crippled plant was releasing 300 tonnes of radioactive water into the Pacific Ocean.

In reaction to the media reports, Japan's Prime Minister Shinzo Abe has pledged government action on the Fukushima clean-up.

One of the proposal being considered is to freeze the ground around the plant.

The plant was badly damaged by an earthquake and tsunami in 2011. It has been hit by a spate of water leaks and power failures in recent months.

"Rather than relying on plant operator Tokyo Electric, the government will take measures," Mr Abe told reporters on Wednesday.

A file photo of Fukushima plant showing the barrier.

He added that, "This is an urgent matter that needs to be addressed."

Penn Bowers, a research analyst at CLSA Asia Pacific in Tokyo, was quoted as saying to the *BBC* that the government appeared to be set to take a bigger role in the Tepco clean-up. "The government has invested capital in the company to date but not taken any direct operational steps at the facility until now," he added.

Several sources have also raised alarm that the contaminated water may have been leaking from the plant into the sea ever since 2011 when the plant was hit by the disaster. — *Agencies*

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

# First 'electric' road charges buses in S Korea

## Public Transport Can Be Powered Wirelessly Through Buried Cables While Being Driven

Seoul: In a first, South Korea has developed a hi-tech 'electrified' road which can recharge moving electric vehicles as they drive over it.

Project developers claim that the 12 kilometre route is the first of its kind in the world and allows electric public buses to recharge their batteries from buried cables as they travel. The Online Electric Vehicle (OLEV) is an electric vehicle that can be charged while stationary or driving, thus removing the need to stop at a charging station, researchers said.

OLEV, developed by the Korea Advanced Institute of Science and Technology (KAIST), does not require pantographs to feed power from electric wires strung above the tram route.

Two OLEV buses run in an inner city route between Gumi Train Station and Indong district, for a total of 24km roundtrip.

The bus receives 20 kHz and 100 kW (136 horsepower) electricity at an 85 per cent maximum power transmission efficiency rate while maintaining a 17cm air gap between the underbody of the vehicle and the road surface. OLEV receives power wirelessly through the application of the Shaped Magnetic Field in Resonance (SMFIR) technology.

SMFIR is a new technology that enables electric vehicles to transfer electricity wirelessly from the road surface while moving.

Power comes from the electrical cables buried under the surface of the road, creating magnetic fields. There is a receiving device installed on the underbody of the OLEV that converts these fields into electricity.

The length of power strips installed under the road is generally 5-15 per cent of the entire road, requiring only a few sections of the road to be rebuilt with the embedded cables.

The road has a smart function as well, to distinguish OLEV buses from regular cars - the segment technology is employed to control the power supply by switching on the power strip when OLEV buses pass along, but switching it off for other vehicles, researchers said.

"This is certainly a turning point for OLEV to become more commercialised and widely accepted for mass transportation in our daily living," Dong-Ho Cho, a professor of the electrical engineering at KAIST, said. PTI

**SMART WAY**

South Korean developers claim the **12-km route** which allows electric public buses to recharge as they travel is the first of its kind in the world

TEST DRIVE: An OLEV bus at a bus stop in Gumi, Seoul

**Road Trip**

**2** OLEV buses run for a total of **24**km roundtrip

They receive **20**kHz and 100kW electricity at an 85% maximum power transmission efficiency rate

**Groundbreaking**

- OLEV technology will accelerate the development of electric vehicles as a viable option for **future transport**

**Electric Wonder**

- Online Electric Vehicle (OLEV) can be charged while **stationary or driving**
- OLEV does not require **pantographs** to feed power from electric wires strung above the tram route
- It receives power **wirelessly through Shaped Magnetic Field in Resonance** (SMFIR) technology, which enables vehicles to transfer electricity from the road surface
- Power comes from the electrical cables buried **under the surface of the road,** creating magnetic fields
- Smart road can **distinguish OLEV buses** and switches off the power strip when electric vehicles are not passing along

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

# Illegal mining depleting groundwater, say experts

Jayashree Nandi & Ayaskant Das | TNN

New Delhi: Large-scale illegal sand mining could be changing the face of Noida in many ways. Experts say it is likely to deplete and pollute groundwater, ruin river bank ecology and alter the course of the river. Some of these effects are already being felt.

Scientists are particularly worried about groundwater in Noida. "While the construction sector cannot do without sand, we have to understand that sand acts as a filter," says Saumitra Mukherjee (geology and remote sensing expert), School of Environmental Sciences, Jawaharlal Nehru University. "It's a permeable layer that holds water and facilitates groundwater recharge. It also filters the pollutants from the river water. If the layer of sand is missing, our groundwater can be highly polluted. It would become a saline patch if the water is not able to percolate through and that will affect agriculture as well." He recommends regulated mining in places where the sand deposition is more and leaving the present mining areas to recover.

The UP ground water department's data shows Noida's water table is going down at a rate of 70cm per year, while in Greater Noida the rate is 20cm per year. After conducting a study, the Jamia Millia University wrote to the Noida Authority in 2011 about the falling groundwater levels. The letter states that the water level was in the range of 10-19 feet when Noida was commissioned but has gone down to 70-123 feet.

Sand mining has affected the ecology of the river bed, which is home to organisms and plants

Sand mining has also affected the ecology of the river bed, which is home to many small organisms and plants. "Mining immediately destroys the habitat of these small organisms which are crucial for maintaining a healthy river ecology," says Chandra Bhushan, deputy director general, Centre for Science and Environment (CSE). Unchecked mining also weakens infrastructure like flyovers and bridges as they remain exposed due to erosion, he says.

"Sand is an integral substance for river ecology. It has a structural functioning of maintaining boundaries. So large-scale extraction weakens the boundary and destabilizes life in a river... In Chambal and Ganges rivers, gharials and turtles need sand for basking and nesting sites," says Asghar Nawab, Project Coordinator (River Basin) Freshwater & Wetlands Programme, WWF. He fears that turtles that nest along the Hindon may be very badly affected. "The Hindon has a good habitat for turtles but a lot may have been destroyed".

*Deccan Chronicle, Hyderabad, Dated August 12, 2013*

■ Burning of plastic waste pollutes area

# Nala poses health hazard to residents

A large amount of plastic waste has accumulated in the Taj Banjara *nala* making it a mosquito breeding ground. We cannot even stand in our balconies or any other open place. People are using this as a dumpyard. The plastic accumulates in the *nala* and is burnt frequently. This is causing serious health hazards to the residents living on Road No.s 11/10/13 of Banjara Hills.

Last year they built a huge tank/sub tanks, underground drainage and laid roads around lake. We heard that they were developing a park around Taj Banjara lake and the open *nala* will be covered. The work went on for eight months, but stopped suddenly. After building concrete tanks they were dismantled and now the *nala* has become a dumpyard.

Thick smoke billows from the garbage burning in the nala near Taj Banjara.

What are the authorities going to do about the *nala*? If they want it to be open they should take steps to ensure that people do not dump plastic waste in the *nala*. They should also take up frequent cleaning and provide healthy environment for surrounding colonies. We gave complaints to the GHMC on numerous occasions, but all went in vain.

***Mamatha Atluri,***
*Lake View Apartments, Road No. 11, Banjara Hills, Hyderabad.*
*9989809995*

*Deccan Chronicle, Hyderabad, Dated August 13, 2013*

ECO | FRIENDLY ■ **Proposed steps aim to make the sector more nature friendly**

# Now, green norms to govern hotels

**New Delhi, Aug. 12:** Top hotels could soon be donating leftover untouched food and partially used toiletries, allowing guests to order half portions and buying toilet tissue and towels made from recycled paper, besides re-using all their waste under the government's green agenda.

Amid concerns that posh hotels generate a lot of wastage and misuse water, these are some of the guidelines for hotels listing the "dos" and "don'ts" for ensuring an environment friendly venture that the Centre has come up with. They ask five star hotels to donate leftover untouched food to local shelters or food banks and also offer guests the option of ordering half portions to reduce food waste.

**GUIDELINES FOR PLUSH HOTELS**

**The Centre has come up with a set of rules for hotels to make them more eco-friendly:**

**Suggested steps:**

- Donate leftover untouched food to local shelters or food banks.
- Offer guests the option of ordering half portions to reduce food waste.
- Purchase refillable soap, hair rinse and hand lotion dispensers.

The guidelines prepared by the Central Pollution Control Board (CPCB) were presented in the Lok Sabha by environment minister Jayanthi Natarajan on Monday.

"Purchase refillable soap, hair rinse and hand lotion dispensers for guest rooms. Donate partially used product. Purchase towels and sheets made from 100 per cent natural cotton, containing no chemical, dyes or bleaches. Donate used linens to local shelters or other charities," they say.

The waste reduction measures include donating left over, untouched food to poor living in local shelters or food banks and "to reduce food waste, offer guests the option of ordering half portions." Assuming a 50 per cent occupancy rate, a 200-room hotel uses almost eight million gallons of water in a year, it says.

"Using water-efficient fixture could save nearly 2.5 million gallons of water a year," the guidelines say. To encourage environmentally responsible purchasing practices, the guidelines suggest to buy recycled products. — *PTI*

*The Economic Times, Delhi, Dated August 14, 2013*

# Generation-based Sops Restored for Wind Power

All projects launched after April '12 will gain; maximum incentive amount capped at ₹1 cr

SHREYA JAI
NEW DELHI

Breathing life back into the subsidy-starved wind energy sector, the government has approved the implementation of 'generation-based incentive (GBI)' that was announced in the budget this year.

After a hiatus of one and a half year without any subsidy or incentive scheme, the wind power sector would now be able to avail GBI with a retrospective effect. All the wind power projects launched after April 1, 2012 are eligible for GBI.

The government would pay the producers ₹0.50 for every unit of wind power generated. The maximum amount of incentive that could be availed has been increased to ₹1 crore from ₹62 lakh during 2011-12, a senior official at the ministry of new and renewable energy told ET. The time period for availing GBI is minimum 4 years and maximum 10 years of operations.

"This would straightway give benefit of ₹38 lakh to all the wind power producers who started commissioning after April 2012," said the official.

The wind sector has been struggling to perform and survive due to lack of any incentive for more than 16 months. Capacity addition fell by half during last financial year from 3,000 mw in 2011-12 to 1,700 mw in 2012-13. In the first half of 2013-14, wind has been able to feed 512 mw against a target of 2,500 mw. The current installed capacity of wind power in India is 19,564 mw, fifth largest in the world.

Both GBI and accelerated depreciation (AD) schemes were discontinued in April last year. GBI, however, was re-introduced this year with a budget allocation of ₹800 crore. Both MNRE and the industry have been urging the government to reinstate AD and provide clarity over GBI.

"The Cabinet has refused to restore AD citing procedural challenges," said the official. AD is a tax benefit scheme, which could be availed by any one who sets up a wind farm irrespective of the power generation. Officials also said that the finance ministry had earlier rejected AD citing that it would lead to huge loss to exchequer. AD was in force for the wind industry from 2003 to 2012. Total 17,000 mw of wind power was added in the nation's grid during this period.

*Deccan Chronicle, Hyderabad, Dated August 15, 2013*

# Study begins to set up water recycling plants

M. ROUSHAN ALI | DC
HYDERABAD, AUG. 14

Gujarat-based private agency, Multi Mantech International Private Limited has been awarded the contract for conducting feasibility studies for setting up of water recycling plants for a cluster of IT companies, government offices, industries, big residential complexes, gated communities etc. in the city.

"The idea is to treat and recycle sewerage water and sell it at a lower price to citizens. This will bring down the usage of drinking water for flushing, gardening and washing purposes and most importantly, reduce the burden on exploration of ground water," said Water Board engineer-in-chief M. Satyanarayana.

The Water Board had announced nearly a year back that it would be coming out with a policy making it mandatory for every apartment complex with more than 20 flats to have mini-water recycling plants.

Employing Mantech to conduct feasibility studies is the first step towards formulating a comprehensive policy, officials said.

The water recycled by these plants would be utilised for non-drinking purposes like washing, flushing, watering gardens, supplying to industries etc.

If the scheme is implemented in multi-storeyed residential complexes, big gated communities and commercial complexes, it is expected to save a minimum of 20 crore litres of water every day, added officials.

Water Board chief general manager (Projects) Sridhar Babu said Mantech had also been given the task of suggesting the size of recycling plants to suit the requirements of a city like Hyderabad.

The studies will also cover the existing Sewerage Treatment Plants at Amberpet, Nagole, Nalla Cheruvu, Attapur and Hussain Sagar.

The firm will submit the project report in six months.

**THE PROJECT**

- Gujarat-based private agency, Multi Mantech International Private limited has been given the contract to conduct feasibility studies about setting up of water recycling plants for a cluster of IT companies, government offices, industries, big residential complexes and gated communities etc.
- The idea is to treat and recycle the sewerage water and sell it at a lesser price to the citizens.

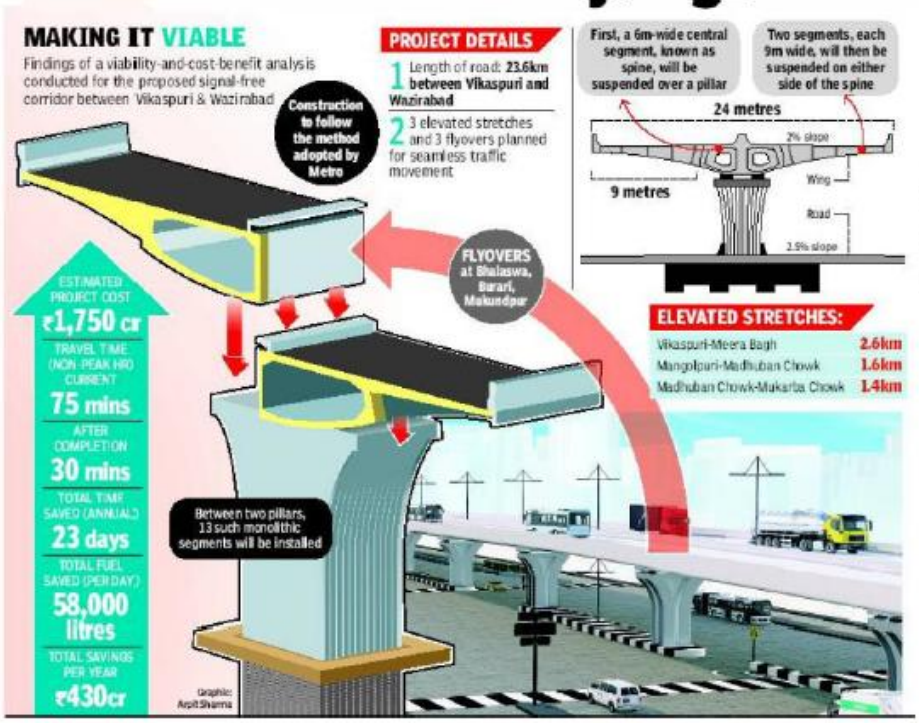
**The Benefits**

- **Water Board says that this will bring down the usage of drinking water for flushing, gardening etc. and and reduce the exploration of ground water.**
- **Officials say that If the scheme is implemented in residential complexes, big gated communities and commercial complexes, it is expected to save a minimum of 20 crore litres of water every day**

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

NGT COMMITTEE SUGGESTS PWD RETHINK DESIGN OF VIKASPURI-WAZIRABAD ROAD TO SAVE TREES

# Green rider to delay signal-free corridor




Neha Lalchandani | TNN

New Delhi: The National Green Tribunal committee's recommendation that PWD rethink the design of the Vikaspuri to Wazirabad elevated road is likely to delay the project by a few months at least. The present deadline for the project is the middle of 2015.


The committee, which submitted its report to NGT last week, said PWD needs to redesign the project to try and save several trees that would otherwise have to be cut. NGT has allowed construction of only the central verge for now.

"We are waiting for the court's final order and if they so decide, we will have to work out some other design and submit it to UTTIPEC for clearance. The process, however, will be long-winded and could easily delay the project by six months," said a senior official. PWD's problem may be compounded by NGT's direction to UTTIPEC for including an environment expert in the committee for clearing such projects. The agency is already facing flak for the massive tree-felling exercise it has proposed to make this 23.6km stretch almost signal free.

**NGT has allowed construction of only the central verge of the corridor for now**

The elevated road is a unique project for Delhi as the six-lane wide road will be supported by a series of single columns. "Such a design has never been used in Delhi; Mumbai has used it for the only such project in India. The construction will be similar to that undertaken for the Delhi Metro work. First, a 6m-wide central segment, known as the spine, will be suspended over a pillar. After this, two segments, each 9m wide, will be suspended on either side of the spine, and these three pieces will be connected through cables in a process known as stressing to make one monolithic structure," explained a senior official.

The new design, said sources, would be slightly more expensive than the conventional methods in use but would turn out to be quite economical in the long run. "We are in the process of acquiring machines for this design, which is our biggest expenditure. Once the infrastructure is in place, the design is actually more economical. This process also requires less ground area as only pillars have to be constructed," said a source.

Officials said though work on the central verge had started, they needed directions from NGT if they had to continue with it. "We have to make diversions for the traffic, and that would mean eating into the green space that the court wants us to preserve. The matter needs to be resolved at the earliest as we are likely to face a huge set back in the project otherwise," said an official.

The tenders peg the project, which includes three elevated stretches and three flyovers, at Rs 1,750 crore, while its sanctioned cost is Rs 2,300. The elevated stretches will include 2.6km between Vikaspuri and Meera Bagh, 1.6km between Mangolpuri and Madhuban Chowk, and 1.4km between Madhuban Chowk and Mukarba Chowk. The three flyovers will come up at Bhalaswa, Burari and Mukundpur. Officials said the project is likely to cut down travel time from 1.15 hours during off-peak hours to about 25 minutes.

neha.lalchandani@timesgroup.com

*The Economic Times, Delhi, Dated August 16, 2013*

# Green Min Streamlines Clearance Process for Hydro Projects

URMI A GOSWAMI
NEW DELHI

The environment ministry has streamlined the clearance process for hydro power projects to avoid duplication and reduce the time required. Hydro power projects require environment and forest clearances, which are recommended by two separate committees. The expert appraisal committee, which looks into environmental parameters, is set up under the Environment Protection Act. The forest advisory committee, which considers the diversion of forest land, is set up under the Forest Conservation Act.

There are overlapping issues such as impact on biodiversity, which need to considered by both environment and forest committees while assessing the project for clearance. The ministry has decided that "once an issue has been examined and looked into by one committee, the details and findings could be shared with the other committee to avoid duplication of efforts", an environment ministry order said.

The expert appraisal committee has been designated as the principal on the question of environmental flow of a river. The results of the environmental committee's deliberations and study on the issue will be shared with their counterparts dealing with forest clearance.

However, assessing the impact of a project on biodiversity, the ministry is of the view that agencies preparing the environmental impact assessment report and environment management plan are not equipped to address the issue. A study of the project's impact on bio-diversity will be undertaken by specialised institutes, the Wildlife Institute of India and the Indian Council for Forestry Research and Education will identify such institutes in each state.

"Some institutes in the country are well equipped with expertise and resources with regard to examination of bio-diversity issues. Therefore, their knowledge and expertise may be harnessed on bio-diversity aspect for ensuring a sound assessment of this cardinal component in EIA studies and preparing an effective EMP," the order said.

Environment minister Jayanthi Natarajan has been keen on a thorough assessment of the impact of projects on bio-diversity. The move to entrust the assessment to institutes with the requisite specialised knowledge is a step in that direction, without increasing the time taken for clearances.

The environmental appraisal committee is being made responsible for ensuring that a cumulative impact study of the river basin is conducted

The ministry has asked state government to make a scientific assessment of the carrying capacity or the optimal number of projects that a river basin can support. This assessment will be crucial while considering all hydro power projects. The ministry has asked that these studies be completed in the next two years.

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

# *Thanks to global warming, apples losing their crunch*

Paris: Global warming is causing apples to lose some of their crunch but is also making them sweeter, a study said on Wednesday.

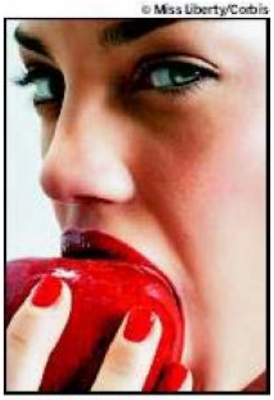
Analysing data gathered from 1970 to 2010 at two orchards in Japan, a research team said there was clear evidence that climate change was having an effect on apple taste and texture.

"All such changes may have resulted from earlier blooming and higher temperatures during the growth season," they wrote in the journal Nature Scientific Reports. About 60 million tonnes of apples are produced every year, making it the world's third most popular fruit.

Previous studies had shown that global warming was causing apple trees to flower later, and that harvests were also affected by changes in rainfall and air temperature.

The orchards used in the study produce the Fuji and Tsugaru apples, the two most popular kinds in the world.

The farms are located in Japan's Nagano and Aomori prefectures, which had seen a mean air temperature rise of 0.31 and 0.34 degrees Celsius, respectively, per decade.



BITTER-SWEET BITE

The orchards were chosen because there had been no changes in cultivars or management practices for extended periods, thus ruling out non-climate factors like technological improvements in the apple change.

The data collected over the years included measures of acid and sugar concentration, fruit firmness and watercore -- a disease that causes water-soaked areas in the flesh of an apple. The analysis showed a decrease in acidity, firmness and watercore, but a rise in sugar concentration over time. AFP

*The Economic Times, Delhi, Dated August 16, 2013*

# Indian realty scales up to adopt CSR as a strategy

**ET Realty** explains how CSR is slowly spreading its wings in the Indian realty sector and brings out the difference between working for society and brand building of one's organisation

RAVI SINHA

Corporate Social Responsibility (CSR) is a new concept in the Indian real estate segment and companies are still going through the learning curve. Some are adopting it with a greater amount of conviction, while for others, it is an emerging trend to explore with a 'why not' mindset. However, smart realty companies have discovered the benefits of CSR, both, in terms of engaging their stakeholders as well as becoming a brand enhancer. A beginning has definitely been made, wherein CSR has, of late, made inroads as a strategy within the segment. Companies are slowly but surely shifting their focus to broader and deeper issues surrounding sustainability, accountability and governance concerns.

A real estate company organises a painting competition, another undertakes a sweeping drive for a day. Some companies organise schooling for the children of construction workers. Yet another organises a blood donation camp for a day as its CSR effort. Welcome to the world of CSR in the Indian real estate sector.

Realty companies are now beyond the stage of getting into CSR only for fulfilling mandatory provisions. This, despite the fact that CSR means different things to different companies and hence, the Indian realty sector has not completely been able to link CSR strategy with their overall brand image. It is in general believed that while a local brand can take a selective and partial approach in the formulation of a CSR strategy, a global brand strategy should be defined from a multidimensional and multi-stakeholder perspective.

This brand strategy however, is yet to take off in Indian real estate, which is predominantly a local business but is increasingly striving to be seen in global markets. The realty companies are, by trial and error, trying to formulate CSR strategies that enhance their brand image from a local perspective and the glocal (global and local) objective of fund raising. Many of these companies are well aware of the fact that CSR cannot be a brand driver and there is no scientific metric to calculate ROI the way other branding efforts are being evaluated. Still, the intent is increasingly scaling up.

Dilpesh Bhagtani, executive director, Jaycee Homes, says that CSR alone cannot be the catalyst for brand building; there is no case study as such. CSR is seen more as a responsibility towards society rather than a business promotion activity. "CSR brings a company into the limelight as a socially responsible company. It also goes to say that a company understands the need of the day towards the entire society, be it towards a green revolution or towards specially-abled children or even patients with terminal illness who cannot afford treatment. This forms a very different kind of branding for a company and has a rub-off effect on the company, rather than a direct branding impact," adds Bhagtani.

However, there are others who believe that CSR must be linked to brand positioning in the overall scheme of things. Jackbastian K Nazareth, group CEO, Purvankara Projects, advocates that brands must operate responsibly in the communities they serve. This is particularly

**REALTY COMPANIES ARE NOW BEYOND THE STAGE OF GETTING INTO CSR ONLY FOR FULFILLING MANDATORY PROVISIONS. THIS, DESPITE THE FACT THAT CSR MEANS DIFFERENT THINGS TO DIFFERENT COMPANIES AND HENCE, THE INDIAN REALTY SECTOR HAS NOT COMPLETELY BEEN ABLE TO LINK CSR STRATEGY WITH THEIR OVERALL BRAND IMAGE**

true of real estate brands, as the category has historically been mired in perception issues. "CSR activities are a credible brand building tool and must be leveraged. Companies like ours, have over the years, focused on CSR activities, including responsible environment management, providing on-site labourers humane working conditions, enriching local communities through social and skill-building interventions," says Nazareth.

Kishor Pate, CMD, Amit Enterprises Housing, gives it a different perspective when he examines if in India, one should look at CSR, as a new concept at all. In fact, it is as old as the concept of business itself. "It is only in the last fifty years or so that it has become a matter of social debate and public opinion. However, socially aware and responsible companies have been

**COMPANIES ARE SLOWLY BUT SURELY SHIFTING THEIR FOCUS TO BROADER AND DEEPER ISSUES SURROUNDING SUSTAINABILITY, ACCOUNTABILITY AND GOVERNANCE CONCERNS**

engaged in some form of CSR or the other for much longer than that. India is a country in which companies have always been expected to give back to society. This principle is firmly rooted in our ancient history and dates back to the days of Chanakya - India's very own ancient business guru," adds Pate.

Manoj John, VP, corporate planning and strategy, RNA Corp, claims to have a broader CSR platform called Responsible Living, which is about adopting certain responsibility towards improving the quality of life and towards the environment. "This concept of Responsible Living governs the design process to create a project that improves the quality of lives of inhabitants and the eco-system around. We also conduct area adoption programmes around our project location to promote the concept. It is usually a year round programme that enhances the awareness on practices like sewage collection and disposal, conservation of water, improving green-cover in open spaces," says John.

Kamal Khetan, CMD, Sunteck Realty also claims that being a responsible corporate entity, CSR forms a very important aspect of their day-to-day functioning. They have formed Sunteck Foundation that is a dedicated entity which under its umbrella, supports various initiatives that lead to social betterment. "This includes a wide spectrum of activities like green initiatives, education support, empowerment of the underprivileged and many more. The Sunteck Foundation under its umbrella, supports initiatives like tree plantation, medical check-ups, notebook distribution, food distribution and many other such initiatives," says Khetan.

Devang Varma, director, Omkar Realtors & Developers, puts it in a slightly different perspective when he says the CSR perspective is interwoven in the business model as any form of redevelopment impacts the society at large and stakeholders in specific. "At different levels of brand communication, the essence of upliftment of the economically weaker segment and direct/indirect benefits accrued by quality and responsible redevelopment gets communicated to our audiences," says Varma.

While there have been very few successful case studies in effective CSR strategy by the Indian real estate, some endeavours, of late, indicate the shift towards wilful CSR. For example, in Kolkata, a leading real estate consortium has stepped forward to fund the clean-up of Bank Plot Jheel, a water body that was under threat from land sharks in Saheednagar area, off the Prince Anwar Shah connector to the Bypass. The development by the consortium is significant, as it points to a change in the mindset of realty players vis-à-vis their connection to the public. "When the centre has mandated that we spend a portion of the profits on activities that reflect corporate social responsibility, it makes sense to invest in improving the environment of neighbourhoods because that will make the place more livable and hence, more amenable to development," says Sushil Mohta, director, South City Projects.

Some more matured property markets globally, have successfully defined the CSR programmes for the right reasons. Their Indian counterparts are scaling up gradually but in order to remain authentic, it is critical that all levels of management are committed to a comprehensive CSR programme for the right reasons and not simply for financial gains and some media visibility.

*(The writer is CEO, Track2Realty)*

*The Economic Times, Delhi, Dated August 16, 2013*

# This Market is the Future of Food

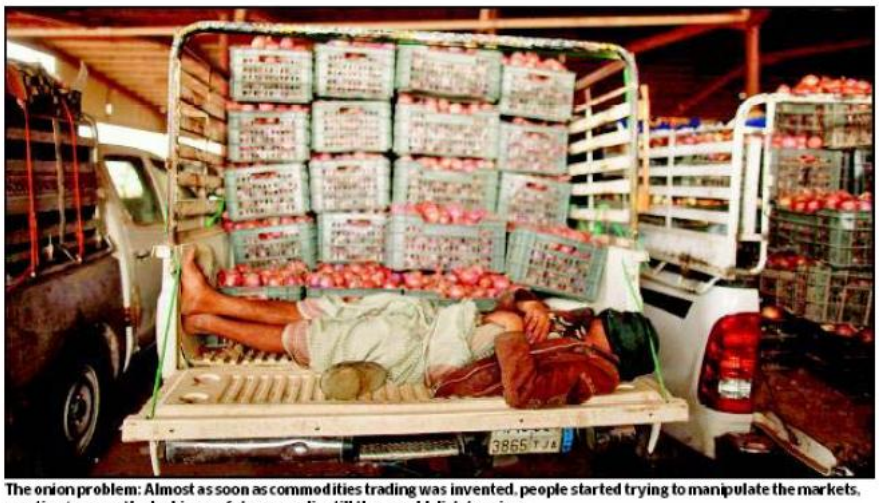
With liberal servings of history, commerce and intrigue, the story of commodity markets always makes for a fascinating read

**Garam Masala**

VIKRAM DOCTOR

Jignesh Shah, the currently embattled financier, is someone who attracts strong opinions of all kinds. But on one point, perhaps, there can be agreement: his passion for commodity markets is very real. He has made much money from them, which helps, yet he has gone far beyond other traders in promoting them. Quite apart from founding the Multi-Commodity Exchange of India, he has proselytised endlessly for commodity markets in innumerable interviews, articles and lavishly produced books, including a history of Indian commodity markets.

This book, *Back to the Future: Roots of Commodity Trade in India*, written with Biswajeet Rath, a professional historian, mirrors Shah's enthusiasm for commodity markets. It traces ancient Indian trade routes and details products sold along them, calling them all commodities and implying that any market where they were traded, be it village *mandi* or urban bazaar, was an embryo commodity exchange. There are plenty of interesting pictures, like of the cubical weights discovered at an Indus Valley civilisation site, which it suggests were used to measure commodities.



The onion problem: Almost as soon as commodities trading was invented, people started trying to manipulate the markets, creating 'corners' by locking up future supplies till they could dictate prices

### PRICE SETTING

But at times one gets a sense of conflict between the authors, with the academic Rath sticks to facts while the promoter Shah strains to move beyond. For example, they quote Kautilya's *Arthashastra* on the way to price imported products: an expert was to do this "after calculating the production of goods, duty, interests, rent and other expenses." This might seem a straightforward description of price setting by a governing authority, but the authors note that this has been interpreted (by who?) as evidence of futures trading in ancient India, then immediately debunk this while still ending by writing that "*Arthashastra* seems to suggest the probability of the existence of forward trade in ancient India."

Passages like this leave readers of the book slightly befuddled which is always how it seems to be, at least for me, with commodities. You have a sense of something interesting, perhaps a promise of much money to be made, but you are also unsure what exactly is going on, and uncertain whether it's really possible for you to find out. Most commodities coverage in the media is this mix between detailed and vague, and while investors like Jim Rogers are always exhorting us to buy commodities, they always seem to end up burning quite a few people — not just investors, but all of us consumers who are the actual end point for what these markets trade in.

### ONION SCANDAL

Onions are just the latest example, and it is interesting to read in Kara Newman's new book *The Secret Financial Life of Food*, that in 1953 a big onion scandal in the USA led to a ban on onion trade and stricter market regulations overall. She notes the extra irony that this happened in Chicago, the global centre for commodity trading, which "derived its name from checagou, an Algonquian word that means 'wild onion' — a fitting omen of things to come at the Chicago Mercantile Exchange." More than any other book, Newman's tries to add clarity to commodities, and if one still ends it a bit unclear, it is possible this something built into the business, at least for ordinary people.

As it happens, Jim Rogers was Newman's starting point. While working as a financial editor she read a report where he declared: "Buy Breakfast!" By this he meant invest in futures in pork bellies (used to make bacon) and orange juice. Newman wanted to be a food writer and immediately recognised this was an area of immense importance that few had really delved into — the markets that dictate what the vast majority of farmers grow and what consumers really get to eat. She enrolled in a course on commodity derivatives which reads like a menu: pork bellies, grains like corn, wheat and oats, and 'softs', which include cocoa, coffee and sugar.

A list of commodities that were once traded in the US, and still are in some countries, yields even more food items like butter, cheese, eggs, milk, pepper and rice. The last was of particular significance since some historians date the first futures market to Osaka, Japan in 1730 where feudal lords set up warehouses to store rice received as land tax, and merchants traded 'rice tickets' based on the contents of these warehouses.

**Some historians date the first futures market to Osaka, Japan in 1730 where feudal lords set up warehouses to store rice received as land tax**

Pepper futures may even predate this by far, and give a direct link to India. From Roman times pepper lead a trade in spices that resulted in regular trade with its source in India. During the Middle Ages, when most other forms of luxury consumption declined, a European trade in pepper continued, with regular fairs to trade in them. Most transactions were based on what was immediately available (spot delivery), but when ships and overland caravans had not arrived in time, contracts came to be drawn "to sell merchandise 'to arrive' or 'for delivery' at some future time. These contracts made up the crude beginnings of what is now called a futures market."

Newman's book focusses on the US, and Chicago in particular, so she doesn't develop on these other, earlier markets.

### TOOLS OF TRADE

Perhaps the most important tool was the railways, which in Chicago was partly created by farmers. One of the first major rail lines was first funded by collecting $20,000 worth of subscriptions in a single day in 1847 from farmers who had come to Chicago to sell their harvests — they saw at once how much they could save with rail transport. Another tool was grain elevators, the gigantic storage facilities which, Newman notes, forced a crucial standardisation on the market. Because elevators made it impossible to store many different grades of grain separately, farmers had to grow just a few varieties, which helped simplify the market — and made more complex trades possible.

But here is where dissonance creeps in between Newman's ambitions as a commodity historian and a food writer. It is hard to ignore the fact that it is this standardisation in agricultural production and the break between farmers and final consumers that many food writers, like Michael Pollan, excoriate as the root of problems with our food system such as biologically fragile and environmentally dangerous destructive monocultures, or cheap, but unhealthy food. Corn, another commodity created by Chicago, is the prime example, a product implicated in everything from soaring diabetes rates due to corn syrup in soft drinks, and heart disease and pollution problems caused by the vast livestock herds fed on corn.

The other problem with commodity markets is our onion one — almost as soon as they were invented, people started trying to manipulate the markets, creating 'corners' by locking up future supplies till they could dictate prices. Newman compiles many colourful examples of this from Benjamin Hutcherson's wheat corner of 1888, which greatly embarrassed his son, who was the president of the Chicago Board of Trade, to the 1897 wheat corner lead by a 28-year-old novice that was destroyed by an older trader furious at his presumption, to the Great Salad Oil Swindle of the 1950s, which involved outright fraud in the form of containers filled not with soya bean oil and cottonseed oil (both used for salad dressings), but with water with just a few inches of oil floating on top.

Newman argues, fairly enough, that such examples are the exceptions that make the news, and that most of the time commodity markets prevent continuous inefficient price fluctuations and ensure long-term supplies of affordable food. She also points out that the trend to organic farming and smaller scale, mixed culture farms are a useful complement to the commodities business for those who can afford it. This isn't really engaging with the commodity critics — for example, through a robust examination of whether alternatives to commodity markets can really supply modern economies (the farming failures of the Soviet Union are one example). But perhaps that would be a different kind of book.

### MARKET CHANGING

What Newman doesn't quite answer either is whether these markets are really meant for mainstream investors. What emerges from her detailed descriptions about different food markets is that specialised knowledge is needed to succeed in them, and this can't be gained from a relatively easy study of earnings reports and economic conditions, but from issues of farming, climate, transport and product uses that vary with each commodity.

And the second problem is what we see with onions — because these markets deal with products directly consumed by most people, big jumps can become big news which tarnishes traders and forces government intervention.

Newman chronicles, with some sadness, how old outcry markets, with their arcane lingo and hand signals, are dying, to be replaced by electronic screens which bring them more in line with mainstream financial markets. Yet, the underlying reasons for the booms and busts of the many food markets she describes remain, and despite the promotional efforts of people like Mr Shah, are always likely to give a pause to investors who want a bite of them.

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***The Times of India, Delhi, Dated August 17, 2013***

## Green award for stadium

New Delhi: The Confederation of Indian Industry-Indian Green Building Council on Friday awarded Delhi government for developing Thyagaraj Stadium as the first green stadium in India. The stadium was constructed during the Commonwealth Games 2010. "It is a great honour for the government. The stadium is unique as recycled water is used for flushing and landscaping," said CM Sheila Dikshit. TNN

***The Economic Times, Delhi, Dated August 17, 2013***

## SC Asks Green Body to Consider MP Request for Sand Mining

OUR BUREAU
NEW DELHI

The Supreme Court asked the National Green Tribunal on Friday to consider the Madhya Pradesh government's request to review the mandatory environmental clearance for all sand mining within seven days.

The Madhya Pradesh government petitioned the court seeking an exemption from environmental clearance for mining leases that was for less than 5 hectares. The state government sought the review claiming that green tribunal's order was resulting in "complete stifling" in the supply of sand, which is "essential for construction industry besides other uses".

The National Green Tribunal on August 5 passed an order restraining all sand mining activity that did not have the requisite environmental clearance. The tribunal's order was a reiteration of the Supreme Court's February 2012 ruling in the Deepak Kumar versus Haryana, which made environmental clearance mandatory for mining of minor mineral, including sand from river beds even in areas less than 5 hectares. The apex court ruling was clear that sand mining on either river bank, up stream and down stream is a cause of environmental degradation and threat to biodiversity, therefore required monitoring and regulatory oversight.

The court ruling has been opposed by several state governments such as Maharashtra and the construction lobby, who see mandatory environmental clearance as a hurdle. Following the court's ruling, the environment ministry issued an order in May 2012, which stated that all mining projects of minor minerals, including their renewal, irrespective of the size of the lease would require prior environment clearance.

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

# Govt plans incentive for green power

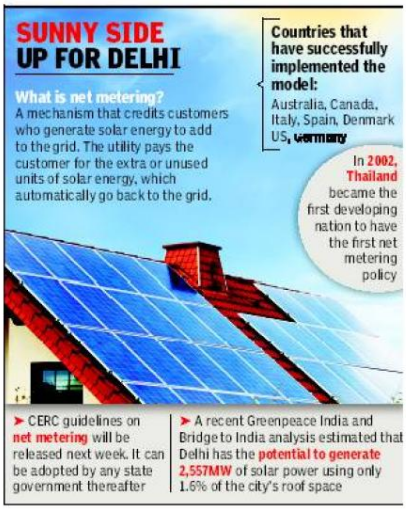
## New Solar Policy To Pay Users For Every Unit Of Conventional Energy Saved

Jayashree Nandi | TNN

New Delhi: If you generate power from a rooftop solar project, the Delhi government will soon incentivize your efforts. A new solar policy upholds "production-based subsidy" which means that the government will pay you for the units of energy you save by using solar power. As of now, there is a "capital subsidy" scheme which involves a rebate of a fixed sum on installation of solar water heaters in Delhi.

While this policy can inspire consumers to invest in solar energy, the Delhi environment department officials say that it can be implemented only after Delhi Electricity Regulatory Commission (DERC) notifies net metering guidelines. Through a net metering system the utility can monitor how much solar energy a consumer is generating at home and if the consumer is generating more power than his requirements, then excess power is returned to the grid.

The consumer is paid for the units that he generates in excess. Over and above the feed-in tariff, the Delhi government is planning to give a small subsidy to producers of solar power. "It will be a nominal subsidy over what they get by feeding in excess power," said an environment department official.




"Our policy moves away from the current method of giving capital subsidies. The highlight of the policy will be production-based subsidy where customers will be reimbursed based on the units of energy saved. This we hope will motivate customers to invest in solar rooftop projects and solar water heaters and also to maintain them," environment secretary, Sanjeev Kumar told TOI.

"It should be ready shortly. DERC has to fix the tariff and net metering system before it goes to cabinet for approval," he added.

The concern with solar heaters was that despite the capital subsidy people were not using it. "People don't maintain the solar water heaters and stop using it after a point. If the subsidy is generation-based and customers are reimbursed every month for it, they will maintain their systems," said another official.

Environmentalists are excited about the new policy because it is customer centric. "We have supported a production-based subsidy policy all along. It is better because it keeps the customer engaged and motivated to maintain a solar generation system. An upfront payment of subsidy like in capital subsidy is not as effective," said Abhishek Prata, renewable energy campaigner, Greenpeace India.

The Central Electricity Regulatory Commission has prepared guidelines on net metering which will be released next week. "The guidelines include every detail of metering, energy accounting and how commercial transactions will be done. Any state government can straightaway use the document to regulate net metering," said Rakesh Shah, advisor, CERC. The guidelines are based on net metering systems in Germany and US.

In 2012, the Delhi government had scrapped its previous solar policy. The government officials had felt that the scheme could be exploited on many grounds and people could produce power through cheaper means and sell it to utilities at a higher rate. But this is not possible according to experts. "Through net metering you can monitor the source of the energy. I don't think it's the reason for scrapping the previous policy," said Abhishek. Environment department officials said they had to scrap the previous policy because solar power tariff was very high then. "Now, it's almost at par with conventional energy," said an official.

***Deccan Chronicle, Hyderabad, Dated August 19, 2013***

## SUN SHINES ON IDEA TO MAKE HYDROGEN FUEL

SCI TECH

**A RESEARCH TEAM** has moved closer to what some call the Holy Grail of a sustainable hydrogen economy — splitting water with sunlight.

The scientists have devised a solar-thermal system designed to use a vast array of ground mirrors to concentrate sunlight onto a single point atop a central tower up to several hundred feet tall. The tower would gather heat to roughly 1,350°C and then deliver it into a reactor containing chemical compounds known as metal oxides.

An artist's concept of a hydrogen production plant that uses sunlight to split water in order to produce clean hydrogen fuel. —*University of Colorado Boulde*

As the metal oxide compound heats up, it releases oxygen atoms. The team from the University of Colorado Boulder showed that adding steam to the system would cause oxygen from the water molecules to adhere to the metal oxide surface, freeing up hydrogen molecules for collection as hydrogen gas. — *Scienc*

*The Times of India, Delhi,*
*Dated August 20, 2013*

# Green tribunal wants list of polluting industries in Noida

Ayaskant Das | TNN

Noida: The National Green Tribunal on Monday asked the UP Pollution Control Board (UPPCB) to produce an exhaustive list of polluting industries in Noida so that liabilities can be fixed on them for damaging the environment. A period of two weeks has been granted to the pollution board to prepare and submit the list.

A bench of the tribunal headed by Justice VR Kingaonkar ordered the pollution board to furnish the list after it was contended on Monday that industrial units should also be made to compensate through the 'polluter pays' principle. The contentions were raised by the counsel for the petitioner in a case in which it has been argued that industrial pollution in Noida has resulted in adverse impacts upon the health of residents. "Industries that have bypassed environmental norms should be held responsible for the critical state of the air in Noida. Compensation paid by them should be used towards cleaning the air," said Raj Panjwani, counsel for the petitioner.

Subsequent to filing of this case last year, a number of Noida industries upgraded their pollution control devices to control quality of emissions and effluents. The case had been filed in 2012 based on the results of a nationwide survey conducted by Central Pollution Control Board (CPCB) in which Noida had been categorized as a 'critically polluted area' for scoring low on different parameters related to environmental pollution.

Prem Bisht

The NGT wants to fix liability on factories for damaging the environment

The petitioner has contended that though individual industries in Noida have begun regulating their functional mechanisms to cut down upon environmental pollution, they should not be allowed to go scot-free as far as their role in the past is reduced the city to a critically polluted area.

In order to take stock of the quantum of environmental pollution caused by industries, the pollution board has been asked to identify the nature of activity of each unit together with its date of establishment. The tribunal has asked the board to list those industries which have erred in installing or undertaking proper maintenance of their effluent treatment plants. The board will also have to enlist industries which cause pollution through improper maintenance of chimney stacks or through usage of old diesel-run generator sets.

# Forest bench to be named green bench

TIMES NEWS NETWORK

New Delhi: Nearly 17 years after the Supreme Court designated a 'forest bench' to deal with cases relating to environment and forests, it will now be rechristened as 'green bench'.

The forest bench began its journey by passing the first order on December 12, 1996 and since then has come a long way, dealing with violators with an iron hand. Chief Justice P Sathasivam on Monday told senior advocate Harish Salve, who has for long rendered assistance to the court as amicus curiae along with advocates A D N Rao and Siddharth Chowdhury, that the apex court has decided to rename the forest bench as green bench.

During the last hearing, Salve had suggested to the forest bench, now headed by Justice A K Patnaik, that it would be proper to transfer to the National Green Tribunal (NGT) certain environment related cases, which required monitoring of implementation of apex court's orders. The green bench will continue to oversee matters relating to sanctuaries and parks as wildlife is not part of the NGT's jurisdiction.

# Tree deaths: Greens to move court

## Say Civic Agencies Violating NGT Order Against Use Of Heavy Machinery

TIMES NEWS NETWORK

New Delhi: Despite strict guidelines from the National Green Tribunal about not using heavy machinery to deconcretize trees, civic agencies continue to use earthmovers. This is weakening trees that were already stifled by concrete. The latest to succumb to careless mechanized work were two peepal trees in CR Park on Saturday. After TOI reported about how these trees fell, activists say they will be filing a contempt of court case on Tuesday.

Similar incidents were reported from RK Puram where trees were affected due to use of machines and were tilting. In an order dated August 8 in the matter of Aditya N Prasad vs Union of India, NGT had observed: "The person operating any machines for de-concretization shall ensure that no damage is caused to the trees and their roots are not left exposed. We make it clear that if now in future it is shown before us that any damage is done to the stumps of trees or roots are exposed as a result of mechanical de-concretization of the trees, the person operating such machines and the executive engineer under whose jurisdiction that work is being carried out will personally be liable to pay compensation."

COLLATERAL DAMAGE: Two trees fell in C R Park last week after their roots were exposed by earthmovers removing concrete

Activist Aditya N Prasad, who will be filing the case, said the ruthless way in which deconcretizing is being done is a violation of the NGT order. "We will be filing a contempt of court on Tuesday," said Rajeev Dutta, senior advocate, Supreme Court, who will be handling the case.

But the corporations continue to use heavy machines in many places to meet the deadline of August-end for finishing all de-concretizing work as ordered by NGT earlier.

The South corporation officials claimed that they stopped using heavy machinery to de-concretize the base of the trees three days ago. "Our staff was instructed to stop using earthmovers. It is being done manually now and a plan to give support to trees after deconcretizing is also being worked out," said Mukesh Yadav, spokesperson for South corporation.

The forest department is also investigating the matter. "Heavy machinery is not required for de-concretizing trees. I have asked the deputy conservator of forests (DCF) to investigate the matter. I think a drain is also being constructed close by and the machines may have been brought for that. We will check on this," said chief conservator of forests, A K Shukla.

***The Times of India, Delhi, Dated August 20, 2013***

# Groundwater ban violation: Checks ordered

TIMES NEWS NETWORK

**Noida:** The National Green Tribunal on Monday appointed local commissioners to conduct surprise inspections of real estate developers' sites in Noida and Greater Noida to ascertain if there are any violations of the ban imposed on builders for extracting groundwater in the district. The surprise checks at construction sites in the twin cities were ordered after the tribunal was informed that developers have been extracting groundwater in a discreet manner violating the ban.

**TIMES IMPACT**

The directions for conducting the checks were issued by the principal bench of the tribunal headed by chairperson Justice Swatanter Kumar. The issue of groundwater extraction was brought to the notice of the tribunal on Monday on the basis of a TOI report which highlighted how networks of pipelines have been installed by developers — particularly in Sector 94 of Noida — to empty groundwater being extracted from their sites at other locations.

The court-appointed inspection commissioners have been asked to submit a report on August 22, the next date of hearing. Earlier in January, the NGT had imposed a complete ban on the use of groundwater in the twin cities. Several packaged water plants, also resorting to groundwater extraction, were asked by the tribunal to shut down their operations. The ban, however, continues for developers though a number of water bottling plants have been allowed to resume operations following their adherence to certain terms and conditions.

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

# How not to de-concretize trees

## Careless Agencies Worsening Damage Instead Of Undoing It, Say Experts

TIMES NEWS NETWORK

**New Delhi:** Relieving trees of the concrete noose can be very tricky and requires great skill. Once the roots of a tree are covered in concrete, it's weakened severely and use of force can topple it. Little wonder that two large peepal trees in Chittaranjan Park crashed after the corporation used heavy machinery to break this concrete.

Urban ecology experts are concerned about the careless approach of utilities to undoing the damage they have already done to the city's greenery which has led to contractors bulldozing through the concrete, hurting trees in the process. They have suggested that the corporation or public works department take up each stretch as a project and assign a forestry or horticulture expert to monitor how labourers are de-concretizing trees.

De-concretizing has to be done manually. There cannot be any other way. It has to be done very carefully and gradually so that the root is not hurt. When the concrete is taken away, the void needs to be filled immediately with good quality soil and manure.

"A horticulture department personnel or even a *mali* should be present to guide the labourers," says Ajay Mahajan of NGO Kalpavriksh. He is more worried about large trees that can easily lose anchorage if their roots remain exposed, especially when it's raining so often in Delhi. "The trees that topple cause accidents and block roads. When bigger trees are being de-concretized a space bigger than 6 by 6 feet (36 square feet) should be left free around their trunk. The tree will grow healthy and create an amazing groundwater recharge system around it," adds Mahajan.

According to urban development ministry guidelines, dead trees can be replaced by small healthy trees but sufficient organic compost needs to be put in the pits aside from maintaining a 6 by 6 feet space. Organic manure added to compost from farmyard manure mixed with nitrogenous fixing bacterial material and neem cake should be put in the soil before rains and before irrigating the tree basin.

Most mega-cities have guidelines to protect their trees. New York's tree planting standards prescribe a tree pit of at least 5 by 10 feet and London's best practices stipulate that the pit be of a flexible size so as to allow bigger and smaller trees to stretch their roots naturally.

Harini Nagendra, an urban ecology expert based in Bangalore, says a similar problem had been causing tree deaths over there a couple of years ago. "It is a misguided idea that contractors can just go ahead and de-concretize trees. A forest officer needs to monitor the process," says Harini. She also says that ownership of the community can play an important role in maintaining the health of street trees. In some neighbourhoods of Bangalore, citizens have ensured space was left around the trees and have made a raised platform with soil close to it for people to sit. This ensured ownership and care for the tree.

**De-concretizing has to be done manually. There cannot be any other way. It has to be done very carefully so that the root is not hurt**

Experts also suggest that the exercise be conducted in a synchronized fashion. "It has to be an integrated process where concrete is removed and the tree is restored simultaneously. I also feel that the location of trees should figure in the larger plans for roads and flyovers. If we have a plan ahead of starting construction, trees can be saved," former director, horticulture, Subhash Chandra, says.

### GREEN CARE

**How can you de-choke trees?**

- **De-choking** has to be manual. At most, one can use gardening equipment or a concrete saw
- **An assessment** has to be made to determine the kind of concrete which is choking the tree. It can be stones, tiles, cement or even road tarmac
- **De-choking** work should be planned as per the size of trees. For smaller trees, concrete should be removed from at least 6X6ft space around the tree. Try to find out which way the root has grown to avoid damaging it
- **Be careful** about not touching the root. As soon as the concrete is removed, fill it back with good-quality soil and manure
- **Soil is** difficult to find in Delhi. So adequate soil needs to be kept ready before one starts deconcretizing
- **A forestry** or horticulture personnel is a must at all de-choking work sites


**UD ministry guidelines on urban areas in Delhi**

- **Only porous** tiles should be used
- **Tiling should** be done only on roads with heavy pedestrian traffic
- **Avoid unnecessary** pruning of trees
- **Some fallen** leaves can be left at the tree base as water retentive mulch
- **Digging near** trees for telephone, electricity or sewage lines should be avoided as it may injure roots
- **Dead trees** can be replaced by small healthy trees but sufficient and suitable organic compost needs to be put in those pits
- **Urban void** areas that are not required for immediate construction should be greened. Similarly, roads that are to be widened later should be greened with trees and shrubs
- **Technology** to use kitchen and garden waste to fabricate landscaping material to be made available to all urban development agencies

**Most guidelines have not been implemented**

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

# Roots exposed, another tree falls

## Crashes At Market In C R Park As Deconcretization Drive Endangers Lives

Jayashree Nandi | TNN

New Delhi: The National Green Tribunal order to deconcretize trees, which have been choked by civic agencies over the years, seems to have led to a virtual spree to hammer away at the concrete without guarding the roots. Instead of implementing the order in its true spirit, the civic agencies have virtually killed many trees as these topple over. And now these are posing a serious threat to people's lives and property.

Around 4 am on Wednesday, a huge tree opposite Raisina School in Chittaranjan Park — that had been deconcretized days ago — came crashing down on the car park, barely missing a popular chocolate shop. If this had happened four to five hours later, it could have killed people and damaged many cars. At that hour, the car park was empty and there was no one around.

This happened just days after two trees fell near another school in B Block of Chittaranjan Park, thankfully without any collateral damage, as earlier reported in TOI. However, scores of trees in the area and in other south Delhi colonies have been left similarly exposed and it may not be long before a tragedy happens. Several trees near Ashram were reportedly seen to be tilting after their concrete bases were smashed without the pits being filled with soil and manure. These have been left to face the wind and rain with their roots completely exposed in a particularly heavy spell of monsoon.

With PWD and MCD showing no urgency in addressing the problem, perhaps the NGT needs to intervene in the matter urgently. Two years ago, after a spate of such incidents in which three people had died and seven were injured, Brihanmumbai Municipal Corporation was forced to formulate a compensation policy. It pays Rs 1 lakh to the kin of anyone who is killed and Rs 50,000 to the injured.

Meanwhile, the tree that had fallen on Aurobindo Marg during the rain on Tuesday, causing a traffic jam, had been hacked into pieces by Wednesday morning. It had been choked by concrete on the pavement. "The rain weakened it further, causing it to be uprooted completely," said Rajesh, who owns a tea stall close by.

Photos: Anindya Chattopadhyay

GREEN MASSACRE: The tree that came crashing down at C R Park on Wednesday (left); a fallen tree in Aurobindo Marg hacked to pieces

Anindya Chattopadhyay Rajesh Mehta

A tree fell down due to deconcretization at Aurobindo Marg (left); another tree being deconcretized at Sarita Vihar (right)

### COUNTERPRODUCTIVE COUNTERMEASURE

"The person operating any machine for deconcretization shall ensure no damage is caused to the trees and their roots are not left exposed. We make it clear now that, if, in future, it is shown before us that any damage is done to the stumps of trees or roots are exposed as a result of mechanical deconcretization of the trees, the person operating such machines and the executive engineer under whose jurisdiction that work is being carried out will personally be liable to pay compensation

—NGT order on Aug 8, 2013

**August 17** | Two trees in CR Park's B-block collapse after heavy machinery was used to deconcretize pavements and left the roots of the fragile trees exposed

**August 19** | Activist Aditya N Prasad says he will file a contempt of court petition against the corporation authorities

**August 21** | A huge tree falls in CR Park after authorities try to deconcretize it. Another tree crashed in Sarita Vihar. A tree on Aurobindo Marg falls, weakened by concrete choking its roots. Several trees are leaning on a stretch near New Friends Colony where deconcretizing work is in progress

"It's absolutely careless of agencies to leave the roots exposed. This weakens the anchorage. Dechoking has to be done manually. It has to be done very carefully and gradually so that the roots are not hurt. When the concrete is taken away, the void needs to be filled immediately with good quality soil and manure," said Ajay Mahajan, Kalpavriksh.

"Our staff isn't aware of the technicalities involved in removing the concrete from the base. We are following NGT orders and by August-end the work has to be finished," said a senior official of South Delhi Municipal Corporation, wishing to remain anonymous. "These are mostly old and full grown trees. So we didn't make any provision for providing any temporary support. But with the recent cases highlighted in the media, we will now ensure that steel cages are set up around the trees," he added.

Jayashree.nandi@timesgroup.com

*Deccan Chronicle, Hyderabad,*
*Dated August 23, 2013*

# Ganesh goes green

## Civic bodies, NGOs team up for festival

Ganesha idols at Dhoolpet all prepared to reach their respective pandals. These, however, are plaster-and-paint idols which, environmentalists say, will cause pollution when immersed in water bodies. – DC

**DC CORRESPONDENT**
HYDERABAD, AUG. 22

Eco-friendly Ganesh idols are gradually being used, which dissolve without causing any harm to the environment, but to make a significant impact, other measures must also be taken.

Jayaprakash Nambaru of the I Go Green Foundation said, "They should also keep a tab on the height and volume of the idols. There should be strict use of natural organic colours. Plastic and polythene for decorative and pooja material must be banned from being dumped into the lakes."

He says that housing colonies should set up artificial ponds that cost about ₹5,000-₹6,000, to immerse the idols after the festivities.

HMDA PRO Rama Krishna says that as part of the clean Hussainsagar Campaign, HMDA this year is promoting eco-friendly, eight-inch clay Ganesha idols at ₹12.50 to individuals.

# GHMC works for green fest

**DC CORRESPONDENT**
HYDERABAD, AUG. 22

GHMC will provide space in the city to non-governmental and other organisations that come forward to sell small size Ganesh idols, made of clay, on no profit-no loss basis.

These spaces would be given 15 days prior to the festival.

The announcement was made by GHMC commissioner M.T. Krishna Babu, with a rider that the organisations should not litter the space given to them and it does not give them any right over the space or land. They should take suggestions from local corporators and residential welfare associations in promoting the clay idols.

To a request from Mr Abhinav, of Hyderabad Goes Green, an NGO, that artisans should be extended with financial assistance to make clay idols, Mr Babu said he will be consulting the BC Corporation and Banks to provide loans and subsidy.

Mr Babu instructed all deputy municipal commissioners to coordinate with the NGOs to utilise parks for distribution of clay idols. The GHMC will provide mud and clay blocks to schools that encourage their students in making clay idols.

# ROTARY CLUB SETS UP CLAY GANESH OUTLETS

**DC CORRESPONDENT**
HYDERABAD, AUG. 22

The Rotary club of Greater Hyderabad plans to set up centres to sell clay idols of Lord Ganesh ahead of the festival.

According to the club, the distribution centres are being set up at 624, Bhagath Singh Nagar, near Vasanthnagar colony main bus stop, KPHB post; Seeta Ramanjaneya Temple, HMT Hills, Opp lane to JNTUC; and at Bhagyanagar colony, near Saibaba Temple , Kukatpally.

Interested citizens can collect idols on cost to cost basis from September 7.

The prices are ₹8 for a 6-inch idol, ₹10 for a 9-inch idol and ₹12 for a 10-inch idol.

A hollow 10-inch idol wil cost ₹ 15. Bulk orders have to be booked in advance.

Bulk orders can be collected at JAGISA Plot 624, Bhagath Singh Nagar Phase 1, Raja Rajeswari temple lane, KPHB Post.

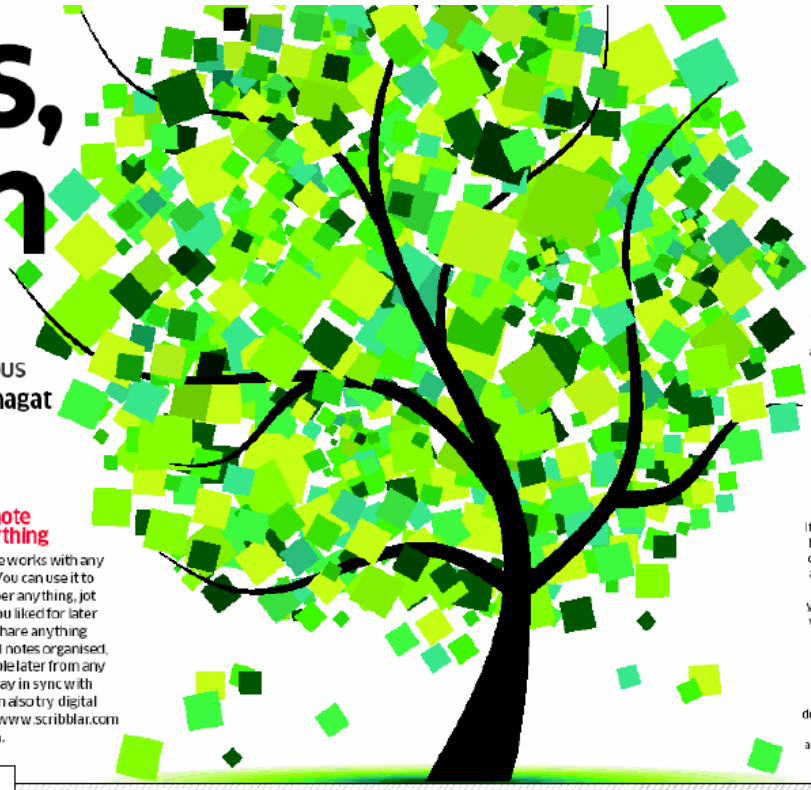
For three-feet idols, contact Mr Dora Raju on 90007 73399 and for five-feet idols, Vijay Ram on 040 27654336 or 64514336.

## PCB plans classes

**● School students are now being encouraged and taught to make their own Ganesh clay idols. The AP Pollution Control Board will conduct a workshop in the first week of September in Hyderabad and Ranga Reddy district on making clay idols using natural colours.**

*The Economic Times, Delhi, Dated August 24, 2013*

# Paperless, By Design



Going paperless doesn't mean that you will never handle another sheet of paper. It means that you reduce or remove dependence on paper for obvious tasks in daily personal and office life. **Hitesh Raj Bhagat** offers a few tips and tools to get you started

## Go Digital

### Opt for Digital Receipts

Instead of paper bills and receipts, opt for digital ones sent to your email ID. All you have to do is key in your email ID at the time of payment. To collate all receipts in one place, you could use tags and labels, an email alias or a separate email ID itself.

### Store Paper Online

Free services such as Dropbox, Box and Google Drive offer a decent amount of online storage and are accessible from various devices. You can use these tools to share documents with others (over email, chat and even SMS), store all kinds of data and keep stuff synced across your devices.

### Digitally Signing Documents

If you receive a digital document you need to sign, don't print it out to scan. You can digitally sign and instantly send back via return email. You could use Gmail's HelloSign (www.hellosign.com/gmail). On your portable devices, use an app called SignNow – you can simply use the touchscreen to sign a document and send back immediately.

### Evernote Everything

Evernote works with any device. You can use it to remember anything, jot down lists, save stuff you liked for later reading, record audio, share anything and even keep personal notes organised, searchable and accessible later from any device. If you need to stay in sync with multiple people, you can also try digital collaborative tools like www.scribblar.com and www.scriblink.com.

## Apps

### CamCard

The next time someone offers you a business card, take a quick photo with the CamCard app on your phone and give it back. CamCard offers free and paid versions for Android, iOS, BlackBerry and Windows 8 – it serves as a digital business card reader and organiser.

### CamScanner

If you don't have a scanner handy, you can use an app called CamScanner to take a photograph of what you need to scan – right from your smartphone. The app will automatically correct, crop, re-position and re-orient the photograph to make it look like it was digitally scanned. You can save your scanned documents online on www.camscanner.net for easy access or sync them across your devices.

## Gadgets

### Portable Scanner

Digital scanners are now small enough to be carried in a laptop bag. This one, the Scanny 6 from Portronics (₹6,999), offers high-quality scans, a built-in battery and a colour screen. It can also hold thousands of scans and when you want to transfer the scans to a computer, a simple USB cable does the trick.

### Wacom Tablets

Designers and infographic artists can benefit a lot from Wacom technology. Apart from precise, pressure-sensitive stylus technology built into several Android tablets and smartphones, Wacom also sell their own tablets. The Wacom's Cintiq 13HD (₹89,000) has a 1080p IPS LCD screen built into a 14mm thick frame. It connects to both Windows and Mac and allows any design professional to draw directly on the screen with up to 2048 levels of pressure. Wacom also sells Pen & Touch tablets for drawing directly on a computer screen, at prices starting at ₹9,190.

### LCD Writing Board

Instead of Post It, try the innovative Boogie Board. The basic version (₹2,999) has an 8.5 inch writing surface and comes with a stylus. The more expensive Boogie Board Rip (₹5,990) also has built in storage. You can write and scribble while each page gets digitally stored. Later, you can connect the device to a computer using USB and download all the saved pages.

*Deccan Chronicle, Hyderabad, Dated August 24, 2013*

# City to host cleanest marathon

**KRUTHI GONWAR | DC**
HYDERABAD, AUG. 23

After earning the enviable tag of being among the top three cities in India with high green cover, Hyderabad is now gearing up to be the only city to host the cleanest and greenest marathon in India — the Hyderabad Marathon, scheduled for August 25.

Waste Warriors, a voluntary organisation for waste management, will be manning 20 checkpoints along the way. Assisting them will be 150 volunteers from various schools in the city.

Jodie Underhill, founder of Waste Warriors, said, "Our activities at the marathon will include waste segregation at source, maximising recycling to reduce the amount going to landfill and composting of food waste. We will also be educating people and raising awareness prior to the event, with emphasis on keeping the route clean rather than just cleaning up afterwards."

Ms Underhill said that during the race, "We are encouraging runners to use the garbage bags that are provided wherever possible, alternatively garbage can be thrown on the ground in the 200-metre stretch on either side of any of the 18 check points. We also have four garbage trucks standing by, to collect from roadsides and checkpoints."

Anticipating a crowd of 6,000 runners, the marathon is being organised by Hyderabad Runners.

**Waste Warriors, a voluntary organisation, is leading the effort.**

**Jodie Underhill of WW, who cleans the Himalayas, was awarded ₹5 lakh by Chiranjeevi**

*The Times of India, Delhi, Dated August 25, 2013*

# Survey finds realtors violating norms near Okhla sanctuary

Purusharth Aradhak | TNN

Noida: In a joint effort involving Noida Authority and Noida Police, a survey was conducted to identify realty projects being developed within a 10 kilometer radius of the Okhla Bird Sanctuary. The team found that around 40 developers were carrying on construction without any environmental clearance.

Scores found flouting norms

The National Green Tribunal, in its August 14 order, had ordered for such surveys.

The counsel for the petitioner reached Noida Authority and examined files of all the developers in sectors around the sanctuary. "The authority has given some documents related to the environmental clearance of several developers but we have no faith in the authority," said the petitioner.

A physical inspection was conducted by a joint team of the Noida Authority and the petitioner's counsel. "We could not cover all sites on Saturday, but initial reports suggest nearly 40 developers are carrying out construction. The role of Noida Authority top brass and enforcement agencies are also under the scanner since without their go ahead, such vital green norms can not be violated. We will raise this issue on August 27—the next hearing in the NGT," he said.

Gautam Buddh Nagar forest department said the realty projects of more than 50 developers are falling within 10 km radius. Environment and forest ministry (MoEF) had on March 15, 2011 directed the states to declare eco-sensitive zones around national parks, wildlife and bird sanctuaries but many states including UP did nothing. State wildlife department formed a nine-member team, headed by Gautam Budh Nagar district magistrate, but it in vain. The callous attitude of authorities has put the realty projects in a lurch.

While hearing a plea on the sanctuary, the NGT asked the government, UP government, Noida Authority and other respondents to submit their replies within two weeks. Notices were also issued to the UP chief secretary and Noida Authority chairman, Rama Raman.

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

# Depleting white cover turns Arctic green

© Tim Graham/Corbis

CHANGING PANORAMA

Washington: Loss of Arctic sea ice is leading to the greening of the Arctic, researchers, including an Indian-origin scientist, have found.

Sea ice decline and warming trends are changing the vegetation in nearby arctic coastal areas, scientists say.

"Our thought was to see if sea ice decline contributed to greening of the tundra along the coastal areas. It's a relatively new idea," said Uma Bhatt, an associate professor with University of Alaska Fairbanks's Geophysical Institute. It is a close, comprehensive look at how the losses of northern sea ice affect surrounding areas, researchers said.

The review team analysed 10 years worth of data and research on the subject. The findings show that sea ice loss is changing marine and terrestrial food chains. The noted sea-ice disappearance means a loss of sea-ice algae, the underpinning of the marine food web.

Larger plankton is thriving, replacing smaller, but more nutrient dense plankton. What that means exactly is not yet understood, researchers said. Above water, loss of sea ice has destroyed old pathways of animal migration across sea ice while opening new pathways for marine animals in others, they said.

Researchers said some animals and plants will become more isolated. In the case of the farthest north and coldest parts of the Arctic, entire biomes may be lost without the cooling effects of disappearing summer sea ice. PTI

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