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#### **Business Sustainability News**

#### Climate change making food crops less nutritious, research finds

By Damian Carrington, for theguardian.com

Rising carbon dioxide emissions are set to make the world's staple food crops less nutritious, according to new scientific research, worsening the serious ill health already suffered by billions of malnourished people.

The surprise consequence of fossil fuel burning is linked directly to the rise in CO2 levels which, unlike



Bangladeshi farmers harvest rice in a field on the outskirts of Dhaka. Photograph: Munir Uz Zaman/AFP/Getty Images

some of the predicted impacts of climate change, are undisputed. The field trials of wheat, rice, maize and soybeans showed that higher CO2 levels significantly reduced the levels of the essential nutrients iron and zinc, as well as cutting protein levels.

"We found rising levels of CO2 are affecting human nutrition by reducing levels of very important nutrients in very important food crops," said Prof Samuel Myers, an environmental health expert at Harvard University, Boston, and lead author of the study. "From a health viewpoint, iron and zinc are hugely important."

Myers said 2 billion people already suffer iron and zinc deficiencies around the world. This causes serious harm, in particular to developing babies and pregnant women, and currently causes the loss of 63m years of life annually. "Fundamentally the concern is that there is already an enormous public health problem and rising CO2 in the atmosphere will exacerbate that problem further."

While wheat, rice, maize and soybeans are relatively low in iron and zinc, in poorer societies where meat is rarely eaten they are a major source of the nutrients. About 2.4bn people currently get at least 60% of their zinc and iron from these staples and it is over 75% in Bangladesh, Iraq and Algeria.

"This is yet another example of the impact climate change is already having on people's ability to grow and access the nutritious food they need," said Hannah

Stoddart, Oxfam's head of policy for food and climate. "With 25 million more children under five at risk of malnutrition by 2050 because of climate change, action to cut emissions and support communities to adapt is crucial."

The research, published in the journal Nature, represents a major advance in the understanding of how rising CO2 levels affect food nutrition. The scientists compared nutrient levels in field crops grown in ambient CO2 levels, about 380-390 parts per million (ppm) at the time of the work, with those grown in the elevated CO2 levels expected by 2050. The latter level, 545-585ppm, is expected even if substantial curbs on emissions are put in place by the world's governments. In order to take account of variable growing conditions, the

food researchers analysed 41 different strains grown in seven locations on three different continents.

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International

### China strengthens environmental laws

Amendments to country's environmental protection are first in 25 years and will remove limits on fines for polluting factories

By Jonathan Kaiman, theguardian.com,

The Chinese government has amended the country's environmental protection law. Photograph: Imaginechina/Corbis

Chinese legislators have passed the first amendments to the country's environmental protection law in 25 years, promising greater powers for environmental



The amendments, which the Standing Committee of National People's Congress passed on Thursday after two years of debate, will allow authorities to detain company bosses for 15 days if they do not complete environmental impact assessments or ignore warnings to stop polluting. The new law will come into practice on 1 January. Since China's environmental protection law was passed in 1989, the country has become the world's second-largest economy and its biggest carbon emitter; decades of breakneck economic growth have left many of its rivers desiccated and its cities perennially shrouded in smog.

Over the past year, the Chinese government has begun to emphasise environmental protection in its official rhetoric. The new law "sets environmental protection as the country's basic policy," state news agency Xinhua reported.

At an annual parliamentary meeting in March, premier Li Keqiang said that the government will "resolutely declare war against pollution as we declared war against poverty".

Yet environmental groups say that China's greatest environmental problems arise from a gap between legislation and implementation.

"If you look at China's air pollution or water pollution control laws, they're pretty good compared to global standards," said Ma Tianjie, program director for mainland work at Greenpeace East Asia. "But no matter how good [the laws] look on paper, the true test will always be the willingness of local authorities to enforce them."

The amended law will remove limits on fines for polluting factories, which are currently so low that many enterprises prefer to pay them than take long-term anti-pollution measures. It will also encourage "studies on the impact environmental quality causes on public health, urging prevention and control of pollution-related diseases," Xinhua reported.

### Asda: 95% of our fresh produce is already at risk from climate change

By Jo Confino, for theguardian.com



95% of the entire fresh produce range sold by Asda is already at risk from climate change, according to a groundbreaking study by the supermarket giant. The report, which will be published in June, is the first attempt by a food retailer to put hard figures against the impacts global warming will have on the food it buys from across the world.

Asda, which is owned by Walmart, brought in consultants PwC to map its entire global fresh produce supply chain against the models being used by the Intergovernmental Panel on Climate Change.

Chris Brown, Asda's senior director for sustainable business, said the study shows the impacts are already being felt and will get progressively worse as time goes on.

The results have already gone to the highest levels of management and Brown said some of the results were surprising. "It did highlight things which we did not expect to see as well as quantifying the impacts."

"Quite a lot of the debate is illuminated by opinions, this provides some much-needed data."

The only produce that would remain unaffected by a rise in temperatures would be those with easily moved production, like fresh herbs.

Brown said the results show that it is imperative that supermarkets start to think strategically about how to cope with the impacts of rising emissions. Tackling views that the UK food supply might benefit from a warmer climate, Brown said: "If we do nothing, we will leave a rubbish legacy for our children and the future would go one of two ways. One is that rich western economies can try to buy their way out of trouble although that is morally not acceptable, and emerging economies such as China will equally be able to use their economic power to secure access to food.

"Secondly, there is the risk that we will act tactically rather than strategically as we won't have thought the implications through."

However, it's unlikely there will be a shortage of products on the shelves as the supermarkets have become experts in managing supply risks and seasonal volatility. "I am not sure the shopper will recognise much difference as there will be strategic investments to manage weather implications, for example, growing salad crops under cover.

"The ingenuity and capacity of the supply chain to cope will insulate consumers but we cannot be certain which is why we need to makes these studies and review the implications."

#### Winning consumer support

Friends of the Earth senior food campaigner, Vicki Hird, welcomed the study and said Asda now needs to act.

"Major retailers must wake up to the enormous climate change threat to food supplies – Asda must now put the problem at the core of its business," Hird said.

"If they really want to be a greener grocer they must take steps in its marketing strategy, reviewing products which use too much water and steering customers off meat, and in its supply chain, paying producers to cover the cost of sustainable production."

The supermarket chain says one pre-requisite for change is to win the ongoing support of customers. A survey of 9,500 shoppers in February showed nearly three quarters had actively investigated their fresh produce's origins.

Paul Kelly, head of external affairs and corporate responsibility at Asda, said the survey shows the reputation of supermarkets is at risk unless they act.

Focusing on the key issue of water scarcity in yesterday's Nature Climate Change, he wrote: "Adequate water management in our business is not just important to enhance the resilience of supply chains but fundamental to maintain our reputation as a sustainable business. In order to cope with greater demands on water, Asda says there needs to be a fundamental reform of systems governing land and water use but points to the difficulty of individual companies to influence complex global supply chains.

"Monoculture production systems – for example, palm oil and sugar cane – may benefit local communities with employment and funding but they're often reliant on over-exploited water resources. Such systems need to be reconsidered and restructured."

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#### Tips:

To promote sustainability we all will have to respond with full devotion because time is ticking away very fast. The repercussions of our irrational behavior towards environment and nature are now seen and felt very clearly. The smog, global warming, depletion of glaciers, extreme climates etc are ringing alarm. Situation is very grim we have to act immediately with full conviction, it's now or never. So this is our request to each and every responsible citizen of this earth to rise to the occasion and do everything possible.

In this reference we are providing tips that may come handy in this cause.

- The first and foremost rule of fuel conservation would be to travel judiciously and shun unnecessary driving.
- Using public transport for travel wherever possible instead of personal vehicle is another way to conserve fossil fuel.
- Whenever two persons have to travel and not very long distances it's better to use scooter or bike, as compared to car. For very short distances it is always better to walk down or use bicycle.
- Use of e-bike, electronic cars may help conserve fossil fuels considerably. If possible one should opt for such vehicles.
- Car pooling to work, will not only conserve fuel, but will also improve social relations with your colleagues.
- Take good care of your vehicle, pay attention for timely servicing, carburetor tuning, and emission control, upkeep of vehicle including correct tyre pressure, top up or change of lubricants for engine and gear box, greasing and oiling etc. This will ensure fuel savings by making the vehicle more fuel efficient. There should be no compromise made on quality aspect of lubricants.
- Correct driving habits are important for conservation. Try to avoid sudden speeding, braking, stopping, clutch riding, idling, overspeeding and over-loading.
- Get vehicle checked for emission control periodically – not to avoid fines, but because it leads to fuel economy and pollution control, which as responsible citizens, is our moral duty.
- This is time we inculcate these measures to become a part of our daily routines. Hopefully by practicing and preaching these tips can we think of improving the situation and think of better future. Foreseeing the difficult times ahead, it has become our utmost responsibility to spread this awareness, particularly amongst the younger generation. Such habits if learnt early will help in addressing the problem of scarcity of fossil fuel.

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#### Full Steam Ahead On Antarctic Ash dieback 'could affect 75% of trees in worst-hit areas' **Ice Melt**

#### SustainableBusiness.com News

Just as the International Energy Agency warns about the "bleak" progress on climate change ...

Two studies find the collapse of the enormous West Antarctic ice sheet is inevitable and unstoppable, ensuring world sea level rise of 4-12 feet. At 10 feet higher, the ocean would consume 28,800 square miles of US land, where 12.3 million people live today.

The Thwaites Glacier, which holds the massive West Antarctic Ice Sheet together - the size of Arizona and New Mexico combined - is collapsing.

Current thinking is it will happen slowly over the next 200-400 years, but as is the case for climate change impacts generally, this too is occurring much faster than predicted.



Because of warmer water and changing winds from global warming and the ozone hole, the "underbelly" of the Antarctic is weak allowing water to flow through, melting the ice faster. After looking at 40 years of data, lead author Ian Joughin, a glaciologist at the University of Washington told Associated Press, "We really are witnessing the beginning stages."

"The system is in a chain reaction that is unstoppable," says Eric Rignot, lead author of a NASA study and a glacial scientist at University of California Irvine. At this point, even if fossil fuel emissions stopped, the melting would likely continue, but at a slower pace, he says. "Think of it is like wine flowing from a horizontal uncorked bottle.'

"It's bad news. It's a game changer," Ted Scambos, lead scientist at the National Snow and Ice Data Center, told Associated Press. "We thought we had a while to wait and see. We've started down a process that we always said was the biggest worry and biggest risk from West Antarctica.'

So far, scientists predict the melt will be slow, about 3 feet by 2100 caused by this one ice sheet. But another ice sheet broke off last November and combined with melt in Greenland and the Arctic, we're clearly going to see significant sea level rise during this century.

If there's a silver lining, it's that the much larger East Antarctic ice sheet seems to be stable.

#### Impact on Australia

Shifting winds are also behind Australia's severe, extended drought. Over the past 25 years, Southern Ocean winds have been shifting away from South Australia - which brings rain - toward Antarctica instead.

And "they are now stronger than at any other time in the last 1000 years," says Nerilie Abram, from Australian National University's Research School of Earth Sciences. "It's not good news. As greenhouse gases continue to rise, we'll get fewer storms chased up into Australia. As the westerly winds are getting tighter, they're actually trapping more of the cold air over Antarctica." That's why Antarctica hasn't been melting as quickly as the Arctic.

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Deadly fungus will infect most ash trees in the south and east of England by 2018. government models suggest

#### By Adam Vaughan, The Guardian

The spread of a deadly fungus killing ash trees in the UK could affect up to three-quarters of the species in the worst-hit areas within just four years, according to government scientists

Conservationists said such a spread rapid would be "devastating" to landscapes and have a "very real economic cost".

Early symptoms of ash dieback on young ash coppice in

Chalara fraxinea, a fungus that

Wayland Wood, Norfolk Photograph: David Mark/Alamy

was found in England in 2012 after being blown over the English channel or imported via nurseries, causes the crown of ash trees to blacken and wither, and can kill younger trees.

Ministers have admitted the spread of the disease cannot be stopped, and are resigned to mitigating the worst distribution and impact of the organism on the UK's estimated 80 million ash trees.

By 2018, more than 75% of ash in Kent will be infected by ash dieback, with a similar percentage of ash in Sussex affected, modelling published in the government's tree health management plan shows. Ash is the most abundant species in Kent, making up around a fifth of the county's trees.

Other counties in the east will be badly hit, it predicts, with around half of ash trees in Essex, Norfolk and Suffolk expected to be infected by 2018.

Austin Brady, director of conservation at the Woodland Trust, said: "If the predicted spread of ash dieback is accurate it would prove devastating to the landscapes of Kent and East Sussex in particular. This highlights the need to ensure that other species can fill the gaps and help restore lost tree cover. This will only happen in the long term if we ensure that risks to our remaining species are identified and minimised and we work to boost the natural resilience of our woods by improving their diversity."

Nick Johannsen, director of the Kent Downs Area of Outstanding Natural Beauty, said:"Ash is a critical component of Kent's land and townscape and already we have seen a major impact from ash dieback. The costs of the loss of many ash trees in the county will be many fold, our landscapes and townscapes will diminish and our wildlife will suffer, there will be a very real economic cost in making roads, railways and urban areas safe as trees succumb to primary and secondary infections over time."

Ash makes up just under 5% of the UK's woodlands, and as well as being a vital

Figure 1: Current outbreaks of Chalara in recently planted sites and the wider environment (left pane) as of March 2014 and the predicted proportion of ash ees that are expected to be infected by 2018 (right pane)<sup>2</sup>



part of the UK's ecosystem - 45 species are only found on the trees - it makes for valuable timber. lt is estimated to be worth £72-£124m annually social in and environmental benefits and is famously good burning, for known in poems as a firewood fit for a queen.

The Department for Environment Food and Rural Affairs said that

Ash dieback distribution map. Photograph: /Defra

it had already agreed payments totalling £120,000 for the removal of young ash trees to be replanted with other species, a strategy it announced in March 2013 to tackle the disease's spread.

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### Boulder's bold plan tackles climate change and energy head-on

By Jonathan Koehn



Climate science has identified the need for a rapid transition to a fossil-fuelfree future, yet Boulder, Colo., has one of the most carbon-intensive electric portfolios in the nation. Our electric supply accounts for abouot 60 percent of city greenhouse gas emissions. Through the passage of the nation's first carbon tax in 2006 and ballot measures in 2011 and 2013 asking the city of Boulder to explore options for clean, reliable, low-cost, local energy, Boulder voters have expressed a strong commitment to addressing climate change.

Reports released this year by the Intergovernmental Panel on Climate Change indicate that climate change is happening faster than anticipated. As a result, the panel has made the unprecedented call for a rapid and systematic disinvestment from all fossil-fuel-based energy infrastructures. The rise in extreme weather events around the world underscores both the immediacy and urgency of this mandate.

We've felt the immediacy and urgency of this mandate acutely in and around our community. The four most destructive fires in Colorado history all occurred within the last five years. Meanwhile, the devastating September floods resulting from what meteorologists called a 1,000-year storm caused damages potentially surpassing \$2 billion.

That's why city of Boulder staff are proposing an approach that addresses both the causes of climate change (climate mitigation) and prepares Boulder for the likely continuation of impacts (climate resilience).

#### Questions and challenges

The process of creating the "utility of the future," while worthwhile, is neither simple nor easy. The city of Boulder was thus delighted when RMI invited it to send a team to this year's eLab Accelerator. The theme was "A Boot Camp for Electricity Innovation," a perfect match for the city's ongoing research and projects.

The event provided an opportunity to explore questions such as:

- What are emerging best practices for rate design and utility services?
- What are customers' expectations for energy supply and energy needs?
- What opportunities exist and what challenges must be overcome?

How can the city, the community and other stakeholders effectively partner on next steps?

By bringing together a diverse team, the city was able to broach these questions and design four guiding principles:

**1. Ensure safe, reliable and secure energy** — The first priority of Boulder's approach will be to ensure the community has access to safe, clean, reliable and secure energy. This includes investments and system enhancements so that energy services can withstand local and regional disruptions and provide increased opportunities for individuals, businesses and institutions to develop additional reliability and resilience through technologies such as microgrids and onsite energy generation and storage.

**2. Prioritize a rapid transition from fossil fuels** — The only way to achieve the scale of emission reductions necessary to stabilize the climate must involve a rapid transition from fossil fuels. This transition also protects and

restores the environmental health on which our outdoor-oriented community depends.

**3. Invest in our local economy** — A fundamental objective is to direct substantial revenues back to the local economy, supporting existing businesses, creating new jobs and expanding business opportunities.

**4. Design a marketplace for innovation** — Central to achieving these principles is the creation of a new energy services marketplace to foster innovation and the development of new energy products and services that serve local needs and can then be applied in regional, national and international settings.

#### Breakthrough concept: an energy innovation marketplace

A major breakthrough the team realized at Accelerator was the potential for the utility to provide a platform for innovation, allowing the private sector to engage in entrepreneurial actions resulting in an "energy services market." The graphic below, developed at Accelerator, illustrates a new relationship between the utility and the private sector, similar to smartphone companies providing a platform for innovation by application developers:





The Accelerator experience and resulting outcomes were tremendously valuable to the Boulder team. The ideas generated at Accelerator were first shared with colleagues in the city's Energy Strategy and Electric Utility Development department and subsequently with Boulder City Council and the community through a council briefing. The work at Accelerator helped inform the structure and content of a council memo integrating work across several city departments and many projects.

We already have seen significant excitement around the concept of an energy innovation marketplace in local media and through conversations, emails and phone calls with engaged residents. A new grant program, the Boulder Energy Challenge, has additional significance within the conceptual framework of an energy marketplace; each project submission potentially could be scaled up and more broadly deployed if successful in generating significant improvements in greenhouse gas reductions.

Transitioning to a low-carbon economy will not be easy. However, Boulder already has begun building a foundation for a new energy economy that will position the community for economic, environmental and social benefits. The growing cleantech and clean energy sectors employ a significant local workforce and generate an increasing share of the local economy. This could grow with more community-based energy infrastructure. Increasingly, clean local energy also will reduce local pollution and improve air and water quality for human and wildland communities. By creating an energy system that supports local generation and intelligent application of energy efficiency, Boulder also can create an energy marketplace that opens the door to new entrepreneurial ideas for energy goods and services. The extensive analyses conducted to date have demonstrated that Boulder can create the utility of the future, which will provide stable, safe and reliable energy while leading a transition to a dynamic, prosperous and healthy way of life.

A sea change is underway in the electric utility market and, in collaboration with RMI, Boulder intends to ride the wave to a clean energy future.

This article originally appeared at the RMI Outlet. Colorado sign image by Filipe Frazao via Shutterstock.

#### International

#### Bhutan could be world's first wholly organic nation within a decade

Political parties in the Himalayan kingdom unite to eradicate chemical fertilisers and pesticides as part of its Gross National Happiness programme

By Jo Confino, Guardian Professional



Bhutan could within a decade become the first country in the world to go wholly organic in its food production, according to key politicians in the Himalayan kingdom.

Agriculture and forests minister Lyonpo Yeshey Dorji and opposition leader Pema Gyamtsho, who held the post in the previous government, say there is a united commitment to rid the country

Farmers carrying baskets filled with plants in the mountain area of the Mangdue Valley, Bhutan. Photograph: Keren Su/Keren Su/Corbis of chemical fertilisers and pesticides.

While no formal timeframe has been put in place, both politicians believe that the goal is within sight as long as practical natural solutions can be found to the pest and disease problems still affecting a few crops. In order to speed up the search for these answers, Bhutan recently brought together experts on organic agriculture from across the world.

"If we continue to have the same intensity of commitment and intention, then we should be able to do it in five or ten years," says Gyamtsho, who estimates that around 70% of produce is already grown without chemicals. "But on the other hand, if we just use it as a slogan, it might take 20 or 30 years or it may not take place at all. It really depends on how serious successive governments are in taking this forward."

Dorji says the new government is maintaining the previous administration's strong commitment to organic agriculture but says any moves to eradicate chemicals needs to be done on a voluntary basis.

While he also says it is possible to become an organic nation within a decade, this is dependent on the government being able to "demonstrate that the benefits outweigh the costs and people should be willing and happy about the transition and choices. That means investment into agriculture research and support through conversion."

Despite the commitment from both main political parties, some experts within Bhutan worry that they are being too optimistic and that farmers are actually becoming increasingly reliant on chemical fertilisers. Many of the farmers the Guardian met in central and eastern Bhutan spoke of their reluctance to go fully organic as they believe their yields will fall, especially given weather patterns are becoming more erratic. Many growers, for example, say that chemical fertilisers increase the size of their potatoes, which makes it easier to find export markets in countries such as India.

However, Gyamtsho insists that the trend is in the opposite direction as farmers begin to recognise that chemicals are having a damaging effect on the quality of the soil.

"Farmers get quite excited when they use chemical fertilisers for the first time because they see that they have to do less work, less weeding," he says. "But then over a period of time they see also the negative consequences.

"Many farmers now see that it destroys the soil and its water retention capacity so unless they increase the input year by year, they're not getting the kind of returns that they were getting earlier.

"To develop this movement and change the mentality of the farmers, we need to take them to see land where yields are not being affected by using only natural fertilisers. If they are convinced then they will also adopt these practices."

Another issue that needs to be addressed if organic produce is to be economically viable is the lack of certification capacity within Bhutan. The first testing laboratory opened only recently.

Gyamtsho says the priority at the moment should be to satisfy regional markets that do not need the same level of third party oversight that buyers in Europe and the US demand.

But as the country's testing capacity grows, he says certification will be "a very important requirement not just for the export market but also for our people as they need to know what they're eating."

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#### Australian uranium mining in Greenland is tearing the country in half

By Antony Loewenstein, for theguardian.com



'Narsag locals are worried about pollution and challenges to traditional ways of life if the mine goes ahead.' Photograph: flickr

This is a story about an you've Australian company never heard of, operating in a nation that rarely enters the global media: Greenland. It's a story about the intense search for energy sources in a world that's moving away from the dirtiest fossil fuels.

Alega Hammond, the prime minister of Greenland, is the first woman to lead this autonomous country within the Kingdom of

Denmark. She also welcomes the financial opportunities from climate change and a melting Arctic Circle.

simply refuse to be the victimised people of climate change", she told Business Week this month. "This time we have other options than just hunting. We have the right now to our own underground."

In October last year, Hammond pushed legislation through Greenland's parliament to overturn a 25 year old ban on the extraction of radioactive materials, including uranium, despite countless leading environmental NGOs urging otherwise. It attracted global interest from the rare earth and uranium industries, including from China. Concerns were also raised about Greenland's ability to manage a toxic substance in the wake of Fukushima and Chernobyl.

The company Greenland Minerals and Energy Limited (GMEL) is based in Perth, Western Australia. This year GMEL announced a major step forward in their plan to open one of the world's largest uranium mines in southern Greenland, at Kvanefjeld. The mine will also produce fluoride, thorium and other rare earths.

There is still significant opposition to the Kvanefjeld project. The Ecological Council, a Danish NGO, organised a conference to discuss the potential contamination risks in March, noting that the mine poses serious risks for the inhabitants of the nearby village, Narsaq. Many locals told the BBC that they worried about pollution and challenges to traditional ways of life if GMEL moved ahead with its plans. Unsurprisingly, Danish green groups have pushed for a continued ban on uranium mining. They claim that rare earth elements can be extracted without uranium mining in Greenland.

This would have been an important but fairly typical contest over resources, but after issues surrounding the ownership and status of Perth-based GMEL were raised in the Greenlandic parliament, the prospects of the Australian firm may be in jeopardy.

last

Late



"[Greenland] is the size of Western Australia but it has no mines." Photograph: Visit Greenland/flickr

year, Greenland MP Sara Olsvig (tipped by some as a future prime minister) wrote to the country's minister of industry and minerals, Jens-Erik Kirkegaard. She demanded details about any and all of GMEL's shareholders, after Australian media outlets had raised allegations about both the company back in 2009 (here and here) and mining prospector Mihran Shemesian, also known as "Mick Many Names".

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#### International

#### Even During Turmoil, Egypt Moves to Renewable Energy

#### SustainableBusiness.com News

In the midst of all the turmoil in Egypt, we're pleasantly surprised to hear that the government plans to invest in solar, reports *PV Magazine*.

To spur clean energy and create jobs for youth, they say they will invest up to \$1 billion for several big solar projects. They also will install rooftop solar on government buildings to reduce strain on the grid.

The government "will not be able to prevent electrical power cuts" this summer, says Egypt's Minister of Electricity and Energy, but they will reduce energy consumption as much as possible to resolved the overburdened grid within a few years, reports *Daily News Egypt*.

Egypt's goal is to raise the share of renewable energy to 20% by 2020. 12% is expected to come from wind. In a separate plan for solar, they want 3.5 gigawatts by 2017 - 700 MW of solar PV and 2.8 GW of concentrating solar.



Last year, the government's New and Renewable Energy Authority (NREA) asked for bids (from local and international companies) for its first major solar project. Ten, 20 megawatt solar farms would be spread over the southern Egyptian province of Aswan. Italy is helping out with a \$500,000 grant.

Egypt is also taking small steps toward manufacturing solar PV modules, starting with a 21 MW capacity this fall and building to 80 MW by the end of 2016.

"MENA" countries (Mid East, North Africa) could see \$50 billion in solar investment alone by 2020, says the Middle East Solar Industry Association. They expect 37 GW of renewable energy projects to be built, with 12-15 GW of that in solar.

There are already 2.3 GW of solar, with Israel in the lead with 842 MW, according to a report from the International Renewable Energy Agency (IRENA), Renewable Energy Policy Network for the 21st Century (REN21) and the United Arab Emirates' Directorate of Energy and Climate Change.

All 21 MENA countries have renewable energy targets, up from five countries in 2007, reports *PV Magazine*, adding up to 107 GW by 2030.

<Source>

#### Canadian mining doing serious environmental harm, the IACHR is told

#### By David Hill, for theguardian.com

The growing role of Canadian mining companies across Latin America has been put under the spotlight at the Inter-American Commission on Human Rights (IACHR) in Washington following the presentation of a damning report.

Mining operations by Canadian firms across nine Latin American countries are causing "serious environmental impacts" by destroying glaciers, contaminating water and rivers, and cutting down forest, according to the report, as well as forcibly displacing people, dividing and impoverishing communities, making

false promises about economic benefits, endangering people's health, and fraudulently acquiring property. Some who protest such projects have been killed or seriously wounded, it states, and others persecuted, threatened or accused of being terrorists.

"Criminal charges such as "sabotage", "terrorism", "rebellion", "conspiracy" and "incitement to commit crime" have been made against social leaders and human rights defenders who oppose and resist the development of industry," it states.

The report, titled *The Impact of Canadian Mining in Latin America and Canada's responsibility*, states that Canadian firms are exploiting weak legal systems in Latin American countries and Canada itself, as well as failing to respect indigenous peoples' rights, international human rights and social responsibility principles, and supposedly "protected" areas.

A summary of the report describes the growth of Canada's mining in Latin America as an integral part of its current foreign policy, and refers to a "new policy of using international cooperation mechanisms as a method of promoting Canadian mining companies in developing countries." It states:



The Entre Mares mine in Honduras, one of 22 large-scale mining projects in Latin America featured in a report on Canadian companies presented to the Inter-American Commission on Human Rights. Photograph: CEHPRODEC

The organizations [co-authoring the report] have been emphatic that the Canadian authorities are aware of the difficulties regarding each one of the [22] case-studies [cited in the report] and that, despite that, Canada continues to provide political, legal and financial support to companies which commit or tolerate human rights abuses. Canada's government has advised various governments in countries where its companies operate about changing the law, citizen participation, and areas to be mined. . . Canadian ambassadors have played a commercial relations management role between the companies, the respective state, and Canada itself.

In total, 22 large-scale projects operated by 20 companies across Argentina, Chile, Colombia, El Salvador, Guatemala, Honduras, Mexico, Panama and Peru are considered in the report, which was written by the "Work Group on Mining and Human Rights in Latin America" formed four years ago by six civil society organizations from Latin America and one in the USA, and with whom 28 more Latin American organizations collaborated. It concludes with a series of recommendations to the IACHR, Latin American host countries, and Canada itself – including one that Canada abandons providing any kind of support aimed at making legal systems more flexible in order to promote mining investments to the detriment of human rights, and that it implements measures to ensure that Canadian mining firms comply with the international human rights treaties binding on both Canada and countries where such firms operate.

"The financial and political support that Canadian mining companies receive from the authorities of their home state, along with the absence of solid institutions and adequate regulatory systems in the host states, are key elements of the current pattern of human rights violations derived from this extractive industry in Latin America," says Daniel Cerqueira, from the Due Process of Law Foundation (DPLF), one of the Work Group members.

"Canada has been able to influence a weak Peruvian state which, ever since the Fujimori government in the 1990s, has loosened all the legal frameworks in order to attract investment," says Javier Jahncke from the Peru-based Red Muqui, also in the Work Group. According to Jahncke:

### New adhesive system makes a circuit Climate change 'making extreme rainfall in England more likely'

Three British companies have developed a system that means components can easily be separated by hot water

By Leah Borromeo, Guardian Professional



Circuit boards are made with a thermoset of glass that isn't easily recyclable. Photograph: Leah Borromeo

Three British companies have developed a 90% recyclable and reusable circuit board, whose components can be easily separated by soaking in hot water. Funded by the UK government's Technology Strategy Board with a view to help industry conform to European electronic waste regulation, the National Physical Laboratory (NPL), In2Tec and Gwent Electronic Materials have devised an adhesive that helps manufacturers take apart electronic circuit boards and reuse their components to make new components. They call it ReUse – Reusable, Unzippable, Sustainable Electronics.

"What happens to end of life electronics is one of the fastest growing waste streams," says Chris Hunt, head of the Electronics Interconnection Team at NPL. "Existing electronic circuit assemblies are based on reinforced epoxy glass systems and solder. A circuit board itself is a significant part of a final product but it's made with a thermoset of glass that isn't easily recyclable.

We looked at how you might make a circuit assembly that could disassemble easily when you no longer had a use for that appliance.

The result was a new adhesive and ink system, which allows the team to put components onto a thermoplastic substrate with a conductive adhesive and make a circuit. A substrate is a solid onto which another solid is applied and that solid adheres to the first. A thermoplastic is something quite pliable at high temperatures but cools down to a rigid solid. The thermoplastic substrate produced by the team can be recycled.

The novelty of what NPL and its partners have developed is demonstrated when a circuit is exposed to water that is just about boiling. In the presence of hot water the ink and the adhesive soften so significantly that all the components on the circuit are easily scraped off with a business card and can be reused for new circuits. It seems laborious and Hunt agrees that they've a while to go before their innovation becomes scaleable for use by the likes of Apple or larger electronics manufacturers.

"This is definitely not a solution for all types of electronic technologies," Hunt continues, agreeing that some types of tech such as high-end servers and performance electronics operate at temperatures too high for ReUse.

However, their business partner In2Tec has already gained a few clients in the automotive industry off the back of this technology.."

Hunt says "there would have to be a step-change in a manufacturer's mindset to embrace this technology and until there is legislative pressure to change, they will stick with what they know. What you get with ReUse is the ability to take apart and recover your components and reuse them. But until there is a pressure to change, manufacturers will stick with what they know."

NPL and its partners say they haven't used any restricted elements or compounds and around 90% of what they have constructed can be reused. "It's very difficult to throw away much," says Hunt. "And when you look at how they currently make things, that's huge."

<Source>

Oxford University research shows rising temperatures mean intense rainfall now one in 80 year event rather than one in 100 year

By Fiona Harvey, theguardian.com



A couple approach flood water on the road at Burrow Bridge on January 28, 2014 in Somerset. Photograph: Matt Cardy/Getty Images

Climate change caused by humans has made the likelihood of extreme rainfall similar to that seen in England this winter significantly higher, according to analysis seen by the Guardian.

Rainfall events that would previously have occurred only once in a century are now likely to be witnessed once every eighty years in the south of England, the Oxford University work shows.

That will mean far more frequent severe floods for residents of the crowded region, with what were once extremely rare events now happening much more often than the infrastructure of the region is equipped for. The research shows an increase in the rate of such events of about 20 to 25%, which significantly alters the number of homes likely to be vulnerable to flooding.

Friederike Otto, from the university's school of geography and the environment, said: "It will never be possible to say that any specific flood was caused by human-induced climate change. We have shown, however, that the odds of getting an extremely wet winter [in the UK] are changing due to manmade climate change. Past greenhouse gas emissions and other forms of pollution have loaded the weather dice so the probability of the south of England experiencing extremely wet winters has increased."

The scientists who conducted the study warned that this estimate of the frequency of extreme rainfall was based solely on current levels of observed rainfall in the recent past, compared with historical levels and those predicted for the future under a wide variety of possible scenarios under climate change.

This method means that if global warming leads, as expected in the future, to higher rainfall in already wet areas of the globe, including the UK, then this frequency could rise much further still. If that were the case, many more thousands of homes in the UK could be vulnerable to flooding, or to worse extremes of weather.

The analysis was arrived at by one of the most significant examples to date of scientists using the power of home computers to crunch vast amounts of data. The weather@home project drew on the power of more than 60,000 volunteers who allowed their personal computers to be used to process raw data gathered from observations of weather patterns.

Specialised software allowed the computers to be used to safely to process the figures, and return them to the scientists, from which the climate change experts were able to deduce key findings such as the increased likelihood of extreme weather events in the south of England.

Under the programmes, the scientists used the spare capacity on home computers to compare tens of thousands of simulations of possible weather in our present-day climate with tens of thousands of simulations of a hypothetical world without the influence of past greenhouse gas emissions in the atmosphere, using the same climate model.

#### French children exposed to dangerous Diesel engine pollution linked to early cocktail of pesticides, campaigners say

By Kim Willsher, for theguardian.com



The samples were taken from children living between 50 and 200 metres from agricultural zones. Photograph: Pascal Rossignol/Reuters

Children in agricultural areas are being exposed to a dangerous cocktail of pesticides, some of which are banned substances, a French health and environment group has claimed.

Générations Futures did independent analysis of the hair of young people living or studying near farms and vineyards after parents expressed worries about their children being exposed to poisons that could disrupt their endocrine system.

The group, a non-profit organisation specialising in the use and effects of pesticides on humans and the environment, says its findings confirmed their fears.

Researchers took hair samples from a selected group of children aged between three and 10 living or attending schools between 50 and 200 metres from different agricultural zones. It sent the samples to an independent laboratory in Luxembourg that used methods similar to those employed by detectives investigating poisoning cases.

In 29 samples tested 624 pesticide traces were found, suggesting that 80% of the children had been exposed to agricultural pesticides in the previous three months. The laboratory found traces of 53 pesticides believed to affect mammals' hormone systems and capable of causing cancerous tumours, birth defects, developmental disorders and learning disabilities in humans.

An average of 21.52 distinct pesticides were found in each child; 35 endocrine disruptor pesticides were found at least once, while 13 types of pesticides were discovered in all the hair samples.

Just under three-quarters of the children ate organic food regularly, so the contamination likely came from an outside source, not their food.

"The presence of more than 21 pesticides, on average, that are endocrine disruptors in the hair that was analysed shows that our children are exposed to a significant cocktail of these substances," said François Veillerette, spokesperson for Générations Futures. "Now the European commission must finally publish a clear and protective definition of the endocrine disruptors that have to be banned."

The group's report urged action. "Our demand is simple and based on an ambitious goal: no organism should contain endocrine disruptors, in order to protect the health of unborn children."

Générations Futures said the French government's national strategy to deal with endocrine disruptors had hit a dead end. The plan originally was to be published in 2013 but had been repeatedly postponed - now it was to be at the end of April.

"Because children are part of the population especially vulnerable to the dangers of endocrine disruptors, they should not be exposed to them," it said.

The research showed several children were exposed to harmful chemicals banned for agricultural use but still used in parasite treatments for pets.

<ReadMore>

### deaths and costs NHS billions

By John Vidal, for theguardian.com



Diesel lorries and cars on the A40 in west London. Air pollution experts warn of the link between diesel engines and premature death. Photograph: Shaun Curry/AFP/Getty Images

Diesel engines in buses, vans, cars and trains may be responsible for thousands of premature deaths a year and cost the NHS billions of pounds, say air pollution health experts.

With government figures for 2008 showing 29,000 people dying prematurely from air pollution each year, diesel fuel burned in vehicles could be responsible for around one in four of all air pollution deaths, said Frank Kelly, professor of environmental health at King's College, London.

"We have walked blindly into a situation where we have a high percentage of diesels in the transport sector. All taxis and buses are diesel. From one in 10 private cars being diesel in 2000 it is now nearly half today. A lot of the minute particulate matter [emitted from exhausts] comes from diesels in cities. It is estimated that 50% of the particulate matter in London is from transport and that diesel makes up about half of all the transport," he said.

The new estimate follows preliminary analysis of the very high air pollution levels recorded this month across much of southern Britain when fine dust blown up from the Sahara desert mixed with heavily polluted air from British and mainland European cities to produce a dangerous smog.

Researchers at King's College London have suggested about 70% of the minute particles of dust in the air could have come from outside Britain, with around 20% composed of Saharan dust. "But this pollution episode was not a natural phenomenon as was suggested in some media. The bulk of the pollution was man-generated, said Martin Williams, professor of air quality research at King's.

Diesel vehicles have been popular with motorists and encouraged by government because they do better mileage and cut CO2 emissions, but the scale of the air pollution health problem they present is only now becoming clear as new research shows how their exhaust emissions are linked to cancers, and heart and lung diseases.

Air pollution can be compared to cigarette smoking and may worsen symptoms of heart failure, said Jeremy Langrish, lecturer in cardiology at the University of Edinburgh. "The predominate cause of death associated with air pollution appears to be cardiovascular disease. It's clear from some work that was done that acute exposure to high levels of air pollution may actually be able to trigger acute cardiac events in patients that are at risk of such, so it may bring forward the onset of a heart attack.

"From a heart point of view it is difficult not to draw a correlation with the similar effects that we see with cigarette smoke and on an organ-level these effects are very similar to the effects of smoking cigarettes, which we all recognise are bad for us," he said.

Children are particularly at risk from air pollution, said Jonathan Grigg, professor of paediatric respiratory and environmental medicine at Queen Mary University of London.

#### Get Ready For Hydrogen Fuel Cell Electric car sales speed up as UK plugs **Cars, Coming Next Year** in to global trend

#### SustainableBusiness.com News

Which kind of zero emission car will Californians like better - electric or hydrogen fuel cell? Automakers are moving in lockstep with California regulators to find out.

Over the next two years, California will have 50 hydrogen fueling stations, coinciding with the launch of Toyota's fuel cell Camry, Honda's revised FCX Clarity sedan and Hyundai's Tucson crossover SUV, due out next year.

California is spending \$47 million for 28 stations, adding to the 26 in operation or under construction. That's enough to support sales of at least 10,000 vehicles, Jim Lentz from Toyota told Bloomberg.



"Just based on the product, based on the infrastructure we see that will be in place in California, we're much more bullish on fuel cells," he says. "I'm more bullish on fuel cells than on electric vehicles (EVs). I think the cost of fuel cells is going to be substantially less than in an EV."

And he believes drivers will adopt them faster than electric cars because they are more similar to conventional cars in range - about 350 miles - and how long they take to fuel. Automakers are especially bullish on hydrogen for larger vehicles.

Toyota is backing FirstElement Fuel with \$7.2 million, which won the solicitation to build and

operate 19 of the stations with \$27.6 million in grants.

Toyota has long thought that fuel cells would win over electric cars and is now pivoting in that direction, ending its contract with Tesla for its electric drive train. Honda and GM are working together on fuel cell technologies.

California's goal is to have 100 stations operational by 2024, planning to spend about \$20 million a year.

#### H2FIRST

Last month, the US Department of Energy (DOE) launched H2FIRST, a collaboration between Sandia National Lab and National Renewable Energy Lab on an ultimate design for hydrogen fueling stations.

The goal is to develop national fueling infrastructure as quickly and cost effectively as possible.

"The success of hydrogen fuel cell electric vehicles largely depends on more stations being available, including in neighborhoods and at work, so drivers can easily refuel," says Daniel Dedrick, hydrogen program manager at Sandia. "We're definitely on the road to making that happen more quickly.

Considerations include everything from how energy will be stored to the hoses used for fueling, developing novel, high-performance materials, components and station architectures that are safe, reliable and attractive.

Last year, DOE opened a National Fuel Cell Technology Evaluation Center to further development of fuel cells and hydrogen technologies, including buses.

Commercializing fuel cells and shifting from gasoline to hydrogen could create 675,000 jobs over the next 25 years, says DOE.

#### **Europe Too**

Europe is also moving forward on hydrogen cars, introducing the public to them through its HyFive program.

Toyota, Honda, Hyundai, BMW and Daimler have agreed to deploy 110 cars in London, Munich, Stuttgart, Bolzano (Italy), Copenhagen and Innsbruck, Austria. Hyundai is providing 75 of the cars which can reach speeds of 99 mph with a range of 369 miles, it says.

<ReadMore>

Britain still lags behind, but carmakers anticipate 'tipping point' for batterypowered driving

By John Vidal, The Observer



BMW's i3 electric car, seen with Tower Bridge behind. Photograph: Andrew Winning /Reuters

If you live in west Manchester and have a plug-in electric car, one of the few places you can charge it is the Irlam and Cadishead leisure centre. But since the public point was installed a year ago, only one car has used it, according to centre manager Natalie Wareham.

That may soon change. Figures from the Society of Motor Manufacturers and Traders show that, while there was just a handful of electric cars on the road three years ago, there are now nearly 10,000, with 1,200 electric vehicles sold in March, compared with 270 in the same month last year. Meanwhile 10,200 hybrid cars - using electricity and petrol or diesel - have been sold in Britain this year, up 45% on last year.

Since 2011, when the government gave a £5,000 grant towards every pure electric car sold, number have been growing, say the carmakers, which now offer 18 models, from the Nissan Leaf, made in Sunderland, to sports cars, estates, vans and other hatchbacks.

"The market is approaching a tipping point, where battery power will become as normal as petrol or diesel," said Ian Robertson, BMW's global marketing chief. "If you look back over the past three years, the electric car market has multiplied by a factor of 25."

"There's no doubt that it's coming and it's coming quickly and there is legislation supporting this in many cities."

A spokesman for the Department for Transport agreed: "The uptake is gathering pace. The last quarter saw a record number of plug-in grants double the previous quarter, which was itself a record. More than six times as many grants were issued this January as in January 2013.'

Most carmakers expect pure electric cars to account for 2%-3% of the market by 2020, said Jay Nagley, head of vehicle consultancy Redspy. "People who buy them are very happy with them. Everyone knows about their range limitation, but owners become quite evangelical. Year by year, battery packs are improving. A huge amount of money is being invested in the new generation of batteries.

The rewards for carmakers who break into the global market with a popular electric car are huge. With one in 12 deaths worldwide linked to air pollution, and with most countries committed to reducing emissions, there is growing awareness by governments and industry of the need for low- or zero-emission vehicles.

But despite encouraging sales figures and investments by companies such as Nissan, Britain is lagging far behind other developed countries. More than 400,000 electric vehicles are on the roads worldwide, four times more than in 2011. The US has by far the largest fleet, with more than 194,000 sold since 2008. Japan has 74,000 and in the Netherlands and Denmark they account for 5% of the total car market. In Norway, where 20% of all cars sold are electric, it is getting harder to find unoccupied public charging facilities.

#### From open defecation to toilets that President Obama Announces produce biogas and fertiliser

Pashupatinath

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By Oliver Balch, for theguardian.com



A Sulabh toilet complex in Kabul, Afghanistan, which produces biogas that can be used for lighting, cooking and generating electricity. Photograph: Sulabh

they will probably want to use the toilet.

Current options are basic at best. A new initiative by Sulabh International is set to change that. In partnership with a local charity, the India-based social enterprise plans to construct extensive toilet facilities at both sites.

In the two decades after 1990, around 240,000 people a day gained access to improved sanitation, according to the United Nations. Sulabh (meaning "accessible" in Hindi) is one of those at the forefront of this effort. Over the past 44 years, it has built over 1.3m household toilets. Its design for a lowcost, eco compost toilet has inspired 54m others, paid for by the Indian government.

Bindeshwar Pathak, a 71-year-old Gandhian-inspired social reformer, founded Sulabh in an attempt to tackle the social stigma around the handling of human waste - referred to as "scavenging" in India. The organisation now operates in 1,599 towns across the country and boast annual revenues of around \$60m (£36m).

"Much still needs to be done," says Pathak, referring to the developing world as a whole, where an estimated 2.5bn people still lack decent sanitation facilities. In India, almost half (49.8%) of the country's 247m households lack access to a toilet, according to the 2011 national census. The consequent practice of open defecation is linked to outbreaks of diarrhoea, dysentery and other serious bacterial infections.

Sulabh continues to work with government agencies across India to install its household lavatories, which cost around \$15 a time. Even so, Pathak believes that pay-to-use public toilets are the "only way" the world will achieve the United Nation's goal of providing toilet access for all by 2025.

To date, Sulabh has established about 8,000 public toilets around India, most of which are located in markets, hospitals and other popular sites. A minimal charge (of between two and five rupees) helps these "toilet complexes" towards Pathak's goal of becoming economically self-sufficient.

Sulabh cross-subsidises its rural or less busy locations with facilities in more popular locations. It also uses revenues generated through a governmentbacked cleaning services contract - which, in addition, provides employment for former 'scavengers'.

"Charging isn't too much of a problem, but you have to promote good facilities for people to pay," says Pathak, who was awarded with a Legend of the Planet award from the French Senate last year.

To that end, Sulabh ensures the toilets are always kept clean and remain open 24 hours a day. It also offers free soap powder for hand washing. In some locations, it has introduced health facilities for medical check-ups, prescriptions and other basic healthcare services.

The scheme's social benefits are enhanced in two further ways. Based on a two-pit, pour-flush design, the organisation's household toilets store solid waste that can then be used as a natural fertiliser. The public toilet complexes, meanwhile, are connected to anaerobic digesters. These produce biogas that can be used for lighting, cooking and generating electricity.

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#### New **Executive Actions on Climate Change**, **Green Economy**

#### SustainableBusiness.com News

Taking the opportunity to turn the US National Climate Assessment into action, President Obama announced new steps to stem climate change.

"Together the commitments we are announcing today prove there are cost effective ways to tackle climate change and create jobs at the same time. It will be good for the economy long term. Rising sea levels, drought, wildfires, more severe storms, those are bad for the economy, so we can't afford to wait," he says.

The announcement comes as the finishing touches are put on the gleaming new White House solar system. Why so small? At 6.3 kilowatts (kW), it's not much bigger than for a typical house. Officials say they can't cover the entire roof with panels for "security" reasons, but in Germany, Chancellor Angela Merkel's house has 128 kW.

We can't find a photo, but this is pretty funny:



More than 300 business and public sector leaders confirmed pledges to significantly increase their use of solar. including Google, Yahoo, Ikea, and Goldman Sachs. Walmart repeated a previous announcement that it will double on-site solar by 2020 (sounds

good, but still only brings them to 8% of demand). More impressive are new pledges from affordable housing and homebuilder developers, rural electric coops, school districts and city and state governments. Together, the pledges add up to 850 megawatts of solar.

Kaiser Permanente, for example, says it will increase on-site solar by as much as 50 megawatts, from 11.3 MW now, at hospitals and medical campuses. But that would still only provide 6-8% of its electricity used in California.

To build on momentum in energy efficiency and solar, President Obama announced Executive Orders in these areas:

- Build a skilled solar workforce:
- Provide innovative financing for deploying solar;
- Drive investment in energy upgrades to federal buildings;
- Improve appliance efficiency;
- Strengthen building codes.

Building a Skilled Solar Workforce: expand the Department of Energy's (DOE) Solar Instructor Training Network at community colleges, with a goal of helping 50,000 people enter the solar industry by 2020. Since 2010, the network has trained 22,000 people at 400 community colleges in 49 states.

Innovative Financing for Solar: the General Services Administration is identifying opportunities for potential Federal Aggregated Solar Procurements in the Washington DC region and Northern California. Agencies would buy solar systems together, capitalizing on economies of scale.

Importantly, he said the Treasury Department and IRS will soon clarify rules to allow renewable energy financing through REITs.

#### **Energy Efficiency:**

\$2 Billion More for Federal Building Upgrades: This doubles his 2011 commitment for upgrades over the next three years through the Better Buildings Challenge. Besides saving taxpayers billions on energy bills and promote energy independence, it will create tens of thousands of jobs in the hard-hit construction sector. There's already a \$2.7 billion pipeline in energy savings contracts.

#### International

### Japan's disposable home culture is an environmental and financial headache

Fifteen years after being built the average home in Japan is worth nothing, creating a perverse market where construction is booming but housing barely increases

By Elisabeth Braw, Guardian Professional



Housing units on the production line at Japanese motor manufacturer Toyota's housing works in Kasugai. Photograph: Junko Kimura/Getty Images

It's time to move to a new city. You look at houses you might want to buy and finally settle on one that's in the right location and appeals to you. But in Japan, that appeal hardly matters: the average home only lasts for 30 years.

That's because, as the economists Richard Koo and Masaya Sasaki show in a report, 15 years after being built the average house is worth nothing. "It's a direct contrast to, for example, western Europe, where many of the most desirable buildings are 200 years old," notes Alastair Townsend, a British architect living and working in Japan. "It's not environmentally sustainable but also not financially sustainable. People work very hard to pay off a mortgage that's ultimately worth zero."

The disposable-home culture has led to a perverse market, where construction is in almost-perpetual boom without the number of homes increasing much at all. It has also produced a huge number of architects, who are kept busy by buyers wanting a new house that reflects their lifestyle. According to the International Union of Architects, Japan has almost 2.5 architects per 1,000 residents, whereas Britain only has half an architect per 1,000 residents. The US has only 0.33 architects per 1,000 residents and Canada has 0.22%. Japan, in other words, has 11 times as many architects per capita as Canada.

The origins of this unusual approach to sturdy structures are the result of a long history featuring earthquakes and fires. The second world war exacerbated the situation.

Jiro Yoshida, an assistant professor of business at Pennsylvania State University, specialises in the Japanese housing market. "Most structures in, for example, Tokyo were destroyed, so everything had to be rebuilt from scratch," he says. "The new buildings weren't very good, so after a while many had to be knocked down."

But today's buildings are demolished even though they could last. That, says Yoshida, has a cultural explanation: "The government updates the building code every 10 years due to the earthquake risk. Rather than spending money on expensive retrofitting, people just build new homes."

That's good news for the Japanese economy, but less good for homeowners themselves. They seem to accept the situation, however, often even neglecting to properly maintain a home they know is on track for demolition. But the real victim is the environment: replacing the entire housing stock within a generation means a whole lot of construction waste.

Granted, a law passed in 2000 requires that most forms of demolition waste be recycled, and more than 80% of it is. But recycling consumes large amounts of energy and yields less valuable materials than the ones being discarded. Consider concrete: though 98% is recycled and used as roadbed gravel, there's more discarded concrete than there are roads that need gravel.

Then there's the problem of illegally disposed construction waste, which is estimated to account for 70% of all illegally discarded waste. The construction sector is also a major CO2 emitter. In 2011, Japanese manufacturing and construction emitted 244.78 million metric tons of carbon dioxide, compared with 587 million from manufacturing and construction in the US in 2010. Last

year, Japan reneged on its pledge to cut its CO2 emissions by 25% compared with the 2005 level, instead announcing a 3.8% reduction target by 2020.

The irony is that unlike their post-war hastily erected forerunners, today's homes are sometimes well built and could easily last for several more decades. "Japan has a very efficient and sustainable way of mass-producing timber homes that are very good and can even withstand earthquakes," notes Townsend. "And Japan is a heavily forested country, but it imports the wood, which is in itself unsustainable." Many other houses, though, are rather logically built using less robust materials as they won't have to last long anyway."

The solution, argues Townsend, is for the government to stop promoting the dream of home ownership for everyone. Several years ago, Japan's parliament passed the so-called 200-year-home law, which reduces homeowners' taxes if their homes are built according to strict standards. The law might not be enough to change the disposable-home culture, but other small changes are under way: more condominiums, which can by definition not be demolished based on the desire of a single homeowner, are being built.

Recent research by Yoshida shows that homes built according to green building standards depreciate more slowly than regular ones, though they're more expensive to maintain. And renovation companies have spotted a market in promoting longer-lasting homes for the sake of the environment. As Yoshida notes: "We know that we can move towards a better world with less construction."

The circular economy hub is funded by Philips. All content is editorially independent except for pieces labelled advertisement feature. Find out more here.

<Source>

#### **Green Technology Spotlight: Collect Water From the Air**

#### SustainableBusiness.com News

We have all heard about how difficult it is for people to access clean water in many developing countries, with people walking miles every day to collect some.

All sorts of low-tech technologies have been developed, from people riding bicycles to pump water to Bill Gates's famous toilet that converts wastewater to drinking water. Most of them don't work in the end because either they are



too complicated, or require people to find a water source

The Smithsonian published an article on an inspiring invention that just might work - it literally draws water from the air.

Developed by

industrial designers Arturo Vittori and Andreas Vogler, Warka Water can collect over 25 gallons of clean drinking water each day. It looks like a 30-foot-tall vase and every detail has a function.

#### Smithsonian explains it this way:

"The rigid outer housing of each tower is comprised of lightweight and elastic juncus stalks, woven in a pattern that offers stability in the face of strong wind gusts while still allowing air to flow through. A mesh net made of nylon or polypropylene, which calls to mind a large Chinese lantern, hangs inside, collecting droplets of dew that form along the surface. As cold air condenses, the droplets roll down into a container at the bottom of the tower. The water in the container then passes through a tube that functions as a faucet, carrying the water to those waiting on the ground."

Even in the desert, the tower works because condensation occurs based on the difference in temperature between nightfall and daybreak, where they can vary as much as 50 degrees F, Vittori says.

It's easy to clean and can be erected in about a week without special tools. And at \$500, it's less than a quarter of the price for a Gates toilet.

Vittori is looking for an investor to mass produce Warka Water towers.

<Source>

### Laundry additive could make your clothes purify air

Fashion designer and chemistry professor say adding a catalyst to your wash could help tackle city pollution, but altruism is proving a hard sell to big business

By Helen Storey and Tony Ryan, theguardian.com



Residents breathing "mountain air" in central China's Henan province. Could catalysing our clothes makes us the most effective air purifiers of them all? Photograph: Str/AFP/Getty Images

It was through a weird wonderful and coincidence on BBC Radio 4 that we met to quantum discuss mechanics and plastic packaging, resulting in the Wonderland Project, where we created disappearing gowns and bottles as a metaphor for a planet that is going the same way.

Spurred by this collaborative way of working, Wonderland led

to Catalytic Clothing, a liquid laundry additive. The idea came out of conversations about how we could harness the surface of our clothing and the power of fashion to communicate complex scientific ideas – and so began the campaign for clean air.

#### How it works

Catalytic Clothing (CatClo) uses existing technology in a radical new way. Photocatalytic surface treatments that break down airborne pollutants are widely applied to urban spaces, in concrete, on buildings and self-cleaning glass. The efficacy is greatly increased when applied to clothing – not only is there a large surface area, but there is also a temperature gradient creating a constant flux of air, and movement through walking creates our own microwind, so catalysing ourselves makes us the most effective air purifiers of them all.

CatClo contains nanoparticles of titania (TiO2) a thousand times finer than a human hair. When clothes are laundered through the washing process, particles are deposited onto the fibres of the fabric. When the catalysed clothes are worn, light shines on the titanium particles and it excites the electrons on the particle surface. These electrons cause oxygen molecules to split creating free-radicals that then react with water to make hydrogen peroxide. This then bleaches out the volatile organic compounds and nitrogen oxides (NOx) that are polluting the atmosphere.

The whole process is sped up when people, wearing the clothes, are walking down the street. The collective power of everyone wearing clothes treated with CatClo is extraordinary. If the whole population of a city such as Sheffield was to launder their clothes at home with a product containing CatClo technology they would have the power to remove three tonnes per day of harmful NOx pollution.

Clothes washed with laundry products containing liquid laundry additive could purify air. Erin O'Connor models a prototype catalysed dress. Photograph: Adam Mufti

#### Why is this technology important?

The EU standard for NOx levels is 40 micrograms per cubic metre (40 µg m-3) but many of our cities now outstrip\_acceptable\_safe



Clothes washed with laundry products containing liquid laundry additive could purify air. Erin O'Connor models a prototype catalysed dress. Photograph: Adam Mufti

levels. The scale of our problem with pollution was highlighted this April, with headlines reporting that schools in London were banning children from playing outside due to smog attributed to a Saharan dust cloud.

Air quality is such a serious health issue that the mayor of London's air quality strategy states it is a contributory factor in the premature deaths of

approximately 4,300 Londoners per year. This is in line with UK national estimates of approximately 50,000 premature deaths.

The exciting thing about CatClo is that the technology is delivered through the laundry process, and doesn't require consumers to buy special clothes or necessarily special products. But it does depend on mass take up – the more people walking around our cities in catalysed clothes the less polluted our cities will be.

#### Why isn't business on board yet?

Altruism, is a hard concept to sell to big business. We have approached and worked with some of the world's largest producers of laundry products but even though the technology exists and could be relatively cheap to add to existing products, it's proved to be a tough sell. The fact that by catalysing your clothes the clean air you create will be breathed in by the person behind you is not seen as marketable.

A more serious issue is that photocatalysts can't tell the difference between a bad pollutant and a "good" one; for example, it treats perfume as just another volatile organic compound like pollution. This is an untenable threat to an entire industry and existing products owned by those best able to take CatClo to market.

We've recently travelled to China to see whether CatClo could work there. China is a place where perfume isn't culturally valued, but the common good is, so a country with one of the biggest pollution problems on the planet, and a government that isn't hidebound by business as usual, might be the best place to start.

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#### Shocking Success! Supreme Court Rules For Clean Air

#### SustainableBusiness.com News

Given the decisions issued by the US Supreme Court of late, today's ruling that upholds a critical EPA rule is pleasantly shocking.

In another 6-2 vote, the court ruled in favor of EPA's Cross-State Pollution rule, issued in 2011, which would regulate emissions that travel from coal-heavy states in the Midwest and Appalachia to eastern states that have cleaner air.

Should a coal plant in Ohio be able to pollute New York's air, for example? Besides sending polluted air their way, it also makes it unfairly harder for states to meet federal ambient air quality standards.

When it finally goes into effect, an estimated 240 million Americans will benefit from cleaner air.



It cuts sulfur dioxide emissions across the US by 73% (compared with 2005 levels) and nitrogen oxide emissions by 54%.

Both pollutants can travel long distances, forming smog and soot, which are linked to respiratory illnesses and other disease. It is expected to save 34,000 lives each year and prevent 400,000 asthma attacks, for example. Overall, the economic and health benefits are in the range of \$120 billion to \$280 billion in exchange for an \$800 million investment by the coal industry.

Today's vote reverses the US Court of Appeals ruling against the EPA, brought by guess who - coal companies and utilities that use lots of coal, such as Southern Company and Peabody Energy. 14 "upwind" states challenged the rule, while "downwind" states defended it.

In writing the majority decision, Justice Ruth Bader Ginsburg calls the rule a "permissible, workable, and equitable interpretation" of the "good neighbor" provision of the federal Clean Air Act.

This is the second recent big win for the EPA this month. The US Court of Appeals upheld long overdue Mercury and Air Toxics Standards, allowing them to finally take effect.

#### International

### Sprint is selling iPhone cases made of waste CO2

By Elsa Wenzel



Sprint is the first telecom company to offer "carbon-negative" iPhone accessories. Later this month, it will sell plastic handset cases made using waste greenhouse gases instead of petroleum. The \$30 black and pink cases for the iPhone 5 and 5s will become available for purchase at Sprint's website.

The main ingredient in the cases, AirCarbon, comes from startup Newlight Technologies, which calls its product carbon-negative, even after production and end of life are taken into account. The company uses carbon dioxide or methane from farms and landfills as well as from wastewater treatment and anaerobic digester plants. AirCarbon "can then be formed and molded into almost any given design," it says.

"As a wireless company, we are at the intersection of new technology," said Amy Hargroves, Sprint's director of corporate responsibility. "Our role is to bring this kind of innovation to Sprint to support the creation of the circular economy — turning waste, in this case greenhouse gas, into a useable product for consumers in the form of a cell phone case to displace oil-based plastics."

Sprint sees this new accessory as a way to accelerate sustainability "by leveraging its role as a large purchaser and supplier" as well as to influence consumers to adopt potentially market-disrupting products. Eventually the company hopes to offer more carbon-based products, even in its brick-and-mortar stores.

Why focus on AirCarbon instead of, say oil-based plastic that's already recycled, or plastic made from the start from plants?

"There isn't one option that is going to change the world. Instead it takes a combination of efforts and innovations to collectively create change," Hargroves said. "We like this option because it removes greenhouse gases from the air — the key contributor to global warming...We aren't limiting ourselves to just this one technology solution, but see it as a potential game changer."

Among its hardware-related sustainability efforts, Sprint recently overhauled its long-running cell phone buyback and recycling program. Last year Sprint worked with UL Environment to develop EPEAT ratings for more sustainable mobile phones. In 2011 the company released the Samsung Replenish as an eco-friendly handset, and in 2009 offered its first recycled-plastic phone, the Samsung Reclaim.

"We have already participated in cases that are made from post-consumer recycled plastic," Hargroves said. "We had a case made from tree resin. This case is something new and frankly, incredible...Imagine if this technology could be scaled to the point that it replaced oil-based plastics."

Sprint's accessories long have been made of recycled PET plastic, and PVCfree. It once sold the solar-powered, handheld Solio charger as an accessory. Sprint's packaging has been fully recyclable since 2009, and it has worked with the San Diego Zoo Centre for Bioinspiration to experiment with packaging that imitates patterns in nature. The AirCarbon-based cases can be recycled at a plastics recycling center, but not via curbside pickup.

Although creating plastic from waste gases has been possible for decades, Newlight says it has accelerated the process. And not only does AirCarbon capture greenhouse gases, but it is cheaper to produce than petroleum-based plastics.

In addition, according to Newlight, "the weight of the new cell phone case is the same weight in carbon (as carbon dioxide equivalent greenhouse gas) that has been sequestered and would otherwise be part of the air by making the case, generating a net positive environmental impact."

Top image of pink, AirCarbon-based iPhone case via Sprint

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### Washing-up liquid bottle made from ocean plastic aims to clean up seas

By Rebecca Smithers, consumer affairs correspondent, for theguardian.com



Plastic rubbish washed up on a beach. Fish in the northern Pacific Ocean ingest as much as 24,000 tonnes of plastic each year – the equivalent of 480m two-litre plastic bottles. Photograph: AP

The world's first washing-up liquid bottle made from reclaimed ocean plastic is to go on sale in UK supermarkets later this month.

The green cleaning brand Ecover will use the launch of its new Ocean Bottle washing-up liquid to highlight the long-term dangers of dumping plastic in the sea, which is killing fish on a large scale and threatening global ecosystems.

Ecover, a Belgian company, has been working with manufacturer Logoplaste to combine plastic trawled from the sea with a plastic made from sugarcane (which it calls Plant-astic) and recycled plastic, in what it is hailing as a world-first for packaging.

In the initial trial, 10% of the plastic in the new bottle will have been retrieved from the sea, although Ecover is keen to gradually increase that proportion. Plastic can take thousands of years to degrade through the combination of salty seawater and the sun. The variable quality of plastic retrieved from the sea and analysed by Ecover's scientists meant it had to be blended with other recycled plastic material to make it robust enough for a household cleaning product.

According to the Marine Conservation Society, plastic debris accounts for almost 60% of all litter found on UK beaches, with much of it ending up in the sea. Fish in the northern Pacific Ocean ingest as much as 24,000 tonnes of plastic each year – the equivalent of 480m two-litre plastic bottles. Around 46,000 pieces of plastic are swirling around every square mile of ocean.

Philip Malmberg, chief executive of Ecover, said: "The scale of the ocean plastic problem is enormous – every year at least a million sea birds and 100,000 sharks, turtles, dolphins and whales die from eating plastic. There is no choice – we simply have to aim to clean up ocean plastic for good."

The new bottle is being launched in the UK in partnership with Tesco, which will be selling it in more than 150 stores.

Boats fitted with special equipment are able to retrieve between two and eight tonnes of waste per trawl for cleaning and recycling, while other fishermen collect plastic debris mixed with by-catch and deposit it at special collection points. The sorted waste is sent to Closed Loop Recycling's plant in Dagenham, east London, where it is processed and turned into the plastic for the new bottles.

#### Thousands of pounds offered to homeowners for green home makeovers

**Exclusive:** Green deal home improvement fund will offer £1,000 for people installing boilers and insulation, and £500 for anyone who fits measures within 12 months of moving into a property

By Adam Vaughan, The Guardian



Payments of thousands of pounds will be available to householders in England and Wales who install energymeasures saving such as insulation and new boilers from June, in a move designed to breathe new life into the government's

efficiency scheme.

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Cavity wall insulation being installed. New incentives forfitting insulation will be available from June Photograph: Andrew Aitchison/Alamy

which launched in January 2013, was hailed by ministers as "transformational" and the "biggest home improvement programme since the second world war". But the scheme was dogged by administrative problems and even energy secretary, Ed Davey, conceded earlier this year that the financing that had been at the heart of the initiative was "disappointing".

The Guardian can reveal that ministers will announce a bold new package of measures on Thursday, known as the green deal home improvement fund, in a bid to revive the scheme.

A £500 payment will be offered for anyone who installs energy efficiency measures within 12 months of moving into a property. They will also get £1,000 for fitting any combination of two measures from a list of twelve improvements, which include installing double glazing, cavity wall insulation, a new boiler, replacement doors and flat roof insulation.

Householders with older homes that have solid walls who undertake the much more expensive process of having solid wall insulation will be able to claim 75% of the cost, up to a maximum of £6,000, from the government.

Davey told the Guardian: "I think it's much more generous [than before]. It's also much simpler. We did a lot of research on what consumers would react to – to make their homes warmer and cheaper to run. This list approach, 'pick two from a list and get £1,000', research showed people liked that. We've gone for things that people most want – they want a new boiler, double glazing, cavity wall insulation."

Climate change minister, Greg Barker, said: "The green deal home improvement fund is another way the government is making it simpler and cheaper for people to stay warm and improve their homes. I want households across the country to benefit from more energy efficient homes and reduced bills through the green deal, and that is what the new home incentive fund will do."

Ministers and officials also appear to have addressed one of the criticisms of the previous scheme, whereby people had to pay  $\pounds$ 100-150 for an upfront assessment of their home to see what measures would work best. Up to £100 of the assessment cost will now be refunded after works are undertaken, under the new plans.

Davey said that the government had got the focus on loans wrong first time round, but lessons had been learned: "I still think the pay-as-you-save [financing] model has a really important future. But what we got wrong was to say it was the only show in town. People want to finance it in different ways, and you know what, I don't care. What I care about is people making their homes more efficient, and getting their energy bills down, and the green deal assessment has been key to doing that, and because of that the green deal has been a success."

The package of measures to be unveiled today were part of a round of horsetrading in Whitehall last winter, under a deal that saw changes to social and environmental levies after David Cameron was reported as saying he wanted

to "get rid of the green crap" on energy bills. The deal saw targets for solid wall insulation reduced under the energy companies obligation (ECO).

However, the package fell short of the type of reforms that some had been calling for, such as offering discounts on council tax or stamp duty.

John Alker, director of policy and communications at the UK Green Building Council, said: "We welcome this package of measures which represents a genuine attempt to rescue the green deal and shows that government remains committed to home energy efficiency. The increased cash-back for solid wall insulation is particularly encouraging following the cuts to ECO. But this isn't 'problem solved' for the green deal. The scheme's initial cash-back went unspent so it's important that history doesn't repeat itself."

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#### Washington Governor Wants Serious Action on Climate Change

#### SustainableBusiness.com News

After finding out that Washington State is not on track to meet its binding climate targets, Governor Inslee signed an executive order that creates a process for success.

His goals: implement cap-and-trade, stop using coal, advance renewable energy and fuels, and cut state government emissions.

Although he needs legislation to pass, Inslee's executive order sets up an action plan to get there. "We will engage the right people, consider the right options, ask the right questions and come to the right answers - answers that work for Washington," he says.



Inslee took action because legislators have been deadlocked along party lines on how to reduce emissions. State law requires that greenhouse gas emissions return to 1990 levels by 2020, and for greater reductions in 2035 and 2050.

Last year, Washington signed a pact with California, Oregon and British Columbia to harmonize their policies to fight climate change and promote clean energy.

#### Action Plan:

**Cap-And-Trade:** a Carbon Emissions Reduction Taskforce composed of 21 leaders from business, labor, health and public interest groups will recommend the design and implementation of the program. Due in November, the results will inform legislation introduced for 2015.

He asked the taskforce to include strategies that help energy-intensive industries transition away from carbon-based energy sources. And it will include ways that offset the costs to individuals and businesses.

Mo More Coal for Electricity: several state agencies will work with key utilities to reduce, and eventually eliminate, the use of coal to produce electricity.

**Clean Transportation:** under the leadership of the state's Department of Transportation, state agencies and local governments will devise and promote strategies that electrify the transportation system, such as greater use of mass transit.

The Office of Financial Management will lead a technical feasibility study and cost-benefit analysis of whether implementing a clean fuel standard makes sense.

While a cap on carbon emissions requires legislative approval, a clean fuel standard could be implemented through Executive Order. The previous governor pushed for carbon trading but could get it through the legislature in 2009.

**Renewable Energy/ Energy Efficiency:** The Department of Commerce will work with Washington State University and others to create a smart building program that significantly boost efficiency, and another program that integrates solar more rapidly.

Reduce the Footprint of State Government: another goal "resource stewardship" throughout state government. The Department of Enterprise Services will lead efforts to reduce carbon emissions and improve energy efficiency.

#### Miracle grow: Indian rice farmer uses controversial method for record crop

By John Vidal, for theguardian.com



Indian rice workers harvest crops in a field near Siliguri. The labour-laden system of rice intensification has yielded extraordinary results. Photograph: AFP/Getty

An Indian farmer has set a state and possibly a national record for growing rice using a neglected method of cultivation that has been dismissed by academic researchers and received little financial backing from agribusiness.

According to Jaisingh Gnanadurai, joint director of agriculture in the southern Indian state of Tamil Nadu, farmer S Sethumadhavan from Alanganallur has harvested a record yield of nearly 24 tonnes of paddy rice per hectare using the system of rice intensification method (SRI).

"This is a state record. The Tamil Nadu government has advocated a second green revolution by using more organic fertiliser and less inorganic fertiliser. Our chief minister's aim is to get double the yield and triple the income of farmers using SRI," Gnanadurai said.

The SRI method of growing crops has been developed over 30 years by small farmers in more than 20 countries. It centres on improving the management of the soil, water and nutrients, rather than bolstering the seed, which has been the focus of scientific research for decades.

SRI involves significantly reducing the number of rice seeds planted, transplanting them to the fields when they are much younger than usual, using different amounts of water at critical times of their growth cycle, and improving soil conditions with organic manure.

The system is more labour-intensive but has generated extraordinary results. Two years ago, Bihari farmer Sumant Kumar set what is thought to be a world record for rice growing, harvesting 22.4 tonnes of paddy rice per hectare using SRI methods.

Although his crop, in Nalanda district, northern India, was measured and verified by state officials, it was challenged by rice scientists in the Philippines and China. Experts claimed the measurements were fake and suggested it was impossible to produce a yield so large.

Sethumadhavan, who has been farming for 15 years, said last week that he used a mix of organic and chemical fertilisers and the common CR1009 rice seed. Although it is a high-yielding variety, it would not be expected to produce more than about six tonnes per hectare. The average yield of most rice varieties is about three tonnes.

SRI, developed in Madagascar nearly 30 years ago, has been encouraged by some development groups and state governments because it has consistently produced higher average yields than conventional rice farming. It needs fewer seeds, and less water and chemical fertiliser.

According to the SRI International Network and Resources Center at Cornell University in the US, the method has been adopted by at least 9.5 million farmers in Cambodia, China, India, Indonesia, Vietnam and the main ricegrowing countries. One million farmers in other countries in Asia, Africa and the Middle East are also thought to be using it.

This week SRI International played down the bumper yield in Tamil Nadu, saying not too much notice should be paid to statistical "outliers". "[It is] averages that feed hungry people and raise farmers out of poverty, not records," said Norman Uphoff, professor of international agriculture at Cornell.

According to the Bihar government, where hundreds of thousands of hectares are grown using SRI methods, average yields are at least 40% larger than for conventional rice farming – and possibly far more.

In Tamil Nadu, farmers are experiencing similar increases and are paying less. "Our chief minister's aim is to get double the yield and triple the income of farmers using SRI. Traditional farmers use 30kg of seeds [compared with] 3kg by the SRI method," Gnanadurai said.

But SRI has received little support from corporations and university research groups, most of which have concentrated on trying to improve seeds using biotechnology or traditional plant-breeding techniques.

The reason, say some critics, could be because there are strong financial and other vested interests to promoting hybrid seeds as the solution to food shortages in India and elsewhere. Hybrid crops are big business because they require not just the purchase of seeds but also fertilisers and agrochemicals. Many farmers have been convinced by political leaders that the only way to improve their production is to purchase seeds, fertiliser and chemicals.

According to the records of the Tamil Nadu farm ministry who advised him, Sethumadhavan ploughed a green manure crop, dhaincha, into the soil as an organic manure, alternated the crop between wet and dry conditions, did not allow water to stagnate, placed the rice seedlings further apart than normal and topped up the nutrient supply with inorganic fertiliser. The only machine he used was a hand-pushed weeder developed for SRI rice crops.

The bottom line for small farmers is the extra money that can be earned from SRI. According to the official Tamil Nadu register, Sethumadhavan would have earned about 98,000 rupees (£970) if he grew the rice conventionally on his five acres of land. Instead the farmer's additional income from the SRI crop was 26,500 rupees.

<Source>

### Now, a process to recover gold from e-waste

#### Vanita Srivastava, Hindustan Times, New Delhi,

Scientists at the National Metallurgical Laboratory, a CSIR lab in Jamshedpur, have successfully developed the process of extracting gold from electronic waste like used mobile phones, medical equipment and telecommunication devices to protect environment and conserve the natural resources and energy.

Precious metals are used widely in electronic appliances such as in printed circuit boards (PCBs) of mobile phones, motherboard of computers and connectors. Scientists feel that in order to meet the increasing demands and conserve resources, it is necessary to recycle and develop e-waste as an alternate source of these metals.

"We have various collaborations with national and international research institutes and companies for development of processes for recovery of various metals from e-waste. We started working on this gold recovery process development nearly two years back. Now we have even transferred the technological know-how to M/s ADV co. New Delhi and they have been working on it successfully," Dr Manis Kumar Jha, the lead scientist of the team told HT.

Maintaining that the PCB of the mobile phones and sophisticated electronic devices have gold, Dr Jha said, "This can be selectively recovered without affecting the environment. Some other metals like copper, lead and tin are also embedded in the PCB but gold has a specific market worth."

Typically, he said one could extract 350 g of gold from 1000 kg of PCB of mobile phone.

"The quantity of gold depends on the type of mobile phone. The sophisticated mobile phone having latest features and good connectivity for communication system would have more amount of gold and obviously expensive too."

Besides mobile phones, he said gold can also be extracted from some expensive medical equipment.

Vinayachal Kishore, managing director of ADV Metals, said, "We procured the technology more than a year ago and used it for our unit in Durg, Chhattisgarh. The technology works successfully. The gold that is extracted is more than 99.99% in purity. Now that we gained an expertise in recovering gold, we will also try and recover other elements like palladium and platinum from the e-waste."

#### National

#### E.V. deployment could cut India's emissions by 4 million tons by 2020

#### EcoSeed Staff

By deploying electric cars on their roads, India can avoid importing 120 million barrels of oil and avoid 4 million tons of carbon dioxide by 2020.



As vehicle ownership in India is set to rise substantially, electric vehicles (EVs) offer an opportunity to diversify India's transportation fuel mix and reduce carbon dioxide (CO2) emissions. Photo: Flickr/xnmeme (PRNewsFoto/Clean Energy Ministerial ...

A new report by the Clean Energy Ministerial's Electric Vehicles Initiative looked at the impact electric vehicle deployment would have on India's oil consumption and carbon dioxide emissions.

The report, Assessing and Accelerating Vehicle Deployment in India, was carried out by the United States Department of Energy's Lawrence Berkeley National Laboratory. The report is helping inform the Government of India's National Mission on Electric Mobility on its goal of 5 million hybrid and electric vehicles on India's roads by 2020.

"Electric vehicles are one of the most promising technology pathways to reducing greenhouse gas emissions and oil consumption around the world," said lead researcher Anand Gopal. "As vehicle ownership in india is set to rise substantially, this new study underscores the important opportunity that exists to diversity India's transportation fuel mix and reduce carbon dioxide emissions."

According to the report, if the E.V. deployment goal for 2020 is met, India can avoid 120 million barrels of oil imported and 4 million tons of carbon dioxide emissions. If the E.V. adoption rates continue beyond 2020, India could end up saving 4.8 million barrels of oil and cutting 270 million tons of carbon dioxide emissions by 2030.

The researchers also found that E.V.s could be produced for the India market at lower costs. This is due to the lower range of requirements for urban car users. In India, an E.V. with a 100-kilometer range is sufficient for 99 percent of trips.

When factoring in fuel cost savings, 100 km-E.V.s could become cheaper than conventional vehicles on a life cycle cost basis prior to 2030.

The report noted that consumer acceptance of E.V.s in India would depend largely on deployment of infrastructure needed to recharge E.V. batteries.

The researchers explored the optimal siting of public E.V. charging stations in the Indian capital of New Delhi. Using an agent-based simulation, the researchers found that high levels of service can be provided for 10,000 E.V.s at a reasonable infrastructure cost of \$760,000.

The study focused mostly on the use of "slow" chargers but found that these could be sufficient to meet drivers' needs if located in the densely populated and frequented areas of the city.

<Source>

#### Air India saved over Rs 1,400 crore on fuel costs over 6 years: Officials

#### PTI, Economic Times,

NEW DELHI: Air India is estimated to have saved over Rs 1,400 crore on fuel costs over six years by phasing out fuel-guzzling aircraft and undertaking innovative measures like flying planes at a particular cruise altitude and speed.

"The fuel savings which Air India has been able to achieve from September 2008 to March 2014 is nearly Rs 1,400 crore which approximated seven per



cent saving over the benchmark year (2008) on a cumulative basis," top airline officials said.

Air India's aviation fuel cost comprises about 38 per cent of the total expenditure.

Till March 2013, Air India achieved fuel savings to the extent of 261 million tonnes and carbon emission reduction of 822.13 million tonnes, the estimates showed.

The national carrier also phased out its fuel-guzzling Airbus A-310-300 aircraft and reduced its utilization of the Boeing B-747-400 jumbo and B-777-200LR fleet.

The routes flown by these aircraft are being increasingly flown by the fuelefficient B-777-300ERs, the Dreamliner B- 787s and B-737-800s, the officials said.

Air India is implementing a new Flight Planning System which provides precise altitude and wind profiles to determine the optimal cruise altitude for a flight.

The airline uses the flight planning software to calculate the most fuel-efficient route, depending on all parameters shown by it.

The airline had employed the expertise of International Air Transport Association (IATA) to find ways and means of reduce fuel cost and manage fuel consumption.

A Fuel Efficiency Gap Analysis (FEGA) was conducted by IATA and an action plan chalked out providing targets to implement green initiatives.

The steps related to the use of Ground Power Units instead of Auxiliary Power Unit inside the aircraft while they are on ground, various flight techniques and management and steps to reduce aircraft weight.

#### New JV Targets Indian Waste to Energy & Recycling Potential

By Ben Messenger, Managing Editor, Waste Management World



A new joint venture to develop waste to energy, recycling and landfill restoration solutions has been formed in India.

Mailhem Ikos Environment Private Limited, is a 50:50 joint venture between Indian waste management and renewable energy company Mailhem Engineers and Lhotellier Ikos, a French-based firm specialising in infrastructure and renewable energy as well as in water management and treatment.

According to the newly formed company, it will benefit from the domestic expertise of Mailhem and the technological expertise of Ikos in its aim to establish large scale waste management plants in India of up to 500 tonnes per day capacity.

The joint venture said that it will specialise in energy production from organic and household waste, biogas plants and recycling solutions including design, construction, & operations, and landfill restoration & degassing.

Speaking on the new venture, Colonel Suresh Rege, founder of Mailhem Engineers said: "We have been working with Lhotellier Ikos Group on domestic projects over the last two years, and have found a strong synergy amongst the companies in terms of vision, approach, and execution."

"After working for over 250 bio gas projects since our inception, we are seeing a growing demand of our waste to energy solutions, and joining hands with lkos will help us to cater to this growing market," he continued.

"Most important, waste and energy are two rising concern in India, and we look forward to an opporuntity to do our part to address these national issues," he concluded.

In addition to waste management solutions, the company said that it will also offer water management solutions through construction of water systems & networks, rainwater harvesting solutions, and water treatment plant set ups.

#### <Source>

#### India ranks No. 3 on U.S. Green Building Council List of top 10 countries for LEED

#### InformationWeek

Canada tops the list of the top 10 countries for LEED outside of the U.S., followed by China, India and South Korea

The U.S. Green Building Council (USGBC) has released its list of the top 10 countries for LEED outside of the United States, on which India ranked No. 3. The list demonstrates the global reach of the movement that is transforming the built environment into healthy, high-performing structures that benefit the planet and all of its people.

"The global community is increasingly recognizing the imperative for action as we combat the extraordinary challenge of worldwide climate change," said Rick Fedrizzi, president, CEO and founding chair, USGBC. "LEED's success in India represents not only a growing recognition of its demonstrated benefits for human health and operational cost savings, but also its unparalleled potential to be part of the solution to a warming planet and rising sea levels."

The list of the top 10 countries for LEED reflects the global adaptability of the world's most widely used and recognized system guiding the design, construction, operations and maintenance of green buildings. To date, project teams in more than 140 countries and territories have implemented LEED in their building projects, taking advantage of its global, regional and local applicability to create structures that mitigate greenhouse gas emissions; create healthier indoor environments for workers, students and community members; and lower utility bills for building owners through reduced energy and water use.

The ranking of the top 10 countries for LEED outside of the U.S. is based on cumulative gross square meters (GSM) of space certified to LEED in each nation as of April 2014. India has 11.64 million GSM of LEED-certified space, and in total, it has 1,657 LEED-certified and -registered projects representing 66.22 million GSM.

Rank	Nation	GSM of LEED- certified space (millions)	Total GSM of LEED-certified and -registered space (millions)	Total number of LEED-certified and -registered projects
1	Canada	17.74	58.66	4,068
2	China	14.30	96.22	1,638
3	India	11.64	66.22	1,657
4	South Korea	3.84	16.61	242
5	Taiwan	2.98	6.97	114
6	Germany	2.90	7.32	365
7	Brazil	2.85	23.24	829
8	Singapore	2.16	3.86	91
9	United Arab Emirates	1.82	47.16	850
10	Finland	1.45	3.56	148

#### The full ranking is as follows:

Notable certified projects in India include:

- ITC Maurya Hotel in New Delhi, built in 1977, LEED Platinum
- Google India Pvt. Ltd. in Hyderabad, LEED Gold
- Cisco Building in Bangalore, LEED Platinum
- Hewlett Packard India Sales in Gurgaon, LEED Gold

Collectively, more than 59,000 commercial and institutional projects are participating in LEED, representing 967 million GSM of construction space worldwide.

<Source>

#### Forthcoming events

#### 3rd International Renewable Energy and Environment Conference (IREEC-2014)

#### 4 - 6 July 2014

#### Kuala Lumpur, Malaysia

The 3rd International Renewable Energy and Environment Conference (IREEC-2014) will be held in Kuala Lumpur, Malaysia during July 4-6, 2014. IREEC is sponsored by WARP, World Academy of Research and Publications. The aim objective of IREEC 2014 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 Chemical and Environmental Engineering. 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.

The broad themes of the conference are renewable energy and environment. The topics of interest include Renewable energies, Green energy technology, Energy and Environment, Hydrocarbon Products and Processing, Low GHG fuels/vehicles, Energy and the environment, Energy savings and emission reduction, Environmental pollution monitoring, Air pollution control, Waste Management (industrial, domestic, natural), Environmental auditing; Environmental impact assessment, Environmental education and professional practices, Monitoring of climate change indicators using remote sensing, Sustainable development and clean technologies and Sustainability indicators; Sustainable process models. Among key note speakers are eminent personalities like Professor Dr. Jim Farrell, Dr. Ela and Dr. Barney P. Popkin.

<ReadMore>

#### 22<sup>nd</sup> International Conference on Modelling, Monitoring and Management of Air Pollution

#### 7 - 9 July, 2014

#### **Opatija**, Croatia

The 22<sup>nd</sup> Conference on Modelling, Monitoring and Management of Air Pollution is being organized by Wessex Institute Southampton, UK from 7<sup>th</sup> to 9<sup>th</sup> July 2014. The conference is being held at Opatija in Croatia. The goal of this conference is to bring together researchers who are active in the study of air contaminants and to exchange information through the presentation and discussion of papers dealing with the wide variety of topics listed.

The list of topics include Air pollution modeling, Air pollution mitigation, Emission studies, Exposure and health effects, Indoor air pollution, Emerging technologies and Global and regional studies.

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### Sustainable Development Conference 2014

#### July 5th - 7th

#### **Bangkok**, Thailand

Sustainable Development Conference 2014: Green technology, Renewable energy and Environmental protection, that will take place from July 5th - 7th 2014 in Bangkok, Thailand. The Conference is organized by Tomorrow People Organization- internationally recognized non for profit organization with head quarters in Belgrade, Serbia. This highly exciting and challenging international Conference is intended to be a forum, discussion and networking place for academics, researchers, professionals, administrators, educational leaders, policy makers, industry representatives, advanced students, and others.

The conference targets: Government officials and policy makers, NGOs, Graduate students, Corporate representatives and Scholars. Sustainable Development Conference 2014 will provide unlimited resources and opportunities to interact with prominent leaders in the field and greatly expand on your global network of scholars and professionals. The conference covers most of important and relevant topics, which includes topics like Air pollution control and equipment, Bio fuels, Clean Coal Technology, Clean energy investments, Climate and climatic changes, Corporate Responsibility and Sustainable Development, Environmental restoration and ecological engineering, Environmental sustainability, Global warming Green Energy Options, Hazardous waste and waste treatment, Recycling technologies, Solar Energy, Solid waste Management and Wind Energy.

<ReadMore>

#### 3rd EESE – 2014 Conference

#### 17th-18th July 2014

#### **Bangkok**, Thailand

This event is third in the series. The International Conference on Energy, Environment and Sustainable Economy (EESE Conference) serials will be held in each season in Bangkok to enable latest updates from delegates from different industries. The 3<sup>rd</sup> EESE conference is being organized by the Australian Society for Commerce, Industry and Engineering (SCIE) on 17 and 18 July, 2014. The sponsors of conference include corporate like Shell, Chevron, CSIRO and Chinese Academy of Sciences.

The major topics are Energy & materials, Environment, Civil &Environment, and Sustainability & Economics. The topics under these major topics consists of Biofuels / Biofuel Cells, Hybrid Energy Systems, Renewable energies: Hydropower, Solar Energy, Wind Energy, Carbon mitigation technologies, Carbon capture and storage, Wastewater and Sludge Treatment, Water Treatment & Reclamation, and Solid Waste Management.

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#### 3rd International Conference on Climate Change & Social Issues (CCSI 2014)

#### 30<sup>th</sup> Jul. to 1<sup>st</sup> Aug. 2014

#### **COLOMBO, SRI LANKA**

The 3rd International Conference on Climate Change & Social Issues (CCSI 2014). CCSI 2014 offers a valuable opportunity to network with colleagues from many countries who share the same goals. Session themes for the conference cover a rich and diverse range of research topics. It is expected these sessions will bring researchers from across the globe together to discuss broad questions of common interest and provide a platform to establish relationships with new colleagues. Delegates will have an opportunity to enlighten themselves with innovative ideas and solutions at CCSI 2014 and take initiatives to forge better solutions to reduce future risks and threats of climate change and social issues.

Keynote speaker at the conference is Prof. Mohan Munasinghe, Professor of Sustainable Development, SCI, University of Manchester, UK. He shared the Nobel Peace Prize with former Vice President of the United States Al Gore.. Among other distinguished international speakers are Dr. Tahseen Jafry Yunus Centre for Social Business and Health Glasgow Caledonian University (UK), Dr. Risa Morimoto University of London, Prof. Paul Hoole from Malyasia and Dr. Pramod Gopinathan Nair professor in Physical Chemistry, Mahatma Gandhi University, Kottayam, Kerala, India.

#### The Times of India, Delhi dated April 26, 2014

## Haryana to leave Mangar alone

#### DipakKumarDash TNN

New Delhi: In a move to shield Mangarbani sacred grove from any real estate development in the guise of recreational activities, Haryana government on Friday committed to demarcate the area as 'no construction zone'. Moreover, under pressure of huge number of pending land licence applications and after major objections from Delhi government and Ministry of Environment and Forest (MoEF) on green issues, the Haryana government also committed to drop contentious provision of more construction in natural conservation zones (NCZs) such as Aravalis.

Now with Haryana's commitment and Uttar Pradesh already complying with the provision of present norm of capping construction at 0.5% in NCZs, the revised regional plan is also likely to delete the newly introduced section to allow more construction and tourism in such areas.



NO CONSTRUCTION HERE

No representative from UP and Delhi government attended the meeting. While UP had informed that none of its officers could come due to the poll code, sources said Delhi LG Najeeb Jung and PWD secretary couldnot join because of a massive fire in Vasant Kunj slums in which 4,000 people were left homeless.

According to sources, Haryana will soon notify its sub-regional plan after incorporating observations of MoEF and NCRPB. An official said Haryana will comply with all the Supreme Court orders on identifying forest areas and preparing the geo-reference maps. MoEF has pointed out significant gaps in the reports prepared by Haryana government in both these cases.

"If the sub-regional plan fails to align with the provisions of regional plan, NCRPB will ask the state to make further changes. This is being done even in the case of UP sub-regional plan, which has been notified by the state," said a government official.

It's also learnt that following a PMO directive to urban development ministry and NCRPB that the plans should not be finalized until and unless the MoEF's concerns were resolved, efforts were made to address the issues. "The process of resolution has started. Once this is over, PMO will be informed and the revised regional plan will be notified," said a source.

The Times of India, Delhi dated April 28, 2014

## Here's a water bottle that you can eat

London: Finished drinking your bottle of water? Now eat it! A design student in the UK has developed an edible bottle that could rid the world of excess plastic waste. Rodrigo Garcia Gonzalez, along with fellow students from Imperial College London, has been working on the Ooho water bottle for the pastfew years.

The bottle is made from edible material, looks like a jellyfish, and has the potential to put an end to the bottled water industry, Smithsonian-.com reported.

The Ooho bottle is inspired by the juice-filled pearls added to bubble tea and the creations of legend-



END OF PLASTIC MENACE?

ary Spanish chef Ferran Adria, who uses a technique for encasing liquids in edible membranes known as sheperification.Gonzalez and his team first took a frozen ballof water and dipped it into a calcium chloride solution, which formed a gelatinous layer.

The frozen ball was then soaked in another solution made from brown algae extract, which encapsulated the ice in a second squishy membrane that further reinforced the structure. Keeping the frozen water in the algae solution for long periods of time allowed the mould to become thicker and stronger. "The main point in manipulating the water as solid ice during the encapsulation is to make it possible to get bigger spheres and allow the calcium and algae to stay exclusively in the membrane," Gonzalez said.

The Ooho has been tested in some European cities, but the researchers need to perfect it, as their edible bottles still don't hold large amounts of water and also can't be resealed. Even with the Ooho's fortified layers, Gonzalez describes the container's strength as comparable to the skin of a fruit. "We're trying to address this with a double container," he said. AGENCIES

#### In Print media

# Awarded for fighting mining Indian lawyer wins 'Green Nobel' prize

Gare Village (Andhra Pradesh), April 28: The man walked into Ramesh Agrawal's tiny internet cafe, pulled out a pistol and hissed, "You talk too much." Then he fired two bullets into Mr Agrawal's left leg and fled on a motorcycle.

The 2012 attack came three months after Mr Agrawal won a court case that blocked a major Indian company, Jindal Steel & Power Ltd, from opening a second coal mine near the village of Gare in the mineral-rich state of Chhattisgarh.

For a decade, MrAgrawal, who has no formal legal training, has been waging a one-man campaign to educate illiterate villagers about their rights in fighting pollution and land-grabbing by powerful mining and electricity companies. He's won three lawsuits against major corporations and has spearheaded seven more pending in courts.

"When I started this fight, I knew I'd be a target. It will happen again. Let it happen. I'm not going anywhere,"" the soft-spoken yoga enthusiast said in an



Ramesh Agrawal

interview this month in the city of Raigarh, where he hobbled around his modest home with a cane and a metal brace screwed into his shattered femur.

On Monday, Agrawal, 60, was recognised in a ceremony in San Francisco as one of six recipients of this year's \$175,000 Goldman Environmental Prize, often called the "Green Nobel."

"This is the biggest milestone in my life, Mr Agrawal said. Among the other winners are former corporate lawyer Helen Slottje, Desmond D'sa from South Africa. — Agencies The Deccan Chronicle, Hyderabad dated April 29, 2014

> The Times of India, Delhi dated April 29, 2014

## Revised NCR plan will limit construction in green zones

#### Dipak Kumar Dash TNN

New Delhi: Environment activists could breathe a biteasy asthe revised plan for National Capital Region and sub-regional plan of Haryana will be reworked to ensurenotourismactivities and only limited construction in natural conservation zones (NCZs). These sensitive zones include Aravalis, riverbeds and major waterbodies.

Sources told TOI that the minutes of the last NCR Planning Board meeting will mention all these since all the parties have agreed to incorporate specific changes suggested by the Ministry of Environment and Forests to protect ecologically sensitive areas. "These are major changes. Complying with the meeting, provisions relating to the construction in NCZs will be modified before the plans are notified. There will be no mention of any condition or exception to allow construction beyond 0.5%. Mapping and delineation of forest



SAFE AT LAST

will be done by each member state," said an official, who attended the meeting.

According the NCRPB reports, green cover and water bodies almost equal to a quarter (23%) of Delhi's area was lost to development works and rabid urbanization in NCR.

Once Haryana has committed to make the changes in its sub-regional plan, sourcessaid it has no option but to comply with the minutes that would be circulated. "In case they fail to do so, NCRPB will send objections. If this is brought to the notice of courts, the fate of the plan and projects cleared by the state will be under legal scrutiny," said a source.

A major controversy had brokenout after TOI first reported in September last year how Haryana government had successfully got restrictions on construction activity in NCZs deleted from the proposed revised regional plan in the 61st planning committee meeting held at NCRPB.

The Times of India, Delhi dated April 30, 2014

## In a first, experts produce solar jet fuel

Water & Carbon Dioxide, Powered By Sunlight, Help Synthesize Renewable Kerosene

#### KounteyaSinha TNN

London: An EU-funded research project called Solar Jet has produced the world's first 'solar' jet fuel from water and carbon dioxide. Researchers have successfully demonstrated the entire production chain for renewable kerosene using concentrated light as a hightemperature energy source.

The project is still at an experimental stage and just a glassful of jet fuel was produced in lab conditions using simulated sunlight.

The four-year Solar-Jet project was launched in June 2011 and is receiving €2.2 million EU funding from the Seventh Framework Programme



GREEN POWER: The project is still at an experimental stage and just a glassful of jet fuel was produced in the lab using simulated sunlight

for Research and Technological Development. In the next phase of the

In the next phase of the project, the partners plan to optimize the solar reactor and assess whether the technology will work on a larger scale and at competitive cost. Find-

ing new, sustainable sources of energy willremain a priority under Horizon 2020, the seven-year EU research and innovation programme launched on Jan 1. 2014.

European commissioner for Research, Innovation and Science Maire Geoghegan-Quinn said, "This technology means we might one day produce cleaner and plentiful fuel for planes, cars and other forms of transport. This could greatly increase energy security and turn one of the main greenhouse gases responsible for global warming into a useful resource."

Concentrated light— simulating sunlight—was used to convert carbon dioxide and water to synthesis gas (syngas) in a high-temperature solar reactor containing metaloxide based materials developed at ETH Zürich. The syngas (a mixture of hydrogen and carbon monoxide) was then converted into kerosene by Shell.

Although producing syngas through concentrated solar radiation is still at an early stage of development, the processing of syngas to kerosene is being deployed by companies including Shell on a global scale. Combining the two approaches has the potential to provide secure, sustainable and scalable supplies of aviation fuel as well as diesel and gasoline, or even plastics.

#### The Times of India, Delhi dated April 30, 2014

### Oil cos go solar to light up lives of 1m school kids

#### SanjayDutta | TNN

New Delhi: State-runoil biggies are to tap solar power to light up the lives of one million schoolkids and help them shine in academics. The companies are to provide solar home lighting systems so the children can study after dark without suffering the heat and toxic fumes of kerosene lamps.

The project is to be implemented in districts with high consumption of kerosene on "area saturation" basis. Money would come from CSR (corporate social responsibility) funds, aggregating about Rs 1,000 crore a year.

Data for the last Census conducted in 2011 shows 47% households using kerosene for lighting. The solar initiative is aimed at reducing use of kerosene for lighting purpose and prune subsidy. The companies had some years back funded cooking gas connections for Delhi's poor to make the capital akerosene-free city.

India consumes about 59 million tonnes of kerosene, a little less than diesel. But several studies have said that nearly 40% of the poor man's fuel sold through ration shops flows into the black market for adulteration due to subsidy, pegged at Rs 34.43 a litre at present.

Sources said the chief executives of all the bigoil firms — IndianOil, ONGC, Hindustan Petroleum, Bharat Petroleum, GAIL, Oil India — and senior oil ministry officials discussed the plan earlier this month at the Petroleum and Planning Analysis Cell, the ministry's data monitor.

The idea originally came from the ministry of new and renewable energy which sought a role for the oil companies in its "million solar lights project being



The idea originally came from the ministry of new and renewable energy, which sought a role for oil firms in its 'million solar lights' project being implemented with IT-Bombay. The idea behind dovetailing oil companies' CSR is to bring down kerosene consumption and reduce subsidy outgo

implemented with IIT-Bombay. The idea behind dovetailing the oil companies' CSR is to bring down kerosene consumption and reduce subsidy outgo.

The oil ministry's economic division thinks solar lamps could replace kerosene as a lighting fuel. Two options for implementing the initiative are being weighed — either through IIT-Bombay as part of the existing project or a separate rollout by the companies.

The project is part of the outgoing UPA-2 government's efforts at ramping up solar power usage. But the project and liberal funding from oil companies — and subsequently even power companies — could come in handy for the outreach plan of BJP if the party forms the next government at the Centre. The party's manifesto stressed solar power as a key ingredient of ensuring India's energy security.

#### The Times of India, Delhi dated May 01, 2014

### Spanish island 1st to run on water & wind power only

Valverde (Spain): The smallest and least known of Spain's Canary Islands, El Hierro, is making a splash by becoming the first island in the world fully energy selfsufficient through combined water and wind power.

A wind farm opening at the end of June will turn into electricity the gusts that rake the steep cliffs and green mountains of the volcanic island off the Atlantic coast of Africa. Its five turbines installed at the northeastern tip of El Hierro near the capital Valverde will have a total output of 11.5 megawatts — more than enough power to meet the demand of the island's roughly 10.000 residents.

Although other islands around the world are powered by solar or wind energy, experts say El Hierro is the firstto secure a constant supply of electricity by combining wind and water power and with no connection to any outside electricity network. Surplus power from the wind turbines will be used to pump fresh water



A wind farm opening at the end of June in Spanish Canary island of El Hierro will make it fully energy self-sufficient

from a reservoir near the harbour to a larger one at volcanic crater located about 700 metres above sea level.

When there is little or no wind, the water will be channelled down to the lower reservoir through turbines to generate electricity in turn. "This system guarantees us a supply of electricity," said the director of the Gorona del Viento wind power plant. Juan Manuel Quintero who is supervising final tests before the plant starts functioning in a few weeks. The plant willaccountfor50% of theisland's electricity demand when it is officially inaugurated at the end of June. AFP

The Deccan Chronicle, Hyderabad dated May 01, 2014

## Water Man fights for pollution-free Godavari

DC CORRESPONDENT HYDERABAD, APRIL 30

Rajendra Singh, the "Water Man of India", is currently on a parikrama of the Godavari river to make it pollution free.

it pollution free. The river that flows through five states, is degrading by the day, and Mr Singh has been protesting against organising any form of gatherings or kumbhs on the banks of the rivers.

Disappointed with the sad plight of the Musi in Hyderabad, he said the city's water bodies needed immediate attention. "The lakes in Hyderabad during the Nizam's time and the kind of water management we had was amazing.



Disappointed with the sad plight of the Musi, he said the city's water bodies needed attention.

There was decentralised management and now they have become polluted nalas," he said. Talking about his fight to make the Godavari pollution free, he said, "I have toured Godavari and there is not much left of it and the government will very soon change it into a nala in its records. We want freedom for the river's course, whereas political leaders will remember Godavari now, because it is bringing votes for them. They will woo voters by promising all sorts of plans for Godavari," said this Ramon Magsaysay awardee who was also named among the 50 people who could save the planet by *The Guardian*.

Protesting against organising kumbhs at the river, he said, "Crores of people will come to take a dip in the Godavari and they will all fall sick. We have even fought for this at the court. A committee has been formed and the matter is sub judice in High Courts and the Supreme Court." The Times of India, Delhi dated May 01, 2014

## No space to treat toxic waste

#### Capital's Desperate Search For Land To Build Facility Continues

#### Jayashree Nandi TNN

New Delhi: With no space to build a hazardous waste treatment plant, Delhi is going through a massive crisis. Its efforts to build a treatment plant in Ghuman Hera, Kanjhawala and Bawana have failed because of a variety of reasons. Chief among these are the 'not in my backyard' stance of local communities and litigation over land.

Delhi government had also requested neighbouring states earlier if they could provide land for treating the capital's hazardous waste but got no response. Now, National Green Tribunal, which heard the issue on Monday, has issued notices to the state governments of Rajasthan, Haryana and Delhi to see how the crisis can be solved.

Delhi generates about 5,000 tonnes of hazardous waste annually which, in the absence of a treatment facility, is being sealed and stored by industries generating it. But this cannot continue for long. In fact, hazardous waste management rules say "operators may store the hazardous wastes for a period not ex-



ceeding 90 days and shall maintain a record of sale, transfer, storage, recycling and reprocessing of such wastes". It can be stored for longer only if the state pollution control board has authorized the unit to do so but that, too, has a time limit, say scientists.

"NGT has taken note of the problem which is why they have issued notices to neighbouring states. DPCC, for a long time, has been looking for space to locate a treatment facility, which is supposed to be far away from habitation. But it has not managed to get land," Biraja Mahapatra, lawyer for Delhi Pollution Control Committee, said. The situation is so precarious now that DPCC is relying on a helping hand from neighbouring states. As of now, the generators of hazardous waste are maintaining a record of annual waste generation that is being submitted to DPCC in the form of affidavits.

Delhi desperately needs a treatment facility, says Piyush Mohapatra of Toxics Link. "Storing of hazardous waste is a problem because it has lifespan. If it's not disposed of within that period it will start contaminating. Delhi should immediately have a treatment facility, preferably within Delhi. Transporting it to other states will require permission," he said. "We have been desperately writing to Haryana government but it hasn't allowed us to send our hazardous waste to its facility. The CM wrote to them earlier," DPCC member secretary Sandeep Mishra said.

There are 27 hazardous waste treatment plants in the country. Most of them are located in Gujarat, Maharashtra and Andhra Pradesh because they have most of the industries that produce hazardous waste. But the Centre, too, is grappling with the crisis. Considering that it doesn't have land to even treat its municipal waste, Delhi is in a tight spot.

The Times of India, Delhi dated May 01, 2014

### HC seeks reply from DJB, DDA on Tughlaqabad pollution

#### TIMES NEWS NETWORK

New Delhi: The Delhi high court on Wednesday sought response from Delhi Jal Board and Delhi Development Authority on apetition, which has alleged that birds and animals in Tughlaqabad forest area were dying due to polluted water released from nearby illegal factories.

A division bench of Justice Pradeep Nandrajog and Justice Jayant Nath issued notice to Delhi government, Delhi Jal Board and DDA and sought response by August 13 on the plea.

In the petition, it was

sought that clean water should be provided to the animals and birds in the capital.

#### WILDLIFE DEATHS

The court's direction came on a public interestlitigation (PIL) filed by Manoj Kumar, which said animals and birds in the city are deprived of clean water. Kumar also urged the court to direct authorities to set up water treatment plants for purifying polluted water to save birds, animals, trees and the environment.

"There is green forest in Tughlaqabad area on DDA land. Residents of the area were running illegal factories and using chemicals and the filthy, polluted, hazardous water was flowing to the forest," the petition alleged. The nettition further said

The petition further said that animals including monkeys, peacocks, deer and birds were drinking the polluted water and were dying on a large-scale. It also said a particular community has started burying bodies in the forest and the same is being converted into a graveyard which is also polluting and spoiling the forest environment.

toi.reporter@timesgroup.com

#### In Print media

The Times of India, Delhi dated May 01, 2014

# Govt drafts policy on cutting emission from deforestation

#### Its Rollout Will Entitle India To Global Aid

#### Vishwa Mohan TNN

New Delhi: Taking forward an agreed framework of the 2013 Warsaw climate conference, India has come out with a draft national policy on reducing emissions from deforestation and forest degradation (popularly known as the REDD+ initiative), which will enable local communities in getting financial incentives for increasing forest cover.

The REDD+ initiative is a global mitigation mechanism under a UN body, linking deforestation, degradation, conservation of forests carbon stocks and sustainable management of forests with the reduction of green-



BOOST TO GREEN COVE

house gas emissions.

It has provision for compensating developing countries for their efforts to increase forest cover through a result-based payment system. The money for this is being collected through contributions from rich nations. Although only three countries — the UK, Norway and the US — have so far pledged \$280 million for the initiative, the move is a step in the right direction as deforestation accounts for nearly 20% of global carbon dioxide emissions.

In order to tap this source to boost its forest cover, India now intends to make the country REDD+-ready by creating a "national-level authority" and setting up "supportive institutions" in three years. Keeping this deadline in mind, the Union ministry of environment and forests (MoEF) on Monday came out with a draft national policy and sought suggestions from stakeholders and experts within a month (till May 27). "Based on the comments of the stakeholders, the draft document will be finalized," an MoEF note said.

It said the objective of this policy was to develop forest areas, safeguard rights and interests of local communities and to strengthen coordination among sectors and stakeholders having direct and indirect impact on land use and forestry. "The objective is also to develop an appropriate mechanism for channelizing REDD+ funding and transferring the accrued financial benefits to the communities in a fair, equitable and transparent manner," said the ministry.

The MoEF said the present level of forest cover in India (69.20 million hectares) neutralizes 11% of the country's greenhouse gas emissions. According to the Global Forest Resource Assessment, India is at the 10th position interms of forest area in the world. As per the India State of Forest Report, the country's forest cover is around 21.05% of its geographical area. The country however, added merely three million hectares of forest between 1997 and 2007.

Setting up a national forest monitoring system, a national REDD+ architecture/ governance and information system and building a critical mass of technical/institutional capacities of stakeholders are some of the features of thedraft policy.

### Soon, garbage to power planes Project Aims To Convert Trash Into Drop-In Fuel For Jets By 2017

London: In a world first, British Airways is planning to use garbage to power its flights in an ambitious project which aims to convert municipal waste into 50,000 metric tonnes of jet fuel per year.

The project will attempt to convert trash into a drop-in fuel for air-planes by 2017. While the world's first factory to turn garbage into jet fuel will come up in about three years, waste-fuelled transatlantic flights could come soon after.

Turning garbage into bio-fuel generates twice as much energy as incinerating it for trash, British Airways' head of environment Jonathan Counsell said. "What we get from that is a very pure, high-quality fuel," said Counsell. According to Counsell, recent life-cycle analyses indicate



GREEN FLIGHT: British Airways is planning the world's first factory to turn garbage into jet fuel that is expected to come up in about three years, followed by waste-fuelled transatlantic flights

that the fuel could reduce greenhouse gas emissions by up to 95% compared to fossil fuels.

The airline has partnered with Solena Fuels to build a trash-to-jet fuel conversion facility at a former oil refinery just east of London, 'ClimateWire' reported.

The facility will take the waste that cities already collect and turn it into fuel. Once the waste has been cleaned of any hazardous or recyclable materials, it will be combusted in a low-oxygen environment that produces a synthesis gas of hydrogen and carbon monoxide, a process known as gasification.

The gas will then be converted to liquid fuel, in a process called Fischer-Tropsch, the report said.

Fuelling the London to New York trips with bio-fuel would displace about 2% of the airlines' consumption at its main hub — Heathrow Airport outside of London. However, British Airways expects to increase its use gradually, in compliance with a United Kingdom aviation industry road map that sets the goal of obtaining 30% of fuels from renewable sources by 2050. AGENCIES The Deccan Chronicle, Hyderabad dated May 03, 2014

### City groundwater level hits new low

#### DC CORRESPONDENT HYDERABAD, MAY 2

Diminishing water bodies, increasing concrete surfaces and lack of focus on rainwater harvesting pits by municipal bodies has led to the groundwa-ter level being in a deplorable state in the city.

In what should be an alarm call to the city administration, the administration, the ground water level (2014) in most city pockets are in negative figures com-pared to the last few years. This is the case even after the city received more than normal rainy days

last season. This, in increased dependency has turn, citizens' on water tankers and environmental scientists say if appropriate steps are not taken then the city would soon turn into a complete concrete jungle.

"The general rainfall days every season is 40-42 days during mid June to September. However, in 2013, the rainy days continued till October, recording an additional 10-12 days of rainy days. As a result, an additional rain-fall of 30 per cent was received," said Mr. Ramesh, deputy director, Ground Water department.

ment. "However, due to poor recharge, the ground water level is in minus fig-ures in most places," he added. SR Nagar, Ameerpet, Saidabad, Gachibowli, Chandrayangutta, among other areas has water lev.

other areas, has water levels in negative figures against last few years.

"The water tanker sup-ply has increased from

The groundwater level in most city pockets are in negative figures compared to the last few years. This is the case

even after the city recei-ved more than normal rainy days last season. SR Nagar, Ameerpet, Saidabad, Gachibowli, Chandrayangutta, among other areas, has water levels in negative figures

against last few years.

Scientists say if appropriate steps are not taken, the city would turn into a concrete jungle.

10,000 per month last year to 14,000-15,000 every month this year." said an official of Hyderabad Metropolitan Water Supply & Sewerage Board (HMWS & SB). Experts attribute this state to increased con-crete surfaces and lack of proper rainwater chan-

proper rainwater chan-nelising in harvesting points, diminishing water bodies and also increasing water discharge due to

"Water discharge due to increased population. "Water bodies in and around the city are the main source for recharging the groundwater table However, hundreds of lakes that existed in the last few years are no more. Over 200 water bodies within Outer Ring Road limits have been encroached and buildings have come up. Moreover, lack of proper channelis-ing of rainwater into water harvesting pits instead of drainage and increased discharge of water due to increased population are the main reasons for decrease in groundwater table," said Mr Chakri of Save Our Urban Lakes (SOUL).

The Times of India, Delhi dated May 03, 2014

### Green office shows how to be energy efficient

#### TIMES NEWS NETWORK

New Delhi: Ironically, the ministry of environment and forests had a tough time obtaining permission to cut some trees to build its green office in the lush west Delhi neighbourhood of Jor Bagh. To reduce its ecological footprint, the building was designed in a way such that the fewest trees were chopped and some of the old trees were incorporated in the design. About 19 trees were eventually chopped, a half of them transplanted. Deependra Prashad, architect of Delhi's first 'net zero building', said it's possible to build without clearing the its trees

land of all Prashad, who shared his project at Centre for Science and Environment conference 'Urbanscapes' on Friday, said the building is a demonstration of design and technological solutions to make a building energy positive the building itself generates more

energy than it consumes. Indira Paryavaran Bhavan produces all its energy through rooftop solar photovoltaic panels with an installed capacity of 930 kilowatt peak (KWp).

the building doesn't However, directly use this solar energy. It supplies it to the grid and uses conventional energy from the grid to meet its own needs. "This is called a renewable purchase agreement. We have managed to get the agreement in place with the government to be able to supply renewable energy generated by us to the grid," Prashad said. To avoid cutting all trees on the plot, the team used a technology called the vertical ground cutting method in which there is no slope on both sides for excavation but only a part of land is excavated where the building will be built. "There was a lot of resistance from Jor Bagh residents who said these are old trees. We sought permission to chop 45 but managed to save more. We had to do away with 19; half of them have been transplanted. This demonstrates that many trees on the plot can be saved when the design is integrated," said Prashad

About 1,000 officials are going to use the building as soon as the new government comes to power. Apart from many passive features like having optimum play of light and air within, there are some interesting interventions in energy usage. The air conditioner, for instance, is run at 26 degrees instead of very low "The previous temperatures. environment minister agreed to maintain the temperature at 26 degrees. It's helpful because when you step out chances of getting a thermal shock is lower," he said. The building has an automated car parking system with mechanical lifts. The entrance of the building is designed with priority for

**POWERHOUSE IN ITSELF** 14.9 Lakh KWh 14.2 Lakh KW photovoltaic panels shade rost trans t sankolt **Energy efficient lighting** Chilled hears sectore pedestrians. The entry to the main gate has stairs so cars can't use them. They can enter through gates on the sides that directly lead to the parking lots. The building is harvesting rainwater through recharge pits but

doesn't sustain on rainwater. It uses the conventional water supply from utilities. The total cost of the e project is estimated to be about Rs129 crore.

The Times of India, Delhi dated May 03, 2014

### 'India should turn to renewable sources of energy

Dr Rajendra K Pachauri, chief guest at the Earth Care Awards, chairperson of the Intergovernmental Panel on Climate Change and director general of The Energy and Resources Institute, spoke to Anahita Mukherji on why India need not go down the same path as the developed world. Excerpts from an interview:

Should Western countries be forced to pay more attention to reducing carbon foo tprint than countries like India, as the developed world has contributed more towards damaging the environment?

The UN framework on climate change states the need for a common but differentiated responsibility that all countries need to undertake on climate



change. But I feel it is in the interest of countries like India not to follow the path of the developed world, and opt instead for energy security and lower levels of air pollution which would be achieved through a different energy mix. There are economic benefits to using energy more efficiently. Instead of importing hydrocarbons and coal, it will be more efficient for India to use low carbon sources of energy and turn to renewable energy on a large scale. This does not compromise growth; it's just a different pattern of development.

You seek to bring corporates on board the battle against climate change. At a time when large corporates have backed think-tanks that fund climate change sceptics, why would they support sustainable development at the cost of business interests?

Lots of corporates have done outstanding work in conserving the

environment, which shows that such actions have co-benefits. Let's accept that corporates are a part of society and if climate change has a major negative impact on society at large, they will also be affected by it. Rational thinking, reflection and use of knowledge and science will prove the need for corporates to take climate change seriously

#### How can one hold businesses accountable for their impact on the envirønment?

Business has a crucial role to play in dealing with climate change. Enlightened government policy and the right regulatory mechanisms can hold the corporate sector accountable.

#### The Times of India, Delhi dated May 04, 2014

up borewells.



### Waste water to save S Corpn parks

No Nod To Revive Borewells, Plan To Link Facilities With Treatment Plants

#### Risha Chitlangia | TNN

New Delhi: With depleting water levels in south Delhi, the municipal corporation is finding it difficult to maintain its parks, especially the

Although South Delhi Municipal Corporation has borewells in most of the big parks, officials say 10-15% of these have dried up. With the Delhi government not permitting new borewells or reboring, the civic agency has decided to use treated sewer water to maintain the greens. In the first phase, the project willbeimplemented in Sarita Vihar and Vasant Kunj in south Delhi, and Keshopur in west Delhi

The corporation plans to connect 10 big parks in each of these areas with the near-est sewage treatment plant (STP). "We will lay pipelines to connect these parks with STPs. In the next phase, small parks will be linked with with the big parks to utilize the excess water. This will not only



Corporation is struggling to keep its parks green. With govt not giving permission for digging tubewells, the civic agency plans to use treated sewer water in its parks

#### Project highlights

> To be implemented in Sarita Vihar, Vasant Kunj and Keshopur

► In the first phase, South Corporation will connect 10 big parks in each area with the nearest sewage treatment plant (STP)

- Neighbouring parks will be connected
- with big parks in second phase
- DJB will provide 1 MGD from STPs daily > Corpn also plans to install sprinklers in

al major parks

help us maintain the greens but also bring down our de-pendence on groundwater," said Mukesh Yadav, director, press and information. South Corporation.

The corporation has got all the approvals to implement the project, but it is still



worried about this summer. In the corporation's cen-While working on the new system, which has been tral zone alone, 76 of the 347 borewells are lying defunct. adopted by Delhi Develop "We have applied several times to the Delhi government Authority (DDA) and CPWD, the civic agency wants the Delhi government ment for re-boring. But in the past three years, the government has not permitted any re-boring," said Virender Kato permit re-boring of driedIn the first phase, the project will be implemented in Sarita Vihar and Vasant Kunj in south Delhi, and Keshopur in west Delhi

sana, Congress councillo and chairman, central zone Recently, Kasana wrote to lieutenant governor Najeeł Jung requesting his inter vention, "We are not being able to maintain the green ar eas due to an acute shortage of water. Permission for re boring tubewells should be given in a time-bound man ner," said Kasana.

The corporation is also looking for ways to minimize water consumption in parks It plans to install sprinkles systems in all its major parks The agency will also set up rainwaterharvesting facility in all its parks. "We now us the flooding technique to wa ter the greens. Sprinkler: will bring down the water us age by 60%," said an official.

### Green tribunal bans mining in Sariska

#### Rachna Singh TNN

Jaipur: The National Green Tribunal's central zone bench in Bhopal has banned mining in 84 stone and marble quarries located inside and within 1 km radius of the Sariska tiger reserve and adjoining Jamwa Ramgarhsanctuary.

While criticizing the Rajasthan government for unabated illegal mining in the Aravalli hills, including Sariska, a two-member bench of Justice Dalip Singh and Justice P S Rao also flayed Haryana for using illegally mined stones.

Friday's order followed written submissions by the assistant conservator of forests of Tehla, Alwar that 61 quarries were operating inside Sariska and 23 quarries in its buffer zone and the Jamwa Ramgarh sanctuary

The Rajasthan government was criticized for unabated illegal mining in the Aravalli hills

The bench instructed the mining department to carry out a survey to verify the loca tion of the quarries.

"We have asked the divi sional forest officer under whose jurisdiction such illegal mining has been reported to prepare a plan for restoration of the forest area and submit it to the government," said Justice Da-lip Singh. "After examining it, the government shal take necessary administra tive and financial sanction for the restoration work, he said.

For the full report, log on towww.timesofindia.com The Times of India, Delhi dated May 07, 2014

The Times of

India, Delhi

dated May 05,

2014

### Green notice to hospitals

New Delhi: The National Green Tribunal issued notices on Tuesday to resident welfare associations of various colonies, and all government and private hospitals enlisted in Delhi to submit affidavits on installation of rainwater harvesting mechanism.

If installed, NGT asked them to explain whether the water harvesting mechanism are functioning.

After a Delhi Pollution Control Committee(DPCC) inspection report to NGT revealed how in most hospitals and government offices, rainwater harvesting systems were not functioning, NGT directed all the hospitals, Delhi Metro Rail Corporation, DDA, New Delhi Municipal Council, Delhi Jal Board and others identified by DPCC to file their replies to the report.

NGT directed DPCC to upload its inspection report on their website so that it can be accessed by all flouting agencies, TNN

#### In Print media

### Kidwai Nagar construction waste will be recycled

#### TIMES NEWS NETWORK

New Delhi: At atime when Delhi is struggling to find enough dump yards for solid waste and debris, a government owned construction company has set up a facility to recycle 150 tonnes of construction and destruction wasteper day at East Kidwai Nagar in South Delhi.

Launching the facility on Saturday, National Building Constructions Company (NBCC) claimed the construction and destruction recycle plant will 30,000 bricks/kerb stone and will be used in the redevelopment of government housing. The Kidwai Nagar (East)complex project involves construction of approximately 4,747 type-II to type-VII houses in place of existing 2,444. Moreover, the commercial space of about 1,04,413 sq meter will be

#### **150 TONNES DAILY**

created to make the project financialviable.

The recycling plant targeting "zero" waste at the con-struction was inaugurated by urban development secretary Sudhir Krishna NBCC said annually, about 25% of 48 million tonnes of solid waste generated in India is construction and demolition waste. Moreover, the total quantum of waste from the construction is estimated to be between 12 million and 14.7 million tonnes per annum out of which 728 million tonnes are concrete and brick waste.

The corporation said installation of the plant would benefit the project in many ways including 100% saving in transportation cost of waste 100% saving in material.

NBCC which is executing this project on PPP model shall ensure 100% buy back of the finished product comprising bricks, tiles and others after the treatment of the waste in the recycling plant. With the success of this initiative, NBCC plans to follow these best practices in all its future redevelopment projects and mega projects as well.

toireporter@timesgroup.com

#### The Deccan Chronicle. Hyderabad dated May 07, 2014

### People fume as garbage is burnt

DC CORRESPONDENT HYDERABAD, MAY 6

Despite several complaints from residents, tons of garbage continues to get piled up on the roads of plush areas like Marredpally, Kukatpally

GHMC workers, who have been assigned to pick up garbage on a daily basis, have been neglecting their duties here, say residents. Not just dump-ing, but there is also fre-quent garbage burning that emits hazardous gases, leading to health issues

The East Marredpally road that leads to the Talwalkars Gym, Ratnadeep and residential apartments to the right has a long stretch of garbage piled up outside the compound wall of a private property belong-ing to Deewan Bahadur

Seth Ramgopal. Repeated complaints from the family have fall-

en on deaf ears. H.K. Malani, whose late grandfather owned the property and who lives next door, said, "We have made several complaints to the corporation. Last year after continuously complaining for four

The Deccan Chronicle, Hvderabad dated May 07, 2014



Despite several complaints to the GHMC, garbage is being burnt on the East Marredpally road causing inconvenience to residents in the area near the - S. SURENDER REDDY Ratnadeep store.

months, the GHMC authorities finally attend-

ed to the problem and cleared garbage. But after

that, there has been no regulation as people have

started dumping garbage again and many burn it.

We have complained again and we are waiting for them to get it cleared."

Yadamma, caretaker of the property, said, "They do not come regularly to collect garbage from here. We have told them many times, but they just don't new enviteration." pay any attention." Alok Gauray, manager

at the Ratnadeep store, said they have not approached the corpora-

tion so far. "It is definitely a major issue. We will report about it soon," he said. Prasad G., the manager at Talwalkars said the stench from the garbage pile was a major incon-

venience for their clients. "Garbage is dumped even on the road. When RTC

We complained times to the corporation. Last year after continu-ously complaining for four months, the GHMC authorities cleared it. After that, there has been no regulation as people resumed dumping bage and many burn it. We have complained again and are waiting for them to clear it

-H.K. MALANI Citizen affected by dumping of garbage

buses pass by, scrap gets hurled in the air and spread in the area. It is

spread in the area. It is unpleasant for our clients who come to work out at the gym," he said. Jayaprakash Nambaru of I Go Green Foundation said, "Many lorry tyres are burnt behind Metro well mean Yiuwition are burnt benind Metro mall, near Y-junction, Kukatpally. More than 20 complaints have been lodged on 155304, but nothing has been done." Meanwhile, GHMC com-

missioner Somesh Kumar issued an ultimatum to all sanitation officers in the city to ensure that garbage is lifted in the next two days or face suspension.

### Uranium contamination threatens Nalgonda water

#### AMAR TEJASWI | DC HYDERABAD, MAY 6

Researchers assessing the pre-mining contamination of the environment at Nalgonda have found high levels of Uranium contamination in the groundwater and fair levels of gamma radiation, which will increase drastically once mining commences.

About 41 per cent of the groundwater samples collected from sample sites in Nalgonda were found to have contamination levels higher than permitted. Scientists say the Krishna river water and Nagarjunasagar will not be affected by the mining activity, although activists

activity, although activists vehemently dispute it. Researchers from the Centre for Environment at JNTU, Nuclear Fuel Complex and the Bhabha Atomic Research Centre (BARC) had analysed sam-ple sites in mineralised zones of Nalgonda. About 11 million tonnes of Uranium is proposed to be mined from the district by the Uranium Corporation of India Limited (UCL). of India Limited (UCIL).

Levels of contamination in the air, water and soil were analysed and Radon concentrations and gamma radiation in the miner-alised zones were found to be marginally high but not

#### RED ALERT

41 per cent of groundwater samples in Nalgonda were found to have contam-ination levels higher than permitted

This is expected to rise once mining commences

• There have been proposals for Uranium mining in Nalgonda for more than a decade, but the project has faced extreme oppo-sition from the local public and environmentalists

over the permissible limits. Radiation levels were clas-

sified as elevated. However, groundwater remains a concern as 41 per cent of the analysed sam-ples showed high levels of Uranium contamination. These would go up once mining commenced.

Dr T. Raghavendra, one of the researchers from JNTU, said, "Radiation levels are below permissible limits only for now. But once mining progresses, it will definitely have an impact. They will have to explain how they will control the radiation levels.

There have been proposals for Uranium mining in Nalgonda for more than a decade but the project has faced extreme opposition from the local public and environmentalists. UCIL had also held public hear-ings for the project.

### Meanwhile, activists say that mining in the region will also adversely affect Krishna River water and Magarjuna Sagar. G Srinivas, an activist with Samata, said, "Definitely there will be an impact on

Krishna River. In their studies they select sites, which will show no impact. But the reality is hidden." Dr Raghavendra, mean-while, said there would be no impact on Krishna River in case of mining. "The river is upstream from the mining site so it shouldn't have any impact," he said. However, one of the sites that scientists analysed, Peddagattu, is adjacent to Nagarjuna Sagar. Dr Raghavendra, however, said the town was at a height of 324 metres so it would not be affected. Activists, however, are not convinced.

#### In Print media

The Times of India, Delhi dated May 08, 2014

## Delhi air worst in the world

Packed With Fine Particles That Damage Heart, Lungs: WHO

TIMES NEWS NETWORK

New Delhi: Delhi has the most polluted air in the world. A World Health Organization (WHO) air quality database of 1,600 cities and 91 countries released on Wednesday shows that the concentration of PM2.5 (fine, respirable particles) is the highest in Delhi at 153 micrograms per cubic metre (µg/m<sup>3</sup>) when the WHO standard is just about 10µg/m<sup>3</sup>. The fine, particulate pollution which is considered most dangerous for health is way higher in Delhi compared with many other crowded Asian eities, including Beijing which has a PM2.5 level of 56µg/m<sup>3</sup>, Karachi (117µg/m<sup>3</sup>) and Shanghai (36µg/m<sup>3</sup>).

The concentration of PM10(coarseparticles)in Delhi is about 286µg/m<sup>2</sup>, more than 14 times higher than the WHO annual mean standard of 20. Peshawar (540µg/ m<sup>3</sup>) and Rawalpindi (448µg/ m<sup>3</sup>) in Pakistan fare worse on this parameter. Indian cities with avery high PM10level include Gwalior. Raipur and Lucknow.

This is not the first time Delhi has earned the dubious distinction of having exremely polluted air. In January, Yale University's Environmental Performance Index 2014 had ranked India among the bottom five in a list of 178 countries for various parameters, including air pollution. A controversy erupted when the Yale data was interpreted to mean that Delhi's



286 Delhi 273 Karachi 180 Dhaka 121 Beijing 64 28 Colombo. 48 Jakarta 27 Singapore PM10: Particulate matter of size 2.5 10 micrometre ; PM2.5: Particulate matter smaller than 2.5 micro netre

air quality is worse than Beijings. The Delhi government and the ministry of earth sciences which monitors air pollution data for the city, had vehemently denied this. But the latest WHO database suggests that Beijing probably has better control systems in place to deal with air pollution.

"WHO has not ranked cities but its database gives us an idea of where we stand. Delhi is more polluted than

Small particles less than 10 micrometres in diameter (both PM10 and PM2.5) pose the greatest problems, because they can get deep into your lungs, and some may even get into your bloodstream. Exposure to such particles can affect both your lungs and your heart - US ENVIRONMENTAL

PROTECTION AGENCY DOCUMENT

others. WHO has compared our annual mean levels with its standards, which are far lower than Indian standards. The database highlights what a major publichealth issue air pollution is and how aggressive our policies need to be," said Anumita Roychowdhury, air pollation expert with Centre for Science and Environment (CSE). India's annual mean standard for PM10 is 60µg/m<sup>3</sup> and for PM25 it is about40µg/m<sup>3</sup>.

High PM2.5 levels are associated with major health ef-fects. WHO in its statement said "High concentrations of small and fine particulate pollution is particularly associated with high numbers of deaths from heart disease and stroke, as well as respiratory illnesses and cancers. Measurement of fine particulate matter of 25 micrometres or less in diameter (PM2.5) is considered to be the best indicator of the level of health risks from air pollution". WEATHER

#### Max 18.6°C (0)/ Min 3.2°C(-1) Moornise: Thursday -1.06pm Moonse: Friday - 154am Sunset: Thursday - 7pm Sunrise: Thatay - 5.55am Mainly clear sky, Max Inum& ninimum Hamperatures on Thursday will be around 40°C & 25°C. Maxhumidity on Wednesday was 10 sand min 296

Wednesday was 81% and min 12% Dr Maria Neira, WHO director for Public Health, E nvironmental and Social Determinants of Health said, "Cities such as Copenhagen and Bogotà have improved air quality by promoting 'active transport' and prioritizing dedicated networks of urban public transport, walking and cycling". Only 12% of the people liv-

ingin crites getair quality conforming to WHO guidelines. About half of the urban population being monitered by WHO is exposed to air pollution that is at least 2.5 times higher than the levels the agency recommends. The Times of India, Delhi dated May 09, 2014

### Always Wheezing, Coughing

TIMES NEWS NETWORK

New Delhi: Rising air pollution has made ailments like asthma, allergy, recurrent cough and chronic obstructive pulmonary disease a part of life in Delhi. Geetanjali Sharma, who came to Delhifor a job 10yearsago, says she getsallergies at every change of season. "My eyes itch. Ever since I moved here. I have had a persistent cough which was diagnosed as a consequence of air pollution. Other than covering my nose and mouth, there isreally nothing else I can do."

Doctors advise patients with recurring allergic symptoms and infections to spend time uphill or inplaces that are less polluted. "We often come across patients suffering from respiratory illnesses whose symptoms do not improve even with steroids and inhalers. Sometimes, they goabroad and find that the symptoms reduce significantly," said Dr Arup Basu, chest specialist at Sir Garga Ram Hospital. Children are the hardest hit by pollution. Rakhi Mukhuty's three-year-old daughter has a severe allergic cough. "I spend sleepless nights just tending to her as she has frequent coughing bouts. Doctors want us to shield her from polluted air, but that is not possible in Delhi," she says.

Dr Sanjeev Bagai, senior pediatrician and chairman of Nephron Clinic, said, "Newborns and infants are at greater risk because they have limited lung capacity. We often have to prescribe prophylactic inhalers and face masks to control their symptoms. Wheezing, bronchitis and asthma are some of the commonest health problems and these have increased by 40% in the pastfive years".

The Times of India, Delhi dated May 09, 2014

### Beijing battles crisis, Delhi fiddles

#### Jayashree Nandi TNN

New Delhi: Delhi hasthe dirtiest air in the world but it hasn't done anything about it in years. The benefits of CNG have dwindled with increasing vehicular population but the city's second-generation action plan that recommends a move to Euro V and VI emission standards and rapid expansion of public transport is stuck between departments.

An analysis by Centre for Science and Environment (CSE)shows PMI0(coarseparticles) concentration in Delhi's air increased by about 75% from 2007 to 2011 on the back of a 37% increase in vehicular population—from 54 lakh to about 74 lakh. Further, from 2011 to 2014, vehicular emissions in the city increased by another 15-20%, a study by Indian Institute of Tropical Meteorology (IITM), Pune shows.

While it did nothing to check the increase in vehicles, the city government also did not implement better emission standards. Beijing attacked air pollution by capping the number of new car

#### **GREEN STEPS**

licences at 1.5 lakh annually, implementing Euro V standards and continuing the ban ondiesel cars inside cities.

CSE's analysis shows Delhi government has been unequal to the crisis. Its response has been limited to extending the Metro, increasing the number of buses to 6,000 and introducing Euro IV standards in 2010, besides upgrading PUC tests and building 40km of cycle tracks.

Scientists say the meteorological conditions in Delhi also play a role in intensifying air pollution. "In winter, we have been noticing extremely severe smog episodes. It's nota natural phenomenon as there are sudden peaks in pollution levels," said Gufran Beig, chief projectscientist, System of Air Quality Weather Forecasting and Research at IITM. "It could be an early sign of climate change. In 2012 and 2013, there were episodes when the (atmospheric) boundary layer came down dramatically." he added.

But that's no excuse for not acting on poor air quality, said Anumita Roychowdhury, head of CSE's Clean Air programme. "Weather is a factor in all cities. In winter, pollution levels go up because the calm air and low temperatures trap pollutants. The London smog of 1952 killed many people, but London has dealt with these extreme events. Why is action against air pollution missing in Delhi?"

WHO data shows 13 of the world's 20 most polluted cities are in India, and CSE has recommended an overhaul of vehicle emission norms along with the framing of an air pollution policy in Delhi.

CSE on Thursday said India expects "a significant decision" on emissions standards and fuel quality from the Auto Fuel Policy Committee, which must "respond effectively" to the mounting evidence on worsening air quality.

#### In Print media

The Times of India, Delhi dated May 09, 2014

## Delhi air stinks, govt sniffs at WHO data

Instead Of Addressing Problem, Gets Into Futile Argument About Data For Beijing

#### Jayashree Nandi Tras

New Delhi: A day after World Health Organization's Intesturbanair quality database showed that Delhi has the worst air quality among 1,000 cities in 91 countries, government officials chose to split hairs over the published numbers while environmentalists stressed that

#### The ministry of earth sciences said on Thursday the World Health Organization has overestimated India's data and underestimated that for Beijing

the country should get on with addressing air quality concernsurgently.

Getting into an unsvailing comparison with Beijing, the ministry of earth sciences said in its statement: "WorldHealthOrganization (WHO) has overestimated India's data and underestimated Beijing's". It said the air quality records with Indian Institute of Tropical Meteorology (IITM) differ from the WHO database released in Geneva

on Wednesday. "If we compare yearly averages for each year from 2011 to 2014, both cities (Delhi and Beijing) are almost comparable. Delhi'sair quality is better than Beijing's in summer and much better in monsoon. Delhi's annual average ranges from 110 to 120 microgram per: cubic metre but WHO has overest i mated it as 153 µg/m<sup>+</sup> and Beijing's average has been underestimated," said Gufran Beig, chief project sci entist, System of Air Quality Weather Forecasting and Research at IITM. "It is Delhi's winterpollu-

tion and sudden spikes triggered by meteorology that push up the annual average. There are implications from climate change as well, "headded.

The WHO database pro-



bloodstream. Exposure to such particles can affect both lungs and heart --US Environmental Protection Agency document

vides 2010 figures for Beijing versus 2013 figures for Delhi, "I think India has been sharing its data openly but that's an notthe case with China. Why cia would they not share 2012 Co

's and 2013 data?" said an offiy cial from Delhi Pollution 2 Control Committee (DPCC).

The Deccan Chronicle, Hyderabad dated May 09, 2014

#### IITM's own data suggests that Delhi's annual mean PM2.5(fine, respirable particles) has been marginally higher than that of Beijing's in 2011, 2012 and 2013. "Why are they so hang up over Beijing's air quality? Is Be jing the only benchmark for us? Who are not just

Environmentalists, how-

ever, said it doesn't matter

whether Beijing or Delhi has

the dirtier air as both have

very high levels of pollution.

for us? We are not just breaching car own standard but are several times higher than WHO'sstandards, "said Anumita Roychowdhury, head of Centre for Science and Environment's (CSE) Clean Air programme.

"Isn't that a good enough reason to take aggressive action? Why can't we accept the problem? If they want to emulate Beijing, they should have aggressive policies on capping the number of cars and implementing Euro 5 emission standards," she added.

jayashne .nandi@timesgroup.com

## Tank Bund stink reaches Guv

#### Pollution Control Board and HMDA point fingers at each other

#### COREENA SUARES | DC HYDERABAD, MAY 8

The Buddha Purnima Project wing of the Hyderabad Metropolitan Development Authority that collected samples from nallas flowing into the Hussainsagar has found the presence of chemicals above the prescribed standards. This could be the reason for the complaints coming from Raj Bhavan in March that the lake stinks unbearably.

However, the AP Pollution Control Board says there is no chemical content in the lake water.

After complaints in March, the APPCB officials inspected the lake. They found that bad maintenance of Interception and Diversion (I&D) structure near the Kukatpally *nalla* was the source of the odour.

Replying to the HMDA, the APPCB stated, "Poor



A camel grazes near the edges of the extremely polluted Hussainsagar. Water hyacinth can be seen covering a part of the lake. -DC

maintenance of the Kukatpally I&D and the Balkapur *nalla* I&D is leading to stagnation of debris and sewerage which is causing the smell." A PCB official, who did not want to be named, said, "This problem would be more prevalent on rainy days if the predominant wind direction is towards Raj Bhavan. The sample testing carried out by the pollution control board does not prove presence of chemicals above the prescribed standards."

To challenge APPCB's

results, the BBP took new samples for testing from eight places, including Kukatpally and Jeedimetla *nalla*. The tests showed that the concentration of lead and cadmium in both the nallas is far more than the prescribed limit.

The samples were collected in the afternoon. Industries discharge their chemicals early in the morning. The time at which samples are taken could be important.

"The I&D structures at both the nallas are being maintained 24x7 with intensive monitoring. The foul smell is due to unchecked chemical effluents released into the nalla entering the lake. Chemical waste is being let into Kukatpally nalla secretly. This issue has been brought to the notice of the PCB at sev-eral meetings," said the rebuttal letter from the HMDA.

#### In Print media

The Times of India, Delhi dated May 09, 2014

#### LOOKING FOR A SOLUTION by 2015 2020-21 Cities need to implement 281 120 clean air action plan 300 PM10 and vehicles in Delhi > Sustainable commuting 248 249 250 100 20 walking and cycling 200 74 80 170 160 168 177 69 161 Need to inform people 60 150 60 65 daily basis and issue 39 56 100 40 52 48 45 42 PM10 microgram/cubic metre 50 20 Registered vehicles (in lakhs) Suggestions by CSE 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011

#### WHAT CAN BE DONE Entire country must switch to Bharat Stage IV

> Cars should meet Bharat Stage V standards by 2016 and India should leapfrog to Euro VI standards by

practices-public transport.

about air quality on a health alerts especially for children, elderly and those suffering from respiratory and cardiac problems

### China anti-pollution stir turns violent

The Times of India, Delhi dated May 12, 2014

#### Saibal Dasgupta TNN

Beijing: Chinese authorities have offered to shelve a huge waste incinerator project after anti-pollution protestors clashed with the police leaving 39 people including 10 policemen injured.

Photographs coming from the protest site in Yuhang, close to the tourist city of Hangzhou show several bleeding protestors, some with cracked skulls.

The demonstrations have been going on for over two weeks but turned violent on Saturday after several policemen descended on the area. More than 30



Riot police stand guard in Zhejiang province on Sunday

cars including six police vehicles were overturned, smashed and or set on fire.

The local government of Yuhang said the demonstration was a reflection of people's concern.

For the full report, log on towww.timesofindia.com

#### The Deccan Chronicle, Hyderabad dated May 13, 2014

### \$44tn required for clean energy: IEA

Seoul, May 12: The global cost of securing a clean energy future is rising by the year, the International Energy Agency (IEA) warned on Monday, estimating that an additional \$44 trillion of investment was needed to meet 2050 carbon reduction targets.

Releasing its biennial "Energy Technology Perspectives" report in "Energy Seoul, the agency said electricity would increasingly power the world's economies in the decades to come, rivalling oil as the dominant energy carrier.

Surging electricity demand posed serious challenges, said IEA executive director Maria van der Hoeven.

"We must get it right, but we're on the wrong path at the moment," Van der Hoeven told reporters in the South Korean capital.

"Growing use of coal globally is overshadowing progress in renewable energy deployment, and the emissions intensity of the electricity system has not changed in 20 years despite some progress in some regions," she said. "A some radical change of course



Releasing its biennial "Energy Technology Perspectives" report in Seoul, the IEA said electricity would increasingly power the world's economies in the decades to come, rivalling oil as the dominant energy carrier.

at the global level is long overdue," she added. Such a change would, however, be expensive, and the IEA stressed the importance of governments minimising investment risks.

The agency said an additional \$44 trillion in investment was needed to secure a "clean-energy future" by 2050, compared to the \$36 trillion it had estimated in 2012.

The increase partly shows something the IEA has said for some time: the longer we wait, the more expensive it be-comes," he said. — AFP

#### SOUTHERN OCEAN WINDS STRONGEST IN 1,000 YRS

Sydney, May 12: Winds in the wild Southern Ocean are blowing at their strongest in a millennia as climate change shifts weather patterns, leaving Antarctica colder and Australia facing more droughts, a study showed on Monday.

Rising carbon dioxide levels in the atmosphere were strengthening the winds, already dubbed the "Roaring Forties" for their ferocity, and pushing them further south towards Antarctica, researchers from the Australian Nati-onal University (ANU) said. "The Southern Ocean

winds are now stronger than at any other time in the past 1,000 years," said the study's lead researcher Nerilie Abram

"The strengthening of these winds has been particularly prominent over the past 70 years, and by combining our observations with climate models we can



clearly link this to rising greenhouse gas lev-els," she said.

The new research, which was published in the Nature Climate Change journal, explains why Antarctica is not warming as much as other continents.

The westerly winds, which do not touch the eastern parts of Antarctica but circle in the ocean around it, were trapping more of the cold air over the area as they strengthened, with the world's southernmost continent "stealing more of Australia's rainfall", she said.

"This is why Antarctica has bucked the trend. Every other continent is warming, and the Arctic is warming fastest of anywhere on earth," she said. - AFP

#### The Times of India, Delhi dated May 13, 2014

## First electric aircraft takes flight

Test Success Suggests Air Travel Cost Could Be Cut By More Than A Third

London: The world's first airplane completely powered by electricity has successfully taken to the skies for its maiden flight, and could bring down air travel cost by more than a third, its developer Airbus said.

The small experimental aircraft called 'E-Fan' carried its first flight at an airport near Bordeaux in southwestern France, and could prove to be a key step towards greener, quieter and cheaper air travel. Manufactured by Toulouse-based Airbus, E-Fan measures little more than 19 feet from nose to tail and makes slightly more noise than a hairdryer.

Powered by 120 lithium-ion polymer batteries, the plane's first official flight last month lasted less than 10 minutes, though the plane has the capability to fly for around an hour before recharging. An hour-long commercial flight with the E-Fan, according to



The E-Fan measures little over 19 feet from nose to tail and makes slightly more noise than a hairdryer. An hour-long commercial flight with the E-Fan could cost only \$16, compared to \$55 for a flight in a petrol-powered plane of the same size

Airbus, could cost only \$16, compared to \$55 for a flight in a petrolpowered plane of the same size, 'Inhabitat.com' reported.

The electric E-Fan training aircraft is a highly innovative

technology experimental demonstrator based on an all-composite construction, Airbus said on its website. "The E-Fan project and Airbus Group's commitment to the field of electric and hybrid research show our vision of future developments,' technological said said Airbus Group chief technical officer Jean Botti.

"It will not only lead to a further reduction in aircraft emissions and noise to support our environmental goals but will also lead to more economic and efficient aircraft technology in the long run," said Botti.

Airbus plans to manufacture two versions of the E-Fan. The two-seater E-Fan 2.0 will be a fully electric training aircraft, while E-Fan 4.0 will be used for both training and general flight purposes and will be powered by a hybrid system, the report said.

Airbus Group and its partners are aiming to perform research and development to construct a series version of the E-Fan and propose an industrial plan for a production facility close to Bordeaux Airport, Airbus said. AGENCIES

#### The Times of India, Delhi dated May 14, 2014

### Antarctic ice melt unstoppable, sea level to rise by 1m



A Nasa picture shows the Thwaites Glacier in West Antarctic, whose huge ice sheet has started a slow collapse in an unstoppable way

Oslo: Vast glaciers in West Antarctica seem to be locked in an irreversible thaw linked to global warming that may push up sea levels for centuries, scientists said on Monday . Six glaciers, eaten away from below by a warming of sea waters around the frozen continent, mountain ranges entombed under the were flowing fast into the Amundsen Sea, according to the report which was based partly on satellite radar measurements from 1992 to 2011.

Evidence shows "a large sector of the West Antarctic ice sheet has gone into a state of irreversible retreat", said lead author Eric Rignot of the University of California, Irvine, and Nasa's Jet Propulsion Laboratory in glaciers. California. The coastal ends of the glaciers rest on bedrock below sea level, holding back a vast weight of ice and making them vulnerable to melt, he said. He likened the process to uncorking a full bottle of wine while it was lying on its side.

This part of Antarctica would be a major contributor to sea level rise in

coming decades and centuries since the glaciers hold enough ice to raise sea levels by 1.2m. "It's passed the point of no return," he told a telephone news conference.

Ice-penetrating radars showed no ice, for instance, that could halt the flow. The fastest retreat was 34-37km over the period in the Smith/Kohler glacier.

Even so, cuts in greenhouse gas emissions, part of efforts to rein in global warming, could at least slow the slide of the Pine Island, Thwaites, Haynes, Pope, Smith and Kohler

"We think this is related to climate warming," Rignot said. The scientists believed that a build-up of man-made greenhouse gases in the atmosphere was affecting wind patterns around Antarctica, driving warmer towards the continent waters REUTERS

#### The Times of India, Delhi dated May 14, 2014

### Agra doctor moves green tribunal over air pollution

New Delhi: Raising alarm bells over the adverse effect of air pollution on fetuses and newborns, a paediatric surgeon has moved the National Green Tribunal (NGT) seeking directions to the authorities to act against the scourge of our times.

Dr Sanjay Kulshresthra, the Agra-based petitioner, quotes a number of scientific studies indicating an increasing trend of low birth weight. pre-term deliveries and physical anomalies among babies in Indian cities.

On Monday, he urged NGT to issue a number of urgent directions to the government to reduce air pollution.



The doctor urged NGT to issue urgent directions to the government

#### "road-life" of private and commercial vehicles and take measures to withdraw vehicles that had crossed this specified period.

delines on pollution in con-

gested cities such as Delhi, Mumbai and Kolkata.

WHO air quality database that shows Delhi has the high-

est PM 2.5 (fine particle) lev-

Apart from the recent

in India exposed to vehicular pollution are significantly more likely to have smaller He appealed for directions babies. "The International Agency for Research on to permit a person to own just one personal four-wheeler Cancer (IARC) added air poland suggested that tax benelution to Group 1 carcinofits be withdrawn for people gens, the same category ungoing in for a second car. He alwhich tobacco, der so sought curbs on the sale of radiation and plutonium luxury cars and SUVs, and fall," the petition states. said a committee of experts should be formed to make gui-

The government should provide free medical care to babies impacted by vehicular pollution, Sanjay Kulshresthra added.

UV

Kulshreshtra quotes

study from Newcastle Univer-

sity saying pregnant women

"A significant number of personal four-wheelers are being used for luxury or for not so very important purposes and are probably the sideeffect of economic growth and high disposable incomes. Delhi adds roughly 1,400 new vehicles a day or 5 lakhs vehicles in a year - more than double of what was added in the pre-CNG period," it states.

NGT has issued notices to all respondents including the ministries of environment, health, road transport, finance and women and child development. It also stated that ministry of petroleum was a necessary party in the case and so should also be served a notice

### WHO report prompts air pollution panel

To Look Into Yamuna Too; Report In 1 Month

#### TIMES NEWS NETWORK

#### New Delhi: After a WHO urban air quality database re leased last week sounded alarm bells on the city's extremely high air pollution levels, lieutenant governor Najeeb Jung has set up a high-powered committee to look into air pollution levels.

'We cannot allow pollution to grow unchecked. It is our moral responsibility to provide a healthy environment to our citizens. If we have to en-sure health of our cities, we will have to take stern steps against pollution and pollut-ing units." Jung said in his first public statement after the World Health Organization (WHO) report. Constituted on Monday, the

committee has got a month to submit its report. It has a spe-cific brief to examine-pollution caused by the growing number of vehicles in the city and pollution levels in the Yamuna from industries and sewage discharge. The committee has also been asked to study the cause and levels of air pollution and suggest both long-term and short-term steps to check it.

The panel will be chaired by the chief secretary and have special CP (traffic), secretary (environment), commis-

#### FOR BETTER ENVIRONMENT

LG constitutes a high-powered committee to examine vehicula pollution and industries polluting Yamuna

> Panel to file report in a month DPCC directed to serve notices to polluting units

sioner (transport) and member secretary of Delhi Pollution Control Committee of Delhi as its members. It has also been empowered to co-opt members, both from the government and the private sector, including NGOs.

The WHO report, released

#### **ON LG'S ORDER**

on May 7, stated that Delhi had the PM 2.5 (fine, respirable par-ticles) level at 153 micrograms per cubic metre-the highest in 1.600 cities. Jung had met the chief secretary and all senior officers of the Delhi govern-ment on May 9 and expressed concerns about growing levels of pollution in the capital.

After the WHO report, DPPC officials claimed air pol-

 Urban development secretary told to act against inspectors not following DPCC orders

lution levels in the city may not be higher than Beijing's. They said the data used for Beijing was from 2010 which may be the reason for the disparity.

Environmentalists had criticized the government for wasting time on debate on which is the most polluted city rather than taking steps to tackle the problem.

The first thing that Delhi can do is to upgrade the current monitoring system and issue health alerts. There is a need to make an effective public transport strategy. There has to be a parking policy with a pricing strategy and the bus frequency needs to improve," said Anumita Roychowdhury, head of clean air programme at Centre for Science and Environment.

### NCR bars tourism in green zones Board Wants Sacred Grove Mangar Bani Earmarked As No-Construction Area

#### Dipak Kumar Dash | TNN

New Delhi: Tourism activities won't be allowed in the Natural Conservation Zones (NCZs) in NCR, according to the minutes of recent NCR Planning Board (NCRPB) meeting. The minutes revealed that the ministry of environment and forest had specifically wanted deletion of the controversial clause allowing such activities in NCZ in the revised regional plan.

The board also decided that the sacred Mangar Bani and a 500-metre buffer radius

around it will be earmarked as a "no-construction zone". as proposed by Haryana government. Sources said the core grove is around 250 hectares.

As it was reported in TOI on April 26 that the board members agreed to limit construction in NCZs such as Aravalis, riverbeds and major water bodies, the minutes recorded that only "regional recreation activities" will be permitted with "no construction exceeding 0.5%" of the area with permission from competent authorities.



Delhi government, MoEF and environment activists were objecting to Haryana's proposal to allow more construction in these sensitive zones after obtaining permission from authorities concerned. The minutes mention that MoEF secretary V Rajagopalan cited the Harvana mega-tourism policy that allows construction for both residential and commercial use to argue why "tourism" should not be allowed in the ecologically sensitive areas. Haryana chief minister Bhupinder Singh Hooda had accepted all the suggestions to make necessary amendments. However, in its letter, MoEF mentioned that both the revised regional plan and Harvana sub-regional plan should not be finalized till

mapping of forest areas by members was completed. The green ministry wrote the georeferenced maps of Haryana's 19 districts were "incomplete" and "not compatible' to the directions of Supreme Court. He had even raised the issue of how areas with 10% crown density (green cover) have not been shown as forest. Harvana has objected to MoEF's parameter of identifying forest and has said it would not accept the new criteria until and unless these are approved by the Supreme Court.

#### The Times of India, Delhi dated May 15, 2014

### **'Veggies full of river toxins'** Plea Says Effluents In Yamuna Pollute Groundwater, Soil

#### TIMES NEWS NETWORK

New Delhi: It's not just pesticides-atoxic mix of sewage and industrial effluents may be contaminating what's grown on the bed of the Yamuna. The quality of the fruits and vege tables-that feed most of Delhf's population-may thus stand severely compromised, according to two applications filed in Delhi high court and National Green Tribunal, one pleading for a ban on artificial colours and waxing of produce and the other dwelling on how the river's pollution is risking the lives of people who cat greens grown on its soil.

The department of food safety Delhi, too, recently released an advertisement asking consumers to clean their fruits and vegetables in various solutions to do away with chemical residue.

Several consignments of fruit and vegetable exports from India have been rejected for quality issues in the recent past—the European Union beaming the import of mangoes and four vegetables starting May 1 after fruit flies were detected in 207 consignments. Even Saudi Arabia banned import of Indian chillis earlier this month due to presence of high pesticide residues.

The recent plea in NGT by Yamuna Jiye Abhiyan suggests large scale pollution of Yamuna from industrial effluents and sewage that has led to groundwater pollution and soil pollution. Vegetables irrigated by this contaminated wa-

water samples. At one loca-

tions, lead levels were 10 times

more than those anywhere else

The department of food safety recently released an advertisement asking consumers to clean their fruits and vegetables in various solutions to do away with chemical residue

ter are laced with heavy metals RTI revelations from 2013 of the sewage and industrial efand chemical residues, the apfluents discharged in the river plication says. It quotes various studies including a 2012 have also been submitted. The Energy and Resources In-The application seeks NGT stitute (Teri) study that found implead CPCB as a respondent the level of toxic metals like in the case and direct CPCB or the state pollution control nickel, lead, manganese, chroboard to prepare a report on mium and zine high in many

in the river and at another location near a thermal power plant, mercury concentration was about 200 times more than United States Environmental River American American Protection Agency standard, cle

It also quotes a 2012 study by National Reference Trace Organics Laboratory and Central Pollution Control Board (CPCB) in association with the environment ministry that found Lindane, a carcinogenic insecticide in Yamuna water.

what action must be taken to

Vegetables contaminated

stopcontamination.

with such toxins can impact health seriously. It can cause a range of conditions including cancers, heart disease, brain, kidney and liver diseases, muscle and general weakness," Dr SP Byotra, head of internal medicine at Sir Ganga Ram Hospital said.

Activist Mano) Misra, who filed the application, said it shouldn't be misunderstood as a complaint against farmers. "The application is not against farmers. They have no choice but to use pollution agenetics and industries who failed to control it," said Misra.

The other application in HC says the department of food safety is doing nothing about polished food grains and coloured vegetables and fruits containing hazardous sub stances that are being sold in wholesale and retail outlets. Ananthoo, coordinator of civil society group on food safe ty said "middlemen and retailers usually inject colours in fruits like watermelon and pomegranate. Waxing of apples is also common".

STAY SAFE Vegetables grown on the Yamuna bed contain significant amount of pesticides and other toxic contaminants. Here are some precautions suggested by the department of food safety adopting which can keep you healthy and safe

 Scrub melons, carrots, potatoes and turnips with a soft brush or cloth towel before rinsing

 Discard the outer layer of leafy vegetables like cabbage and lettuce

 Vegetables and some fruits which are consumed along with the peel should be soaked



Here are RTI revelations on the volume of effluents discharged in Yamuna upstream of Delhi						
City	Polluting industries	Volume of effluent & sewage (in MLD)	No. of STPs			
Panipat	314	228.2	2 (Capacity: 35 & 10MLD)			
Karnal	412	72.3	2 (40 MLD, 8 MLD)			
Yamuna Nagar	176	30.6	2 (25 MLD, 10 MLD)			
Saharanpur	17	130	1 (38 MLD)			
Muzaffarnagar	53	94.95	1 (32 MLD)			
Meerut	28	10,598.5	11 (88 MLD)			
Noida	69	1.061.3	3 (27 MLD, 34 MLD, 9 MLD)			

POISON IN YOUR GREENS

The Times of India, Delhi dated May 15, 2014

### Climate change a growing security threat: Study

'Warming-Induced Drought In Mideast, Africa Is Already Leading To Conflicts Over Food & Water'

#### **Coral Davenport**

Washington: The accelerating rate of climate change poses a severe risk to national security and acts as a catalyst for global political conflict, a report published on Tuesday by a leading government-funded military research organization concluded.

The Center for Naval Analyses Military Advisory Board found that climate change induced drought in the Middle East and Africa is leading to conflicts over food and water and escalating longstanding regional and ethnic tensions into violent clashes. The report also found that rising sea levels are putting people and food supplies in vul-



#### CONFLICT CATALYST

nerable coastal regions like eastern India, Bangladesh and the Mekong Delta in Vietnam at risk and could lead to a new wave of refugees. In addition, the report predicted that an increase in catastrophic weather events worldwide will create more demand for American troops, even as flooding and extreme weather events at home could damage naval ports and military bases.

In an interview, secretary of state John Kerry signalled that the report's findings would influence American foreign policy.

"Tribes are killing each other over water today." Kerry said "Think of what happens if you have massive dislocation, or the drying up of the waters of the Nile, of the major rivers in China

 Nile, of the major rivers in China and India. The intelligence community takes it seriously, and it's translated into action." Kerry, who plans to deliver a major speech this summer on the links between climate change and national security, said his remarks would also be aimed at building political support for President Obama's climate change agenda, including a new regulation to cut pollution from coal-fired power plants that the administration will introduce in June.

"We're going to try to lay out to people legitimate options for action that are not bank-breaking or negative," Kerry said.

Pentagon officials said the report would affect military policy. "The department certainly agrees that climate change is having an impact on national se-

curity, whether by increasing global instability, by opening the Arctic or by increasing sea level and storm surge near our coastal installations," John Conger, the Pentagon's deputy under secretary of defence for installations and environment, said. "We are actively integrating climate considerations across the full spectrum of our activities to ensure a ready and resilient force." The report on Tuesday follows a recent string of scientific studies that warn that the effects of climate change are already occurring and that flooding, droughts, extreme storms, food and water shortages and damage to infras-

tructure will occur in the future.

In March, the Pentagon's

Quadrennial Defense Review, the agency's main public document describing the current doctrine of the US military, drew a direct link between the effects of global warming — likerising sea levels and extreme weather patterns — and terrorism. "These effects are threat multipliers that will aggravate stressors abroad, such as poverty, environmental degradation, political instability and social tensions conditions that can enable terrorist activity," the review said.

Tuesday's report is an update of a report by the center's Military Advisory Board in 2007, the first major study to draw the link between climate change and national security, wreaws server

#### The Deccan Chronicle, Hyderabad dated May 16, 2014

### MURKY WATER Most establishments dump waste in lake Eateries polluting Hussainsagar

#### DC CORRESPONDENT HYDERABAD, MAY 15

Private commercial establishments, including Eat Street and Jal Vihar, located on the periphery of Hussainsagar are the major pollutants of the lake.

Inspection has revealed that though these establishments have sewerage systems connecting to the GHMC lines, most of them dump leftover food, plastics and other solid waste in the lake. In fact, the HMDA has no idea about how many tons of garbage these eateries generate in a day as half of it is dumped into the lake.

Environmentalist Chakri S., who voluntarily conducted an inspection with the team, said, "The PCB needs to give permission for any business establishment with more than 20 seats, especially restaurants, around the lake. In fact the sewerage lines of these food joints cannot be directly connected to the GHMC drain line. They need to have an oil trap so that cooking oil does not enter the sewerage line.



Though the establishments have sewerage systems connecting to the GHMC lines, most of them dump leftover food, plastics and other solid waste in the lake

They don't have proper solid waste deposal systems for collection and segregation as per rules. Right from Prasads to Sanjeevaiah Park, also the Sailing Club annexure... they all add more pollution. The PCB needs to act and issue notices. Any restaurant violating the rules can be issued a closure order as well."

So far, none of the estab-

lishments have been issued warning notices by the PCB, or any mid-night or early hour inspections carried out. The establishments include Jal Vihar, Eat Street, Lumbini Park Sanjeev Anjaneyolu temple, police station, youth hostel, Hyderabad Boat Club adjacent to the BPP office and Sailing Club.

During inspection, HMDA found the outlets of Sanjeev Anjaneyolu temple, Hyderabad Boat Club and Water Front were being directly let into the lake. The pollutants include liquid and solid waste and every day two tractors have to make several trips carrying waste from the Hussainsagar to the temporary dumping yard, which is adding to the budget.

In a recent joint meeting conducted by Buddha Purnima project wing, these firms were asked to immediately divert the outlets or construct a sump.

R.P. Khajuria, member environment, said that the Hyderabad Boat Club was the only establishment that has constructed a sump. Treated water flows into the lake through the two sewerage treatment plants (STPs) and because of these outlets, the water is again getting polluted. The BBP has installed

The BBP has installed banners and boards at many food joints around the lake asking people not to throw waste and has also warned the managers to ensure no waste goes into the water bodies from their establishments. The Times of India, Delhi dated May 19, 2014

## TV recycling a hazard for city

Lead Content In CRT Sets Putting Waste Handlers At Risk

TIMES NEWS NETWORK

New Delhi: As LCDs and LEDs are fast replacing the old-fashioned cathode ray tube monitors, the capital is faced with a huge health risk. Both the informal e-waste recyclers working at the CRT recycling hubs of Yamuna Vihar, Seelampur and Mustafabad and the end-users of products made from the glass are in danger of developing ailments from exposure to the material.

A study by NGO Toxics Link on improper recycling practices of the leaded CRT glass from TV sets and computer monitors has sent alarm bells ringing among environmentalists and health experts. CRTs contain large quantities of lead and barium-both heavy metals—as well as phosphor. They are considered one of the most hazardous types of ewaste.

The lead content in each CRT may add up to 1.5-2kg. according to the study titled 'Looking Through Glass-CRT Glass Recycling in India'. Once dumped in landfills, the lead-filled CRT





CRT monitors. The scope for soil and groundwater. When reuse of CRT glass to manufacture new CRTs is fast dehammered to pieces, the lead creasing. The toxic glass is now being mixed with clean Researchers at Toxics Link believe that dangers glass to make household from this practice may mulproducts. "These products retain the toxicity of lead and tiply because LCDs and LEDs

end users," a researcher said. Health impacts include delayed mental and physical development, learning deficiencies, kidney damage, hearing problems, delayed puberty, decreased coordination and shortened attention plan. These effects are most acute among children aged 0-6 years.

"The CRT market is dwindling and still the imports are not receding. This clearly indicates that countries are dumping used CRTs in India. If this continues, our country will be saddled with a huge amount of toxic leaded glass," Satish Sinha, associate director at Toxics Link, pointed out.

Recycling of CRT has a huge market in the capital and major hubs are Yamuna Vihar, Amar Colony, Gokulpuri, Mustafabad and Meet Nagar, according to the study. After refurbishing, CRTs are sold to Delhi's biggest electronic markets in Lajpat Nagar and Nehru Place and are primarily used for the manufacture of TVs for local brands and video game screens.

toi.reporter@timesgroup.com

#### The Deccan Chronicle, Hyderabad dated May 19, 2014

### Pollutants in cosmetics enter food

London, May 18: Microplastic beads present in many cosmetic products, such as facial scrubs, toothpastes and shower gels, are being unwittingly poured down the drain by millions of people daily. These beads can persist

in the environment for more than 100 years, and have been found to contaminate a wide variety of freshwater and marine wildlife, reported the The Independent.

The microplastic beads have been deliberately



dust pollutes the air.

are increasingly replacing

added by the manufacturers of more than 100 consumer products over the past two decades.

microbeads, Plastic which are typically less than a millimetre wide

Plastic microbeads, which are typically less than a millimetre wide and are too small to be filtered by sewage-treatment plants, are able to carry deadly toxins into the animals that ingest them, including those in the human food chain.

can lead to high exposure to

and are too small to be filtered by sewage-treatment plants, are able to carry deadly toxins into the animals that ingest them, including those in the human food chain

such as fish, mussels and crabs, scientists said.

While many people have assiduously tried to recycle their plastic waste, cosmetics companies have at the same time been quietly adding hundreds of cubic metres of plastics such as polyethylene to products that are designed to be washed into waste-water systems one estimate suggests that, in the US alone, up to 1.200 cubic metres of microplastic beads are washed down the drains Agencies each year.

#### In Print media

The Times of India, Delhi dated May 19, 2014



### Notice to encroachers on Gzb green belt, drain

#### Avaskant Das TNN

Ghaziabad: The Ghaziabad Development Authority (GDA) has issued demolition notices to encroachers on the Sahibabad drain and the green belt near Vaishali Metro station, and given them time till May 20 to reply, failing which the unauthorized constructions will be demolished.

The notices have been issued in accordance with the May 8 order of the National Green Tribunal, in which it had directed the authority to prohibit encroachments and prevent unauthorized constructions in these areas. An expert panel formed by the tribunal had earlier identified the unauthorized constructions, including several marriage and banquet halls besides makeshift commercial establishments on the green belt. The panel had also pointed to industrial units releasing untreated effluents into the Sahibabad drain, besides several unauthorized constructions on the drain.

"Demolition notices have been issued to those establishments that have come up in violation of the land-use pattern in the authority's master plan for Ghaziabad. We will demolish them if they don't respond to the notices," said GDA vicechairman Santosh Yaday.

The green tribunal had also directed the UP Pollution Control Board (UPPCB) to ensure that a particular industrial unit which was found to be releasing un-



FACING GDA CRACKDOWN: The green belt near Vaishali Metro station is encroached

treated effluents into the drain by the expert panel - be issued closure notice. Both GDA and UPPCB will have to submit a report to the tribunal on May 23, highlighting the action taken by them. The UPPCB said that its headquarters in Lucknow has also issued a show-cause notice to the industrial unit discharging untreated effluents into the drain.

The expert panel, headed by advocate Parul Gupta, had been set up by the tribunal in a case filed by a Ghaziabad-based environmental activist, Hazi Arif, who had alleged the effluents released into the drain has polluted Yamuna river into which it ultimately empties. It had also been alleged that encroachments on the green belt has resulted in depletion of underground water table.

### Experts raise red flag on waste disposal

#### Say It Does Not Address Pollution Concerns, Propose Model To Reduce Load On Landfills

#### Javashree Nandi | TNN

New Delhi: The Planning Commission's taskforce on waste to energy (W2E) has recently recommended a pub-lic-private partnership(PPP)

model for a combination of waste management technologies, including W2E plants, bio-methanation and composting, that can be integrated to reduce the load on landfills.

HOW DELHI AND OTHERS HAND

For larger cities like Delhi, it mainly recommends W2E plants that generate power through gasification. incineration and other methods. Civil society groups, especially waste pickers, are

WASTE

up in arms as pushing PPP in W2E plants would mean loss of livelihood for informal waste pickers, they say, Environmentalists are also disap pointed because the task-force report fails to address air pollution concerns from W2E plants. The Okhla W2E plant is already mired in controversy over dioxin and fu ran emissions, and more such plants may deteriorate Delhi's air quality further, they claim.

The taskforce headed by K Kasturirangan is pushing for W2E plants in large cities across the country. It suggests tax incentives to make them financially viable and a "target of setting up 215 W2E plants by 2031 to generate 1075MW power". The task-force recommends that W2E plants be exempted from corporate income tax for the first five years of operation and be eligible for immediate refund of value-added tax.

The report recommends segregation at source and separation of waste into several streams, like construction and demolition, street sweepings and silt from drains, wet, biodegradable and recyclables. single source bulk waste collected

from market yards, restaurants etc. It advises minimizing of waste by implement-ing the '5R' concept: reduce, reuse, recover, recycle and remanufacture, and suggests recognizing the role of kabadiwalas in sorting recyclable materials. But this, environmentalists say is too little to rehabilitate close to 3.2 million waste pickers across the country. "We are greatly disap-

pointed that the informal sector workers, like junk dealers, scrap dealers and itinerant buyers, have been excluded," said Chitra Mukherjee of Chintan. Waste pickers are concerned about their future. "The Aseem Burman committee in 1998 had said that waste pickers are the backbone of waste management. After 14 years, waste pickers have been completely excluded. If corporates are being involved on a large scale, obviously waste pickers will lose livelihood. I think they don't want to see ragpickers on the roads so that cities don't look poor," said Shashi Bhushan Pandit of All India Kabadi Mazdoor Mahasangh. The taskforce sug-

gests separate collec-

tion and transportation domestic, C and D waste, si from surface drains etc an that "efforts should be mad to collect waste from th doorstep and delivered d rectly to processing plants It also suggests that munic pal authorities consider in viting private companies t operationalize defund plants and a funding suppor of capital subsidy can be e: tended to them.

The report states very li tle on how W2E plants will b monitored and what emi sion standards they will hav to meet. "Who is going t monitor the technology What are the standards? I ar absolutely amazed that th report has nothing on mon toring mechanisms or its fa lout on the environmer and health. One lab report o dioxin or furans costs F 75,000. Who is going to pa for it? We have just one ager cy, CPCB, to monitor suc emissions, Who will monite smaller towns?" said Satis Sinha, associate directo of Toxics Link, a grou that takes up environment; issues



#### In Print media

The Times of India, Delhi dated May 20, 2014

The Times of India, Delhi dated May 21, 2014

#### 'Urgent need for pollution action plan'

TIMES NEWS NETWORK

New Delhi: Central Pollution Control Board chairman Susheel Kumar on Monday said that he had written to the chief secretary in April asking him to urgently formulate an air pollution action plan.

Susheel Kumar said air pollution levels in Delhi are a serious concern and need to be tackled quickly. He clarified that the pollution watchdog disagreed with the World Health Organization's recent report which estimated that PM2.5 (fine, respirable particles) was the highest among 1,600 global cities.

"Although the actual average in Delhi, as measured by our monitoring stations, are lower than the values in the WHO report, the variation does not undermine the fact that particulate matter (PM10 and PM2.5) has been a matter of concern," he said.

The WHO data had revealed annual mean PM2.5 level is 153 micrograms per cubic metre and PM10 level is 286 microgram per cubic metre-far above the limit. But, according to CPCB data for 2013, the PM10 concentration in Delhi was 237 and PM2.5 was 112.

### Dirty air blame on transport Emission Up By 30%, Particulate Matter By 11.5% In 4 Years

#### Jayashree Nandi TNN

New Delhi: Emissions of fine particulate matter or PM2.5 in Delhi have increased by 11.5% over the past four years, according to a GIS-based inventory prepared by Indian Institute of Meteorology Tropical (IITM), an autonomous body under the ministry of earth sciences.

The transport sector appears to be the worst culprit as it's the biggest contributor to this jump followed by manufacturing industries and power plants. After a World Health Organization urban air quality database released early this month said Delhi has the highest PM2.5 levels among 1,600 global cities, IITM scientists had claimed that WHO has 'overestimated' Delhi's pollution problem

IITM scientists told TOI that they are sticking to their stand on the WHO data being incorrect but said their emission inventory shows air pollution levels in Delhi had



gone up substantially, particularly due to emissions from the transport sector. While transport emissions-especially from diesel cars and vehicles that use adulterated fuel-rose by a whopping 30% in the last four years, industrial emissions increased by just 5.7% during the same time. "Surprisingly, some sectors did not record much increase. In fact, contribution from burning of biofuels like wood and dung, decreased marginally. PM2.5 emissions from the power sector increased only by 3.14%," Gufran Beig, chief

project scientist at System of Air Quality Weather Forecasting and Research (SA-FAR), IITM, said.

In 2013, the transport sector was responsible for 38% of the PM2.5 emissions in Delhi compared to 26% from 'others'-paved and unpaved roads, construction activities, brick kilns and windblown dust.

This is an interesting finding as we usually assume that these sectors can't contribute much. But in Delhi, dust from these activities is playing a huge role," added Beig. Strangely, industries

contributed to about 16% of emissions and the power sector only 3%

The transport sector is contributing majorly to black carbon (pollution caused due to incomplete combustion of fossil fuels)-a leading contributor of climate change. About 50% of black carbon emissions were from the transport sector compared to 38% from the industrial sector, in 2013.

Beig said that the inventory can be used to understand which sectors need to be addressed but maintained that WHO's assessment of Delhi's air pollution was grossly incorrect. "Air quality is a problem in Delhi. We have reported that earlier, too.

The issue is not about whose air quality is worse, Beijing's or ours. We are concerned about India's representation by an international body like WHO. It has put out misleading information about us," he said, explaining Delhi's annual PM2.5 average was high but not what WHO has estimated.

#### The Times of India, Delhi dated May 21, 2014

Forest revival attracts herons to floodplains

#### Jayashree Nandi TNN

New Delhi: The Yamuna may not be a lost cause after all. A heronry that has recently developed inside the Yamuna Biodiversity Park gives an inkling of what its floodplains could be-if sustained in their natural glory. There are about 600-1,000 nests currently on Tamarix trees, also known as laal ihau or salt cedar. This part of the park has wetlands surrounded by dense laal ihau and common reed or Phragmites forest.

These forests are common to any riparian ecosystem but in case of Yamuna they had degraded and disappeared long ago. After scientists started developing Tamarix and Phragmites plantations to recreate the floodplain ecology, this is the first time they are seeing such a large number of nests. One can hear the call of hundreds of chicks from a distance: the trail leading to this dense patch is particularly narrow and difficult but gives a view of nests on al-most every single Tamarix tree. The adult birds are seen protecting the chicks by par-



opening their huge wings over them. Scientists said they have not seen adults feeding the chicks yet. Surprisingly, many seem to be feeding on their own. There are no Tamarix for-

ests in the 52km stretch of Va-

muna bank. So there is no suitable habitat for these birds. We created marshes in the park where Tamarix trees can grow. They are fast growing and salt-loving. It took us about five years to create a micro-environment for these

birds to breed," said Prof. C R Babu of Centre for Environmental Management of Degraded Ecosystems and the brain behind the biodiversity

park. "This heronry also shows

that the natural Yamuna eco-

system can be recreated and that we don't need food courts or large structures on the floodplains for recreation," Babu trenchantly said. A committee appointed by National Green Tribunal and headed by Prof. Babu had recently recommended Delhi Develop ment Authority's riverfront development project which includes food courts, parking lots and other concrete structures be scrapped. Instead a 52km stretch of Yamuna in Delhi and Uttar Pradesh bedeclared a 'conservation zone'.

Scientists at the park are documenting various aspects of the breeding process at the heronry so that it can be compared with previous records to understand if there is a change in trends. "We have collected an eggfrom an abandoned nest to measure its size. Their phenology can give us clues into climate change impacts. The data will be very useful in the long run," said Faiyaz A Khudsar, scientistin-charge at Yamuna Biodi versity Park

The park, which is a favourite haunt for bird lovers, has become even more important

to birders now, Raniit Lal, environmentalist and bird watcher who visited the heronry on Tuesday said that the same patch of land used to be deserted in 2002. "It's amazing how the forests have developed. I used to see these birds



#### COSY HABITAT

while walking from Rajghatto Salimgarh only in the early 1980s," he said.

Other flora developed in the park includes mitragyna, adina, thorn forests, ravine thorn forests and acacia woodlands. The park is not open to the general public because it would disturb the faunathere

#### In Print media

The Times of India, Delhi dated May 22, 2014

### Glaciers in Tibetan Plateau shrinking rapidly: Report

Beijing: Glaciers in the Qinghai-Tibet Plateau, home to several Himalayan rivers, have shrunk by 15% in the past three decades and the situation could worsen in future due to global warming, Chinese scientists say. The Qinghai-Tibet plateau

The Qinghai-Tibet plateau in western China has seen its glaciers shrink by thousands of square kilometres (from 53,000 to 45,000 sq km), according to a report by the Institute of Tibetan Plateau Research of the Chinese Academy of Sciences (CAS). As the highest place in the world's mid-latitude regions, the plateau is more likely to get affected by global warming, they said. Tibet is the home of several Himalayan rivers including the Brahmaputra.



Tibet is home to several Himalayan rivers, including the Brahmaputra

"Glaciers in the plateau have been shrinking since the 20th century and sped up since the 1990s," said Kang Shichang, a state laboratory director with a CAS institute. He added that "more and bigger cracks" have appeared in ice on Mount Everest, a sign of "rapidly melting glaciers". China has more than 46,000 glaciers, mainly in the Qinghai-Tibet Plateau. The plateau covers the area China calls the Tibetan Autonomous Region as well as highland parts of neighbouring provinces.

They are a reliable indicator of climate change, and easy for scientists to observe, state-run Xinhua news agency reported. Kang said retreating glaciers have impacted meltwater rivers and led to more glacier-lake outbursts.

"It can increase water flow of major rivers in the short term, but in the long run, a continuation of the retreat will eventually deplete the glacial ice and substantially reduce or eliminate runoff," Shichang said, Agencies

#### The Times of India, Delhi dated May 23, 2014



The new government needs to bring in second-generation reforms for environment which can strike a balance between the need for economic development and rights of a local community. This is a tough job, but necessary. At present, green issues are being handled both at the central and state levels. This needs to be streamlined. The top priorities for the environment ministry are:

■ Set up a 'national environmental regulator' that carries out appraisal of projects and provide clearances in a transparent and time-bound manner. Government is bound by a Supreme Court order to set up such a national regulator.

The target of increasing forest cover from 21% to 33% of the geographical area must be met

#### ENVIRONMENT

under the 'Green India Mission'. • The level of air pollution in cities is alarming. Measures like reducing consumption of fossil fuels, monitoring vehicular pollution and improving public transport are essential.

Build sewage treatment plants across the country to deal with river and groundwater pollution. 'Waste to Energy' concept must be popularized through incentives to private players. Bring strict effluent control

 Bring strict effluent control laws in line with the 'polluter pays' principle and ensure rigorCLEAN AND GREEN EXERCISE MODI TO TOI

environment concerns while sanctioning projects. Problems arises when the procedure for clearance is used in a mala fide manner. This leads to project delays. I am convinced we can move towards a win-win situation where all environment concerns are addressed. All decisions, even rejection of proposals, should be transparent and time-bound

ous enforcement.

Focus on renewable (solar and wind) energy through incentives and investment under a national energy policy which may reduce the dependence on fossil fuels. This will cut India's import bills as well as reduce air pollution.

### Zoo chips in for climate awareness

#### TIMES NEWS NETWORK

New Delhi: The capital celebrated International Biodiversity Day in unique ways. While National Zoological Park staff spent the day inside the elephant enclosure highlighting the plight of the pachyderms due to global warming, Aravali Biodiversity Park staff took slum dwellers and other locals of Vasant Vihar on a nature walk to make them aware of the need to protect flora, fauna and the environment.

Riaz Khan, curator (education) at the zoo, was accompanied by 30 school students and zoo keepers when he gave the elephants—Rajlakshmi and Hiragaj—a bath. The theme for the day was '350'. This stands for 350 parts per million—the safe ratio of carbon dioxide molecules to other molecules in the atmosphere. The planet crossed 400ppm last year which, according to scientists, is the threshold level after which climate change impacts



SAVE GREENERY: A nature walk in progress inside Aravali Biodiversity Park on the occasion of International Biodiversity Day

can become severe. Zoo staff used '350' to communicate about and campaign against global warming.

"Carbon dioxide is a greenhouse gas that traps heat in the atmosphere and contributes to climate change. The atmosphere contains over 400ppm of CO2 and it's increasing every year. We are already experiencing problems due to climate change like melting of ice in the North Pole," Khan said.

At Aravali Biodiversity Park, about 50 students, locals and slum dwellers from Kusumpur Pahari and Bhanwar Singh Camp adjacent to the park, were taken on a nature trail walk through the butterfly park, the orchidarium, medicinal plant nursery and other places.

"This year's theme for International Biodiversity Day is island biodiversity. Delhi may not be an island but forests or biodiversity parks are like islands in the vast concrete jungle. We want people to understand the relevance of such islands and the species that thrive here. They also act as a carbon sink that cleanses the city's polluted air," M Shah Hussain, scientist in charge at Aravali Biodiversity Park, said.

The park has had a number of new sightings recently. These include pheasant-tailed jacana, knob-billed duck, grey heron and the greater spotted eagle. The Indian pitta, a small and colourful bird which is mainly seen in closed-canopy forests, was also spotted after almost 60 years. More than 900 species of plants, 104 species of butterflies, 195 avian species, 26 species of reptiles and four species of amphibians have been documented in the park.

#### In Print media

The Deccan Chronicle, Hyderabad dated May 24, 2014

### US, China to face anti-dumping duties on solar panels India curbs solar imports

New Delhi, May 23: India will impose antidumping duties on solar panels imported from the United States, China, Taiwan and Malaysia to protect domestic solar manufacturers, according to a government statement seen by *Reuters* on Friday.

The order, almost certain to anger India's trading partners, sets duties of between 11 and 81 US cents per watt and comes after a investigation started in 2011. The ruling by a quasi-judicial body has to be published by the finance ministry before it takes effect.

The decision adds to India's growing disputes with trade partners just before Narendra Modi assumes office as prime minister on Monday. "Imposition of antiFOR DOMESTIC GROUPS The order, almost certain to anger India's trading partners, sets duties of between 11 and 81 US cents per watt and comes after a investigation started in 2011.

dumping measures would remove the unfair advantages gained by dumping practices," said India's Anti-dumping Authority in its order released on Thursday.

Local manufacturers have long complained that US, Chinese and Malaysian companies enjoy state subsidies and are selling their products at artificially low prices to capture the Indian market. India also believes that anti-dumping duties imposed on Chinese solar producers by the European Union and the United States have further driven down the price of Chinese solar products, to the detriment of Indian suppliers.

India aims to raise its solar power capacity to 20,000 MW by 2022 from 1700 MW currently. It imported solar products worth nearly 60 billion rupees (\$1.03 billion) last year, according to an industry estimate. Domestic manufacturers got less than two percent of that business.

"India's solar manufacturing is now bound to revive and further increase with both local and overseas participation ensuring a robust supply chain," said H.R. Gupta of the Indian Solar Manufacturers' Association (ISMA).

Under the new duties, importers will have to bear additional costs of between 5 and 110 per cent while importing solar cells and panels from the United States, Malaysia and China.

Last year, the US Trade Representative took India to the WTO for discriminating against US solar companies. — *Reuters* 

#### The Times of India, Delhi dated May 24, 2014

### Heat, emissions raise city's ozone levels Toxic Gas Way Above Safe Limits In Some Pockets, Emerges As Main Summer Pollutant

Jayashree Nandi TNN

New Delhi: Air pollution is once again at worrying levels in the capital. But this time it is not particulate matter but ground-level ozone, associated with severe health impacts, that has breached the safe limit.

On Friday, the average ozone level went over 71 parts per billion in Lodhi Road and Delhi University, compared to the standard of 50ppb. Interestingly, ozone levels are way higher around certain monitoring stations than others. Scientists say these spots could be experiencing the urban heat island effect where a mix of soaring temperatures, built-up area and emissions from various sources like traffic cause ozone levels to go up.

This ozone is different from stratospheric ozone that protects the earth from harmful ultra-violet rays. The ground-level ozone that's currently wreaking havoc in certain parts of Delhi is created due to chemical reactions between oxides of nitrogen (NOX), volatile organic compounds (VOC) and earbon monoxide (CO) in the presence of sunlight and heat.

Sources of NOX and VOCs are usually industrial facilities, motor vehicle exhausts, power plants and others. Ozone levels are usually measured in eight-hourly averages (during daylight) and hourly averages. When Indian Institute of Tropical Meteorology under ministry of earth sciences calculated the average for eight-hourly averages from May 11 to May 20, ozone levels were significantly high around Delhi University and Lodhi road. The temperature during this phase has been hovering around 40-

CROSSIN	G TH	E DA	NGER MARK
Stations	PM 2.5*	Ozone**	SAFE MARK
Dheerpur	127	52	PM 2.5 60
Mathura Road	58	43	Microgram per cubic metre*
Delhi University (North)	117	65	Ozone   50 Parts per
Pusa	106	55	billion (ppb)**
Aya Nagar	84	50	and the second
Lodhi Road	87	68	
Noida	55	42	
IGI Airport	69	30	ALLAS STE
Pitampura	59	54	

(Average from May 11 to May 20)

43 degrees. Hourly average of ozone at 2 pm at these two spots peaked to about 103ppb on Thursday and Friday when the standard for hourly average is 90ppb. "The variability of ozone levels is very high in Delhi. Certain areas are more affected than others which is why we are calling them urban heat islands. The temperature in these areas is also possibly higher than other parts of the city," said Gufran Beig, chief project scientist at System of Air Quality Weather Forecasting and Research (SAFAR), IITM.

Every summer between April and June, ozone levels go up in Delhi. "We see a clear trend of ozone levels rising around this time every year. Ozone has an immediate effect on people suffering from asthma. Which is why ozone levels are always given as part of smog alerts as school children and vulnerable population need to aware of it and stav indoors if required. Ozone is the only gas which has two sets of standards-hourly and eight hourly because high levels of ozone can have very serious health impacts," said Anumita Roychowdhury, head of the clean air programme at Centre for

Science and Environment.

Last year the eight-hourly average for ozone had peaked to 80-85ppb according to records with IITM. This year, too, ozone levels may increase next month.

This toxic gas which is "temperature dependent" according to scientists can have a slew of health impacts. It is associated with breathing difficulty, coughing, and sore throat, aggravate lung disease like chronic bronchitis, increased frequency of asthma attacks, damage lungs says environment protection agency.

Many urbanized parts of US and Europe are known to suffer due to high ozone levels. While PM2.5 (fine, respirable particles) levels go up in Delhi during winter, the city is now experiencing high ozone levels every summer making the population vulnerable in both seasons.

#### The Times of India, Delhi dated May 25, 2014

### Climate change may increase cost of cereal and household basics

#### Heather Saul

The impact of climate change could increase the price of breakfast cereal and other household foods, a report by Oxfam has claimed, whichfound Kellogg and Nestlê are among the world's 'Big 10' food and drink companies who emit more greenhouses gases than Nordic countries combined.

In their report, Oxfam called on the major food and drink companies to do more to tackle climate change after it found that they were responsible for nearly 264 million tonnes of greenhouse gas (GHG) emissions in 2012.

The international aid agency said the Big 10 included Associated British Foods (ABF). Coca-Cola, Danone, General Mills, Kellogg, Mars, Mondelz International, Nestle, PepsiCo and Unilever: Half of the GHG



NO PROMISES: Food industry has not set a target to reduce their total agricultural emissions

emissions come from the production of agricultural commodities in the companies' supply chains. It also singled out Kellogg and General Mills as among the "worst performers". Only Nestlé, Unilever and to some extent Mars and Coca-Cola were vocal in encouraging policy makers and businesses to tackle climate change. "The food industry has a moral imperative and a business responsibility to dramatically step up its efforts to tackle climate change," Oxfam's executive director Winnie Byanyima said. The "consequences" include rising food prices for consumers. Oxfam estimates climate change will increase the price of General Mills' Kix

#### BANANA PRICES GO BANANAS

hat could arguably be the world's most expensive banana went on sale at a Tokyo department store for nearly \$6. The banana, from Dole Japan. was one of 59 bananas sold at the Takashimaya Department Store. The batch was genetically designed by Dole scientists to be a sweeter, more fragrant version of regular bananas. The limited edition bananas, grown in a secret location, even came individually wrapped in a box. The idea of more expensive food tasting better is not completely outrageous. Researchers have found that people tend to think food tastes better if they know it is more expensive.

cereal by up to 24% and Kellogg's Corn Flakes by 44% over the next 15 years. It warned the companies could face financial ruin if they do not do more to tackle the issues with climate change because of the effects extreme weather conditions could have on production.

In a statement, Kellogg said: "Kellogg is committed to doing what's right. We are working to reduce greenhouse gas emissions - along with energy use and water use-by 15-20% at our manufacturing facilities by 2015. Oxfam has recognised our commitment to working with global palm oil suppliers to source fully traceable paim oil, produced in a manner that's environmentally responsible, socially beneficial. and economically viable."

General Mills meanwhile said: "Climate change is a serious issue, and as a food company we are very aware of the impact that it could have on agriculture and food supply We have been engaged in positively influencing climate policy and have been taking steps to reduce GHG emissions." THE INDEPENDENT

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