

# Controversy on Asbestos is... well, 'Asbestos'

**A**sbestos (Greek *a-*, "not"; *sbestos*, "extinguishable") is a group of fibrous metamorphic minerals. The name is derived for its historical use in lamp wicks. The fibres are typically mixed with cement or woven into fabric or mats. It has significant flame-retardant and insulating properties, with high tensile strength, flexibility, and resistance to chemicals. There are several types of asbestos of which Chrysotile, or white asbestos, obtained from Canadian serpentine rocks is the type most used industrially. It is less friable (and therefore less likely to be inhaled).

Asbestos has been used commercially since the late 1800s (in North America), but its use increased greatly during World War II. Since then, it has been used in many industries. For example, the building and construction industry uses it for strengthening cement and plastics as well as for roofing, insulation, fireproofing, and sound absorption. The shipbuilding industry uses asbestos to insulate boilers, steam pipes, hot water pipes, and nuclear reactors in ships. The automotive industry uses asbestos in vehicle brake shoes and clutch pads. More than 5,000 products contain or have contained asbestos prominently. In India, the white variety Chrysotile is mostly used, blended with cement in the manufacture of insulated corrugated roofing sheets, cement pipes and cable conduits and also as packing and insulating material. Elsewhere, like in the US, the brown and blue varieties are also sometimes used.

All types of asbestos tend to break into very tiny fibre, almost microscopic. Because of their small size, once released into the air, they may stay suspended in the air for hours or even days. Asbestos fibres are virtually indestructible, even over time. The fine asbestos fibres are easily inhaled, and can cause a number of respiratory complaints (see box). Generally, there are no signs of asbestos-illness until many years after first exposure. For example, the time between first exposure to asbestos and the appearance of lung cancer is generally 15 years or more; a lag of 30 to 35 years is not unusual. The lag period for development of mesothelioma and asbestosis is even greater, often as long as 40 to 45 years.

At the Rotterdam Convention for Prior Informed Consent on Hazardous Chemicals and Pesticides in November 2003, a concerted move by some states to include chrysotile in the list of hazardous chemicals was stonewalled by the asbestos exporting countries led by Canada and Russia.

India happened to be one of the countries opposed to

# EcoConsumer

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(Jan.-March)

the  
enlistment.  
'The National  
Conference on  
Workers' Plight and  
White Asbestos Trade'  
at its meeting in New Delhi  
on Nov. 8, 2004, has however  
appealed to boycott all asbestos  
products.

In India, asbestos is not unequivocally recognised as a health hazard. Some industry experts emphasize that asbestos is safe unless its fibres are inhaled over a long period of time; and in the form that it is used - bound within a cement matrix - rules out the possibility of its fibres escaping into the atmosphere and posing a health hazard. It has been stressed that elevated concentrations of airborne asbestos can only occur after

asbestos containing material are disturbed by improper attempts to remove these materials by cutting, sanding or other remodelling activities, which should be done by experts.

The occupational exposure limits to all kinds of asbestos in the work environment in India is 2 fibres/cc (world average 0.1 f/cc-0.5 f/cc). According to Dr S K Dave of the National Institute of Occupational Health (NIOH), Ahmedabad, "We have to bring down the occupational exposure limits to 0.1f/cc at any cost. Also we have to completely ban activities of all kinds of amphibole asbestos, especially tremolite. It

is extremely injurious to health and hazardous for workers. The tremolite mining in Rajasthan is done under very hazardous conditions and should be immediately banned."

However, while asbestos imports and use continues to grow in countries like India, its use has decreased significantly in the developed countries. In Canada, use of asbestos is almost non-existent and it exports almost all its mined asbestos (more than 96 percent), especially to Asia. In the US, demand for asbestos has continued to decline and it is now two percent of what it was at its peak in 1974.

All in all, the controversy on asbestos rages on. For the moment it appears to be non-extinguishable - 'Asbestos'!

## What are the health hazards of asbestos?

Exposure to asbestos increases the risk of several serious diseases:

- ◆ Asbestosis—a chronic lung ailment that can produce shortness of breath and permanent lung damage and increase the risk of dangerous lung infections;
- ◆ Lung cancer;
- ◆ Mesothelioma—a relatively rare cancer of the thin membranes that line the chest and abdomen; and
- ◆ Other cancers, such as those of the larynx and of the gastrointestinal tract.

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**CUTS**  
International

## Sustainable Production

**2** stretched to their limits and nearly a quarter is already over-exploited. The U.N. Food and Agriculture Organisation (FAO) issued this grim snapshot of world fisheries in a biannual report that warned of increased pressure on stocks since 2002 that was unsustainable amid rising consumption. Fifty-two percent of world fish stocks were fully exploited, compared with 47 percent in 2002, it said.

FAO forecast total world consumption of fish may increase by more than 25 percent to 179 million tonnes by 2015, underscoring the urgent need to rebuild depleted stocks.

(Reuters, 08.03.05)



## Unsustainable Fish Harvesting

**W**orld stocks of most fish, including Atlantic herring and capelin, are

## Booming Bushmeat Trade Hits Kenya Wildlife

What was once seen as a typical West African phenomenon seems to have come to East Africa as well: killing wildlife for food. In Kenya, drought has caused regular meat prices to rise, going beyond the affordability of most people, who subsist on less than a dollar a day.



On the supply side, poachers, who were once after elephant and rhino tusks but baulked by tough trade bans, have turned to edible wild game like the impala. Such meats are selling at a fraction of the price of beef and mutton. Since 1999, conservationists have found 48,900 wire snares strung across game trails criss-crossing the country, famed for its abundant wildlife. A minority of Kenya's 72 tribes have always killed wild animals for food, but recently these small-scale culls have proliferated. The scope of the problem is not yet fully known, but conservationists say it could endanger Africa's wildlife as much as the great herd massacres of the 1970s and 1980s. Officials are tight-lipped, obviously fearing a fall in their lucrative tourist industry.

(PA, 01.03.2005)

## Environmental Sustainability Ratings Among Nations

**T**he Nordic countries led by Finland ranked highest in environmental sustainability according to a survey conducted among 146 countries by environmental experts at the US universities of Yale and Columbia. Rounding off the top five were Norway, Uruguay, Sweden and Iceland.

The survey, done for the World Economic Forum, ranked the countries on 21 criteria, including the use of natural resources, protection of the environment and countries' ability to improve their environmental acumen. The top countries were cited for their ability to combine good management of their natural resources in concert with new development.

The United States was ranked No. 45, its overall standing, dragged down by its production of greenhouse gases. Britain was No. 66. Finishing at the bottom of the Environmental Sustainability Index (ESI) were North Korea, Iraq, Taiwan, and the ex-Soviet republics of Turkmenistan and Uzbekistan. "The ESI provides a valuable policy tool, allowing benchmarking of environmental performance country-by-country and issue-by-issue," said Daniel C. Esty, a Yale professor and creator of the index. "By highlighting the leaders and laggards, which governments are wary of doing, the ESI creates pressure for improved results."



(AP, 28.01.05)

## Tsunami: Boon for Ridley Turtles?

**C**onservationists want to turn a popular Malaysian beach hit by the tsunami into a protected nesting area for endangered sea turtles, which hatched there for the first time in over a decade - probably because of a drop-off in tourists after the disaster.

More than 30 baby Olive Ridley turtles were found crawling on Tanjung Bungah beach, a popular stretch of resorts and seaside condominiums on northwestern Penang island, Malaysia. A professor of biological sciences in the Malaysian University of Science has informed.

"Marine turtles are very sensitive to human disturbances, so we want this place to be a sanctuary to let nature take its course," said Mashhor. "We might be able to learn so much, because it's very tough to study this rare species."

(AP, 22.02.05)

## Chennai to Recycle Waste Water to Feed Parks

**I**nspired by residents' welfare associations' success in waste-water recycling, Chennai Municipal Corporation has tied up with several of them to treat and use domestic waste-water for plants and parks. This could be a very convenient approach in the face of Chennai's perennial and acute water shortage.

Civic officials are confident that waste-water recycling will help them handle the requirements of 161 parks and gardens maintained by them. So far they depended heavily on bore-wells, which water could now be diverted to the requirements of the citizenry.

(TH, 20.02.05)

## UN Imposes Wildlife Trade Ban on India

**I**ndia has suffered the ignominy of being slapped with a commercial trade ban by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The rap has come for not enacting a separate law to specifically protect wild animals and plants as required under CITES.

The actual volume of trade affected may not be much but the real issue is that India which was once in the forefront of the movement is now being perceived as a laggard by the International community and needs to be given this wake-up call.

(Tol, 19.02.05)

## Now Bags From Banana Fibre

**I**n a unique range of natural products, a student of the National Institute of Design (NID) in Ahmedabad, India, has crafted bags made from banana fibre. The technique is simple and the USP of this fibre is that it is very strong. It is easily available in Karnataka as banana is one of the main crops grown there. And most importantly, hardly anyone knows about this as most people associate jute with natural fibre.

(Tol, 05.02.05)

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## The Science of Biomimicry

**A** new science is on the horizon. This new science, called biomimicry, studies nature's models and then imitates or takes inspiration from these designs and processes to solve human problems. Nature provides beautiful examples of elegantly simple and sustainable engineering, chemistry, manufacturing, architecture and agriculture:

- From digested crickets, beetles and other bugs, the orb-weaver spider weaves a web of silk thread stronger and more flexible than any man-made material.
- The blue mussel attaches to a solid surface by creating a collagen/silk mix that provides both toughness and flexibility.
- Photozymes, like chlorophyll and enzymes, are molecules that show us how to use absorbed sun energy to do chemistry. For example: when photozymes are scattered in sunny water they can break down pollutants, such as PCBs, into harmless compounds.
- The green leaf of a plant converts sunlight into energy.
- Prairies hold the soil and prevent erosion, fertilize themselves, and protect themselves against pests.

(ENN, 30.03.05)

## The Downside of Using Combine Harvesters

**A** major farming practice followed in Asia (including India) is the rice-wheat system in which the two cereals are grown one after the other: rice between June and October and wheat between November and March, leaving little gap between the harvesting of one crop and planting of the other.



Combine harvesters are often used to expedite cutting the crop and these also work out cheaper at the peak season. These giant harvesting machines cut close to the grain-bearing crest of the plant. The remaining part - by far the larger - is left as crop residue. The fastest (and cheapest) method of disposal is to burn this in-situ. What used to be treated as fodder in the days of manual reaping, when the entire plant over the ground was cut and then threshed, is now looked upon as waste.

Not only does the burning spew greenhouse gases, there is loss of the considerable nutrients present in the crops. Repeated burning also causes permanent diminution of the bacterial population in the soil leading to loss of organic matter.

(DTE, 28.02.05)

## India Examining Overturning Shahtoosh Ban

**I**n the wake of a representation to the Prime Minister from the shahtoosh weavers and traders of Kashmir that their livelihood was at stake following the ban on the fur of the Tibetan chiru antelope, an expert committee has been formed to examine whether an 'environment-friendly shahtoosh trade' is possible.



The traders contend that the chiru is never killed for its wool as the wool from dead animals become sub-standard and that the shawls are actually woven from hair discarded by migrating animals. The expert group is however not swayed by this argument and have pictorial and statistical evidence to show for their contrary opinion. The possibility of chiru farming is also being considered but it is not at all certain that the chiru will survive in captivity especially away from its natural habitat where the temperature can dip to - 38°C.

All in all, overturning the ban will not be easy, more than ever because the world's environmental hawk-eye is trained on the chiru, one of the planet's most endangered species.

(Tol, 10.03.05)

**Sustainable Production**

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## Current Fishing Practices "Unsustainable"

**A**s per experts, the normal practice of netting only the older and larger specimens of any variety of fish - leaving the younger and fast-growing ones to reach spawning age - may be flawed. The big, fat older fish spawn inordinately more larvae than the smaller fish and the larvae also have a better chance of survival. Older mothers produce larvae with a larger oil globule, helping them to better resist starvation mainly from the sudden depletion of phytoplankton.



The new thinking would better help if the objective was to make fishing sustainable and rebuild fast depleting stock. Such practices have also been found by the experts to induce evolutionary pressures on fish to remain smaller and grow more slowly. Also, their age of maturity is sliding down. The scientists say that one of the practical ways to arrest further damage due to commercial fisheries is to go for some sort of ocean zoning: some totally protected, some closed seasonally, some open to commercial fishing, etc.

(DTE, 31.03.05)

## Timber Stocks are at Risk, Group Warns

**C**hina's rising demand for wood threatens to devastate timber stocks in countries from Indonesia to Russia, the environmental group WWF, formerly known as the World Wildlife Fund, said, calling for more efficient wood use and measures to discourage illegal logging. Although China still uses one 17th as much wood per person as the United States, it is on course to become the world's top overall consumer within a few years, the group said in a report.

(IHT, 09.03.05)

## Green Cover Under Threat

**T**he forest cover in Haryana, India, is under threat due to overuse of firewood in households. According to surveys done by Central Government agencies, one-third households in the state are chopping off the green cover to use it as fuel. A study done by the Director, Census Operations, reveals that more than 31 percent population in the state is still using conventional fuels, including firewood. Officials in the Forest Department have expressed concern over the issue. "With a mere 4 per cent forest cover, excessive use of firewood can bring eco-imbalance in the state," said an official.

(TT, 07.03.05)

## New technology for soil conservation developed

**T**he Coir Geo-textiles Research Project at Konni, in Kerala, India, a joint venture of the Coir Board and the Agriculture University, has developed an eco-friendly and cost-effective technology for the conservation of soil using coir. Research officer M.S.Nair and Coir Research Management Institute director Balan said that the Rs 1.43cr project had developed coir geo-textiles for the conservation of soil for use in various fields. They said that the new technology could be used for protection of river banks, prevention of soil erosion in hilly terrain and construction of village roads.

(NIE, 02.01.05)

**Feted and Hated, Kyoto Pact Starts** A world plan to fight global warming went into force on Feb 16, 2005, feted by its backers as a lifeline for the planet amid sniping at the United States for pulling out. After years of delays, the UN Kyoto Protocol on curbing emissions of heat-trapping gases blamed for disrupting the climate took effect with muted celebrations for a deal Washington dismisses as an economic straitjacket

Under Kyoto, developed nations will have to cut emissions of greenhouse gases by 5.2 percent below 1990 levels by 2008-12. Those exceeding the 2012 goals will be penalized with bigger cuts than the average targets from 2012. Australia, the only big developed nation on the sidelines with the United States, said it had no plan to sign up.

(Tol & ET, 17.02.05)

### The Other Greenhouse Gases

**T**he Kyoto Protocol seeks to limit the emission of five other greenhouse gases besides carbon dioxide (CO<sub>2</sub>). These are methane (CH<sub>4</sub>), nitrous oxide, sulphur hexafluoride (SF<sub>6</sub>), perfluorocarbons and hydrofluorocarbons (HFC). As the effects of global warming escalate these gases would increasingly start coming under the scanner, sometimes resulting in the most diverse of insights.

CH<sub>4</sub> from livestock, for example, is the biggest source of greenhouse gases in New Zealand, more than from energy! Changes in diet or in fertilizer use can help cut livestock emissions and farmers, sooner than later, would have to get used to such terms as "manure management" and "enteric fermentation" — the latter referring to how methane is produced in the stomachs of livestock and expelled. CH<sub>4</sub> is also released from sources which include rice farming (cf: India), rotting vegetation and coal mines.

HFC, a popular refrigerant, has long been identified as a villain and efforts are on over the world to change to hydrocarbons. Little known SF<sub>6</sub>, used to give tennis balls and sports shoes etc their 'bounce', is 23,900 times more powerful at trapping heat than CO<sub>2</sub>.

(Reuters, 15.12.05)

### "Global Warming at Critical Point": Report

**G**lobal warming is approaching the point of no return, after which widespread drought, crop failure and rising sea levels will be irreversible, warned an independent report jointly made by the Institute for Public Policy Research in Britain, the Centre for American Progress in the United States and the Australia Institute. It called on the Group of 8 leading industrial nations to cut carbon emissions, double their research spending on technology and work with India and China to build on the Kyoto Protocol.

According to the report, urgent action is needed to stop the global average temperature rising by 2°C above the level of 1750 — the approximate start of the Industrial Revolution when mankind first started significantly adding carbon dioxide to the atmosphere. Beyond such a rise, "the risks to human societies and ecosystems grow significantly,"

the report said, adding that there would be a danger of "abrupt, accelerated, or runaway climate change." It warned of "climatic tipping points" such as the Greenland and West Antarctic ice sheets melting and the Gulf Stream shutting down.

(AP, 21.01.05)



### Ice Melting Everywhere

Ice is melting everywhere—and at an accelerating rate. Rising global temperatures are lengthening melting seasons, thawing frozen ground, and thinning ice caps and glaciers that in some cases have existed for millennia. These changes are raising sea level faster than earlier projected by scientists, and threatening both human and wildlife populations. Some scenarios and consequences:



- Temperatures in the Arctic Circle have risen by more than 0.5°C per decade since 1981. The extent of Arctic sea ice cover has decreased by 7 - 9 percent per decade. The Arctic melt season has lengthened by 10 - 17 days, threatening life support to polar bears, seals and walruses that can become extinct by the end of the century
- Marine transport through the Arctic is projected to increase to about 120 days by 2100, up from the current 20 - 30 days. The positive effects are however likely to be offset by environmental costs like oil-spills and fishery depletion.
- A 3°C rise in the temperature of Greenland would melt the land mass completely, raising the world's sea levels by more than seven metres; this is likely to come to pass by about 2100.
- In the Amundsen Sea region in the West Antarctic temperatures are rising 2.5°C annually for the last 60 years, disastrously speeding up glacial movement to as much as 1.5 km per year as against typically a few centimetres to a few hundred metres.
- All but 13 of the 2,000 glaciers in southeast Alaska are retreating. Montana's Glacier National Park may have no glaciers left by 2030.
- The ice cap on Tanzania's Kilimanjaro may disappear completely by 2015.
- In South America, glaciers are melting three times faster in recent years than they were in the mid-twentieth century; some may disappear completely by 2010.
- Millions of people living in Asia and South America rely on glacial runoff for drinking water and irrigation. If the glaciers disappear, severe water shortages are sure to follow. Meanwhile, rapidly filling glacial lakes in both the Andes and Himalayas threaten to break their banks and flood towns below.
- Warming and melting could force local plant and animal species to adapt or relocate—an increasingly difficult proposition as wildlife habitats are fragmented by expanding human populations.

(EPI, 25.02.05)

### Forests could be Key to Arresting Global Warming

**F**orests will play a central role in the extent of climate change future generations face. These have a large influence on the amount of carbon dioxide (CO<sub>2</sub>) in the atmosphere and thus global warming. The woods absorb CO<sub>2</sub> when healthy, to aid the process of photo-synthesis and release the same when rotting or burning.

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The wild card in this scenario is forest fires that spew millions of tons of CO<sub>2</sub> at one go. Fires in Indonesia which raged for months in the late 1990s, creating clouds that dimmed the sun, released up to an estimated 2.6 billion tonnes of greenhouse gases or the equivalent of about 40 percent of world industrial emissions in a year.



Therefore greater responsibility needs to be exhibited to manage forests with more careful forest plantings, better surveillance to spot outbreaks of fires, quicker response by fire-fighters and education of the public.

(Reuters, 04.03.05)

### Cooking Practices in South Asia Spur Warming

The major source of potentially climate-changing soot in the air over south Asia is home cooking fires, according to a team of Indian and American researchers.

The burning of wood, agricultural waste and animal manure for cooking is the largest source of black carbon in the air in that region, according to the team led by C. Venkataraman of the Indian Institute of Technology, Bombay. The effect of soot in the air over the Indian Ocean is some 10 times that of the so-called greenhouse gases, according to the researchers. The pollution causes the air to absorb more sunlight, thus warming the atmosphere.

"We therefore suggest that the control of these emissions through cleaner cooking technologies, in addition to reducing health risks to several hundred million users, could be of crucial importance to climate change mitigation in south Asia," the researchers wrote in a paper appearing in the journal *Science*.

(AP, 04.03.05)

### Himalayan Glaciers Receding Fast - WWF

The Worldwide Fund for nature (WWF) has said in a study that Himalayan glaciers are receding at among the fastest in rates the world. Himalayan glaciers feed into seven of Asia's greatest rivers, the Ganges, Indus, Brahmaputra, Salween, Mekong, Yangtze and Huang He and ensure a year-round supply of water to hundreds of millions of people in China and the Indian subcontinent.



"The rapid melting of Himalayan glaciers will first increase the volume of water in rivers causing, widespread flooding," said Jennifer Morgan, director of the WWF's global climate change programme, "But in a few decades this situation will change and the water levels in rivers will decline, meaning massive economic and environmental problems for people in western China, Nepal and Northern India," she said.

(PA, 15.03.05)

### No Stopping Global Warming, Studies Predict

Even if people stopped pumping out carbon dioxide and other pollutants tomorrow, global warming would still get worse, researchers reported recently. Existing hazards of global warming like rising sea levels, droughts, heat waves and storm surges will get more severe in the immediate future due to the gradual yet inexorable long-term effects of global warming that Mother Earth is already subjected to.

There is thus a crying need to aggressively pursue an agenda for reducing greenhouse gases without any delay or let up, so that the earth is still habitable for our progeny.

(PA, 18.03.05)

### Fuel Curbs May Speed Warming!

Some scientists continue to differ as to whether global warming is caused by man-made emissions of carbon dioxide and other "greenhouse" gases, by natural climate cycles or if it exists at all.



Dr Peter Cox, climate change scientist from the UK, quotes a research report to suggest that fossil fuel by-products like sulphur dioxide particles reflect the sun's rays, "dimming" temperatures and almost cancelling out the greenhouse effect. The research says that cutting down on the burning of coal and oil, one of the main goals of international environmental agreements, will actually drastically heat rather than cool the climate and "help turn parts of Europe into desert by 2100".

(BBCN, 15.01.05)

### US Forests Cost-Effective vs Global Warming - Study

The cost of using forests to remove greenhouse gases from the air could be about the same as cutting pollution with fuel switching or energy efficiency improvements, according to a new report from the Pew Centre on Global Climate Change, Washington.

The Pew study estimated it would cost between US\$25 and US\$75 per ton to remove 300 million tons of carbon dioxide from the atmosphere each year through sequestration projects using vast expanses of forest land. This would be roughly the same as other emission reduction measures used to trim energy consumption in buildings, automobiles and appliances, the report said.

(PA, 20.01.05)

### EU Launches Pioneering Emissions Trading Scheme

On New Year's Day a new front opened in the battle against global warming. The 25-member European Union launched the world's first international carbon dioxide emissions trading scheme. This is after months of political wrangling as governments and Brussels juggled the demands of industry and environmental concerns. From that day, energy-intensive businesses have to monitor and lower their carbon emissions or face a penalty.

The scheme could ensure Europe meets its Kyoto target of an eight percent cut in carbon emissions by 2012 compared with 1990.

(Reuters, 04.01.2005)

### 2005 Could Be Warmest Year Recorded

A weak El Nino and human-made greenhouse gases could make 2005 the warmest year since records started being kept in the late 1800s, NASA scientists said this week. The warmest year on record was 1998, with 2002 and 2003 coming in second and third, respectively.



Last year was the fourth-warmest recorded, with a global mean temperature of 14°C, which was about 0.84 degrees warmer than the middle of the century. Average temperatures taken from land and surfaces of the oceans showed 2004 to be 0.48°C above the average temperature from 1951 to 1980.

(PA, 11.02.05)

## Ocean Waves for Power Supplies

**S**cientific efforts are on to tap energy on a commercial scale, from ocean currents and tidal waves, captured by big buoys bobbing on sea swells or by submerged turbines spinning with the ebb and flow of the tides.

Marine power is in its infancy. But an experimental wave project run last summer in the Scottish Orkneys successfully provided power to 500 homes. The technology, when fully developed, holds great potential for clean energy for littoral states.

Environmental regulators are however examining the plans and weighing possible problems for fish and other marine life.

(Reuters, 14.02.05)



## Congo River Slated to Power Africa out of Poverty

**P**lans to harness the power of the mighty Congo river to generate electricity are being drawn up. The scheme, which will initially focus on the Inga rapids, aims to eventually generate more than enough electricity to power Africa's industrialisation

Hydro-electricity from the Congo could generate more than 40,000 megawatts, enough to power Africa's industrialisation with the possibility of selling the surplus to places like Spain and Italy in southern Europe via an interconnector under the Mediterranean Sea.

(UNEP, 24.02.05)

## Growth in Solar Energy Initiatives

**S**olar electricity production growth jumped 67 percent last year as established industry players increased output and new players entered the industry, a survey said. In 2004, world solar cell production reached 1,256 megawatts (MW).

The reason behind this spurt in solar energy is varied. If it is the high cost of conventional energy in Japan, it is the urge to meet Kyoto goals in Germany. Whatever be the reason for this surge, it is welcome.

(WNN, 17.03.05)

## Green Energy May be US\$100bn Market in a Decade

**R**enewable energy like wind and solar power and hydrogen fuel cells could blossom into a US\$100bn a year global market in less than a decade as technology costs fall, according to a study. The combined market for "green" sources of energy has already grown 68 percent since 2002 to more than US\$16bn last year, according to Clean Edge, a research and publishing firm based in California.

(PA, 17.03.2005)

## Honda to Start Selling Fuel-Cell Cars Shortly

Honda President Takeo Fukui has announced that they would be putting a car powered by hydrogen fuel-cells into the hands of American consumers within the next few months. The model, code-named '2005 Honda FCX', will emit only water vapour. It also will be the first fuel-cell vehicle to operate in subzero temperatures.



(AP, 12.01.05)

## Battery-Powered Two-Wheeler Launched

**A** two-wheeler which runs on electricity was launched in Bangalore, India recently. Named Eko-cosmic, the battery operated vehicle can carry two persons at 40 kms/hr upto a distance of 50 kms. on a single charge. Recharging costs only Rs 3. The two-wheeler is priced at Rs 25,000.



(BD, 08.01.05)

## China Cracks Down on Power Plant Polluters

**C**hina's State Environmental Protection Administration (SEPA) is cracking down on large-scale power projects that have not undergone proper environmental reviews before starting construction. The Administration demanded recently that building work on 30 projects in several provinces be halted because they have not successfully completed environmental impact assessment.

China had beefed up its environmental laws in Sept. 2003, but it is only now that its provisions are being invoked, after SEPA started to exercise greater resolve in pursuing possible polluters.

(FT, 20.01.05)

## No Gas? Try Coconut Oil!

**P**acific island nations want to popularize the use of coconut oil as a fuel instead of the increasingly expensive petroleum products. This was revealed at a recent United Nations conference on small islands, held at Mauritius. During World War II, some people in the Philippines had first discovered the use of coconut oil as a fuel. But the idea was abandoned after the war. With increasing prices of petroleum derivatives these days, the idea is being revived. Coconut oil has many advantages: it does not pollute, has a nice smell and costs less.

(DTE, 15.02.05)

## Future of Ethanol as a Fuel

**T**he International Energy Agency in a report says that support schemes have financed the growth in global ethanol production from zero in the mid-1970s to 30,000mn litres in 2004. Nevertheless global ethanol output is equivalent to only 0.5mn barrels of oil a day, a fraction of the 81mn barrels of oil that the world consumes per day.

However, there will not be such a quantum leap in the production of bio-fuels, including ethanol, in the near future - if ever - as to make a serious dent in the world's demand for fossil fuels. For one, bio-fuels including ethanol are themselves far more energy intensive to produce. More importantly, it would be impractical to expect a hungry world to allocate substantial arable land towards ethanol and other bio-fuel production to the detriment of food production.

(FT, 11.02.05)

## Orissa to Supply 'Green Power'

**O**rrissa Electricity Regulatory Commission (OERC) of India, directed Electricity Grid Corporation of Orissa and other power distribution companies to purchase 200 million unit of electricity produced from non-conventional sources for the financial year of 2006-07.

The two member division bench of OERC was hearing a petition filed by Greenpeace that had urged the State Electricity Commission to promote generation and distribution of electricity from non - conventional energy sources like wind, solar, biomass and tidal wave.

(AA, 29.04.05)

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## Wind Energy Producers Seek Changed Tax Sops

Wind energy producers in India have sought an innovative performance-based incentive system in the place of the existing tax incentive scheme. The Indian Wind Energy Association has submitted to the Finance Ministry that the existing provision of an accelerated depreciation regime be reduced to a nominal depreciation regime and the indirect fiscal benefits provided, as tax foregone, be linked to performance.



The new system, it is felt, would help in expediting the growth of the wind energy sector as well as lower tariffs, by attracting independent power producers and foreign institutional investors.

(TH, 19.02.05)

## Nuclear Energy May be Back in Vogue: US

Mohamed ElBaradei, director general of the International Atomic Energy Agency (IAEA), told a conference on nuclear energy recently that expectations of a sharp rise in energy demand and the risk of climate change are pushing many countries to return to the idea of nuclear power. "The IAEA's low projection, based on the most conservative assumptions, predicts 427 gigawatts of global nuclear energy capacity in 2020," he said.

On the topic of climate change and the threat posed by greenhouse gases, ElBaradei said nuclear energy in combination with renewable sources of energy represented a safe alternative to fossil fuels. "Nuclear power emits virtually no greenhouse gases. The complete nuclear power chain, from uranium mining to waste disposal, and including reactor and facility construction, emits only 2-6 grams of carbon per kilowatt hour," he added.

(Reuters, 22.03.05)

## Canadian Researchers Invent New Solar Cell

Researchers at the University of Toronto have invented a flexible plastic solar cell that is said to be five times more efficient than current methods in converting energy from the sun into electrical energy. The cell harnesses infrared light from the sun and can form a flexible film on the surface of cloth, paper or other materials. The film can turn 30 percent of the sun's power into usable electrical energy — a far better performance than the six percent gleaned from the best plastic solar cells now in use. Since the cell works on infrared light it can still operate when there is no visible sunlight.

We can let our imaginations run riot and think of clothing made of material into which this flexible plastic is woven - to let us have ready electricity even on the move. Powering that cell phone or accessing e-mail anytime anywhere will no longer be a problem

(PA, 14.01.05)

## A Petroleum Free Iceland?

With almost unlimited geothermal energy sizzling beneath its surface, Iceland has an official goal of making the country oil-free by shifting cars, buses, trucks and ships over to hydrogen by about 2050. By then, in theory, the only oil used on the volcanic North Atlantic island will be in planes visiting Reykjavik airport.

About 70 percent of Iceland's energy needs, from home heating to electricity for aluminium smelters, are already met by geothermal or hydro-electric power. Only the transport sector is still hooked on polluting oil and gas and Iceland has already started introducing hydrogen powered buses to overcome this.

(Reuters, 10.01.05)

## What Will Power Vehicles in the Future?

The world's major carmakers appeared split over which fuel efficient, lower emission engines will prove to be the wave of the future — hybrid, clean diesel or hydrogen fuel cell.

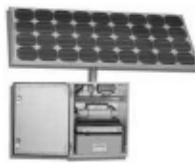
As of now, gasoline-electric hybrid engines are the only practical alternative, all others being 'futuristic'. Some rosy forecasts for the end of the decade range from 500,000 units to 1 million of 'hybrid' vehicles in the US alone.

But consumer research firm J.D. Power and Associates foresees slower growth for hybrids. The significant price premium on hybrid cars will likely put off most customers. Cleaner diesel and other alternative powertrains and fuel options may also emerge in the next few years to compete with hybrid technology, limiting the sales rise. Some manufacturers are proceeding on the premise that commercializing zero-emission, hydrogen-powered fuel cell vehicles (FCVs) was the ultimate goal, with hybrids merely an interim solution to advance fuel-cell technology.

(Reuters, 12.01.05)

## India's Untapped Renewable Energy

In a seminar held in Kolkata the potential for green energy in India was highlighted. Solar, wind, hydel (mini & micro hydel plants), biomass, tidal and geothermal power are the popular ways where renewable energy sources are put to use across the world. India is blessed with many days of sunshine and has a long coastline so both solar and wind power are at the focus of activities along with biomass. India has a potential of 45000 mw of power from these sources of which only about 3500 mw has been installed. The meeting called for a separate renewable energy policy from the Government of India so that the potential can be fully exploited.



(TT, 27.04.05)

## Widespread Green Energy Use Decades Away

The search for sustainable energy sources should intensify as oil prices simmer at a high and governments try to meet commitments under the United Nations Kyoto Protocol on climate change. The search however is failing to make the rapid progress required to make any material impact, because of the stark economics involved.

Wind power is making headway in the electricity market, with generation nearly quadrupling globally in the past five years, but costs are still about 50 percent above those of conventional energy sources. Biodiesel remains 50 percent more expensive than petrol, meaning oil prices would have to climb above US\$70 (INR 315) a barrel for biofuels to be competitive with petrol.

Apart from biodiesel, fuel cells using hydrogen are touted as an emission-free solution for transport but high production costs mean a widespread change from petrol is decades away. Other green power sources such as biomass and solar also remain much more expensive than gas.

(PA, 14.02.05)

## Environment

8

### Mercury Damage to Babies Costly

**L**ower IQ levels linked to mercury exposure in the womb costs the United States US\$8.7bn a year in lost earnings potential, according to a study released by researchers at the Mount Sinai Centre for Children's Health and the Environment, New York.

Mount Sinai paediatrician and lead researcher Leonardo Trasande estimated that about 5mn children are born in the US each year with umbilical cord blood mercury levels linked to IQ loss. The research found the IQ losses linked to mercury range to as much as 24 points. As an example, Trasande said about four percent of babies, or about 180,000, are born each year with blood mercury levels between 7.13 and 15 micrograms per litre. That level of mercury, the group concluded, causes a loss of 1.6 IQ points. Using work examining the effects of lead exposure on IQ, researchers determined that even a 1.6 point drop in IQ could cost a person US\$31,800 in lifetime earnings because of missed educational opportunities or jobs.

(AP, 01.03.05)

### Early Settlers Made Australian Desert

**S**ettlers who came to Australia 50,000 years ago and set fires that burned off natural flora and fauna may have triggered a cataclysmic weather change that turned the country's interior into the dry desert it is today. A study suggests that large fires could have altered the plant population enough to decrease the exchange of water vapour with the atmosphere, stopping clouds from forming.

The researchers used computerised global climate simulations to show that if there were some forest in the middle of Australia, it would lead to a monsoon with twice as much rain as the current pattern. Fossil evidence shows that birds and marsupials that once lived in Australia's interior would have browsed on trees, shrubs and grasses rather than the desert scrub environment that is there today.

(Reuters, 26.01.05)

### Beijing to Plant Rooftop Grass to Clean Away Smog

**P**olluted Beijing is planning to clean up its act by planting grass on rooftops. The gardening campaign was part of the Chinese capital's drive to improve air quality in time for the 2008 Olympics. Downtown Beijing is too crowded to insert more green belts, so rooftop "green belts" could sprout on 30 percent of the city's high rises and 60 percent of its lower buildings by 2008. The preferred vegetation for roofs was "evergreen grass" because it could resist high temperatures and Beijing's typical dry weather.

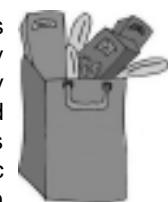
(Xinhua, 10.01.05)

### Ecology Tax for Grocery Bags

**S**an Francisco, which has long prided itself on environmentally friendly policies, is debating whether it should become the first U.S. city to tax grocery bags to encourage recycling.

Environmentalists say that plastic bags create significant litter problems, are rarely recycled and are a threat to marine life. They add that 14 million trees a year are needed to make 10 billion paper grocery bags nationwide. The city uses 90 percent plastic and 10 percent paper, so the problem in San Francisco is largely plastic.

Bag fees are working in Ireland, Australia, Taiwan, Bangladesh and other places.



(Reuters, 25.01.05)

### World's Largest Iceberg Posing Problems

**T**he world's largest iceberg, a 3000 sq. km. behemoth codenamed B15A, appears to have run aground near Antarctica, posing problems to scientific bases and penguin colonies, where tens of thousands of chicks face starvation. B15A has blocked wind and water currents that break up ice floes in McMurdo Sound during the Antarctic summer, causing a build-up of ice behind it. The US McMurdo Station and New Zealand's Scott Base are located on the sound, and Italy's Terra Nova base is nearby. The iceberg and the ice buildup are right in the path of ships that arrive in Antarctica with fuel and food for the three stations. Though the scientific communities are in no imminent danger, scientists are looking into solutions, including breaking a path through the ice for the ships.



Of immediate concern however is the fate of several penguin breeding colonies, with tens of thousands of Adele penguin chicks facing starvation as parent birds are forced to trudge up to 175 km to open sea to gather food.

(AP, 20.01.05)

### U.S. Power Plants More Polluting than Neighbours

**T**he United States' reliance on coal makes its power industry produce more of four pollutants - sulphur dioxide, nitrogen oxides, carbon dioxide and mercury - making it significantly dirtier than its counterparts in Mexico or Canada, a new study charges.

While that might not be surprising, given that U.S. power production is 17 times that of Mexico's and nearly seven times that of Canada's, the study also found U.S. plants produced more of each pollutant per resident, in all but one case, when measured by gross domestic product - an indicator of a country's economy.

Coal is the highest polluting fuel for all of the above pollutants and the nation's high levels of pollution stems from a dependence on coal for 50 percent of U.S. power. Canada depends on coal for 17 percent of its power, and Mexico for 8 percent.

(ENN, 12.01.05)

### Road Salt Harms the Environment

**S**cientists have found that the salt used commonly to melt snow and ice from slippery winter roads in many parts of the world has an environmental downside that can affect a widespread area long after winter has passed.

Researchers have learned that excess salt changes stream chemistry, causing certain minerals to leach out of soils. At high enough concentrations, salt, which frequently contains dyes and other chemicals, can increase the acidity of water, causing some of the same negative effects as acid rain. Road salt has been seen to affect amphibians in small seasonal wetlands located as far as 550 feet from roads; the effects can sometimes be seen all the way down to the ocean. On another plane, road salt attracts deer and moose, causing collisions with vehicles. Scientists have also learned that some amphibians refuse to cross salted roads and, as a result, can be separated from their traditional breeding areas.

Scientists who study road salt's effect on the ecology do not however advocate leaving icy roads untreated. They hope to learn more about how to prevent salt's negative impacts without sacrificing public safety.

(AP, 18.03.05)

1/2005

## Time Ticking on Nuclear Waste Decision

As the U.S. extends the life of its nuclear plants far into the future, a potentially critical question remains: Where will the reactors' intensely radioactive waste be stored for thousands of years to come? Erratic planning for nuclear waste has left no place for permanent disposal until perhaps 2015, when the Yucca Mountain underground repository is scheduled to open in Nevada. Even then, the volume of spent nuclear fuel will continue to grow at reactors around the country for decades. In any case, with more than 50,000 tons of nuclear waste awaiting disposal across the US and the Yucca Mountain only initially capable of storing 77,000 tons, the facility would reach its capacity by 2030. What then? Things have come to such a pass that the biggest impediment to installing new nuclear reactors is waste disposal.

The above story is US specific, but the problem is not. It is high time that the world community started to critically look for a sustainable solution to the problem of nuclear waste disposal.

(CT, 06.02.05)

## Global Warming Could Worsen US Pollution

Global Warming is not a stand-alone hazard but has environmental pollution dimensions as well. It could stifle cleansing summer winds across parts of northern United States over the next 50 years and worsen air pollution, U.S. researchers said. Further warming of the atmosphere, as is happening now, would block cold fronts bringing cooler, cleaner air from Canada and allow stagnant air and ozone pollution to build up over cities in the Northeast and Midwest, they predicted.



(ENN, 21.02.05)

## Dubai Island-Building May Alter Gulf Environment

Dubai has embarked on a US\$14bn project to build man-made islands off its coast, that is luring buyers from around the world. The new land masses have however buried coral reefs, oyster beds and sea grasses that nurtured fish and sea turtles. They block and reroute natural currents, eroding Dubai's famed natural beaches. One of the archipelagos, the Palm Jebel Ali, lies in an area once protected as a marine wildlife zone.

Though the developers assure of doing everything necessary to restore the marine environment, some experts feel that it is irretrievably lost.

However other experts like David Bellamy, the British conservationist and TV documentary host, said after touring a Palm construction site that it was "like watching Venice being built." He felt that rubble dumped to create the islands would provide cover for fish. "If they do it right with proper effluent treatment, there will be a lot of new habitat," he said.

(ENN, 28.02.05)

## Exports Blamed for Amazon Deforestation

New evidence that the rapid expansion of Brazil's exports fuelled agriculture sector is contributing to the deforestation of the Amazon rainforest is emerging from a study conducted by a group of leading environmental organisations.

Soyabean farming, the leading crop, has expanded by more than 50 percent since

2001 and earned the country more than US\$10bn in foreign exchange last year. While soyabean farmers do not usually clear the forest themselves, the authors of the report say, they fuel deforestation by driving cattle and rice deeper into the forest.

Wary of environmental restrictions and international criticism, the powerful farm lobby and parts of the government have all along argued against the notion, till faced with recent aerial evidence, and are now beginning to acknowledge the fact.

(FT, 14.01.05)

## Asian Tsunami Still Spawning Hazards

UN Environmental Programme (UNEP) report has said that the tsunami has dislodged hazardous materials, causing a threat to public health, and cited Somalia, where the people of the coastal areas are suffering from mouth bleeds, respiratory infections and skin conditions. It also said that thousands of wells and water sources had been contaminated in other affected countries.



The report also revealed that regions protected from the tsunami included those with thriving coral reefs, mangrove forests and other coastal vegetation as well as peat swamps.

(PA, 23.02.05)

## Arctic Becoming Chemical Waste Sump

The Arctic, already a dump for Russian nuclear waste from the Cold War, is also rapidly becoming a chemical sump for the globe, the World Wide Fund for Nature said recently. New research had found even higher concentrations of banned pesticides like DDT in the Arctic environment than in the countries that produced them.

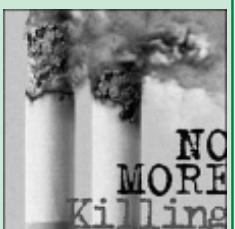
The environmental pressure group said some of the chemicals — found not only in the fat of Arctic species including fish, seals and whales but also in the ice itself — were affecting immune, hormone and reproductive systems. It said the chemicals, including flame retardants and those used in the manufacture of non-stick cookware, drifted north on sea currents, became trapped in ice and were slowly released back into the environment years later.

The United Nations is already backing an international clean-up operation to rid the Russian Arctic of a cocktail of toxic chemicals left behind after the Cold War.

(PA, 17.02.05)

## Global Anti-Smoking Pact Takes Effect

A global treaty aimed at dissuading children from smoking and helping adults kick the habit came into force from Feb 27, 2005, despite what health officials say has been heavy lobbying by the tobacco industry. The treaty, known as the Framework Convention on Tobacco Control, gives members three years to slap strong health warnings on tobacco packages and five years to ban advertising, promotion and sponsorship. Approved by WHO's 192 member states - India among them - in May 2003, the pact became law, 90 days after the trigger of the 40th state ratifying it.



(Reuters, 28.02.05)

## Basic Needs

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### Pill to Add to Lifespan!

The ultimate goal of alchemists - the elixir of life - seems to have been found! According to the Scotsman, a pill invented by Aberdeen University professor John Speakman, if taken once a day would keep a person healthier, able to work longer and would also extend lifespan by up to 30 years.

According to Prof. Speakman, animals with faster metabolic rates produce fewer harmful free radicals that damages the DNA and other building blocks, resulting in the ageing of the body tissues. (This idea of metabolizing fast and dying old of course turns traditional scientific thinking right on its head). In his scheme of things, a pharmaceutical target - in this case a hormone called thyroxine - would pump up the metabolic rate to reduce free radical production.

(ET, 29.03.05)

### UN Launches 'Water for Life' Decade

To spur efforts by governments and civil society to meet agreed targets (as per the Millennium Development Goals) of halving the number of people lacking access to safe drinking water and basic sanitation by 2015, the United Nations has launched the international 'Water for Life' Decade from Mar 22, 2005, World Water Day.

With agriculture being the main consumer of water and women in developing countries often being the main carriers of water, UN Secretary-General Kofi Annan said in a message, "We need to increase water efficiency, especially in agriculture. We need to free women and girls from the daily chore of hauling water, often over great distances. We must involve them in decision-making on water management." The least progress was being made in providing basic sanitation and many millions of children were dying each year from water-borne diseases, he said, urging the world "to respond better" on an urgent matter of human development and human dignity.

(UNN, 21.03.05)

### Traditional Knowledge fades as Languages Die

United Nations Conference on Trade and Development (UNCTAD) report on protecting traditional knowledge argues that beyond a devastating impact on culture, the death of a language wipes out centuries of know-how in preserving ecosystems. Many of these languages have rich oral traditions, stories told from one generation to another. But these accumulated experiences are getting lost forever.

The UN estimates half of the world's 6,000 languages will disappear in less than a century. Roughly a third of those are spoken in Africa and about 200 already have less than 500 speakers. Experts estimate half the world's people now use one of just eight languages: Chinese, English, Hindi, Spanish, Russian, Arabic, Portuguese and French.

(AP, 07.03.05)

### Jeffrey Sachs on India's MDG Efforts

Speaking at the Sustainable Development Summit organized in New Delhi by the Tata Energy Research Institute (TERI), the noted economist, Jeffrey D Sachs felt that India needed to do more on the Millennium Development Goals (MDGs) in terms of health coverage, water resources, maternal mortality and AIDS. In his opinion, China was ten years ahead of India in sustainable economic growth and its public sector was also ahead in terms of social responsibility.

(ET, 06.02.05)

### New Rice Cultivation Method Developed

Researchers have discovered a unique rice production method to increase yields upto 100 per cent, at the same time reducing use of water by 50 per cent. The new method, which will help reduce the pressure on the country's scarce water resources, has been developed by researchers of the Anan-based Tata Water Policy Research Programme, assisted by the International Water Management Institute.



(BL, 24.02.05)

### Simple Solution to Arsenic Contamination

Scientists from the University of Texas and the Massachusetts Institute of Technology, USA, have developed a simple and cheap solution to the rampant arsenic contamination found in groundwater across rural Nepal.

The filtering device consists of no more than gravel and sand layered in a clean plastic can topped by a diffuser containing iron nails and shards of brick. When water is poured through the filter, the arsenic bonds to the iron in the nails. Arsenic is not toxic when it's bonded with iron and can be scooped out once a month. With this reusable device, 96 percent of the arsenic is removed from the water.

The filters, which cost less than US\$20 each, could change the lives of millions of people in Nepal and other Asian countries.

(ENN, 04.03.05)

### Rains Boost Southern Africa Crop Hopes

Good rains have left most of southern Africa expecting better crops in 2005 than in recent years. In 2002, poor rains across the region left 16 million people short of food, but better weather and agricultural recovery — particularly in Zambia, which has gone from a serious shortfall to significant surplus in only a couple of years — have improved the situation.

However, the 2004 crop has now been consumed and the 2005 crop is not due to be harvested until April or May, so that southern Africa is entering its "lean season". The short-term demand for food during this period is met by the United Nations World Food Programme (UNWFP) through food-aid. But the UNWFP has received no donations for southern Africa since the Dec. 26 Asian tsunami, and this may threaten its operations, which it had planned to increase in the coming months.

(Reuters, 21.01.05)

### India's most Populous Cities

Mumbai with 18.3mn people, Delhi with 15.3mn and Kolkata with 14.3mn stand joint fourth, fifth and sixth respectively as the most populous cities in the world, according to a new United Nations Economic and Social Council report on demographic trends. Tokyo tops the list with a population of 35.3mn followed by Mexico City (19.2mn) and New York (18.3mn).

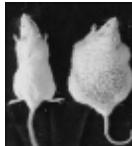
The report shows urban population is rising rapidly and the number of elderly people is increasing, which necessitates major economic and social changes over the next few decades.

(Tol, 18.02.05)

1/2005

## 'Sumo' Rats to Unravel Obesity Genes

The Indian Council for Medical Research and scientists from the Rockefeller University, USA have teamed up to find the genes that cause obesity in specially bred 'sumo' rats - at around 1.4 kgs each, four times the size of normal rats - in an effort to understand what makes people overweight and what causes them to contract fat-related ailments like infertility and diabetes.



Parallels of many of the rats' activities and moods can be observed in corpulent humans so that a critical study of the rats is sure to unveil many secrets ultimately useful to treat the obese.

(TH, 27.02.05)

## India to Equal China's Population by 2030

India's population will equal China's by 2030, five years earlier than previous projections, the United Nations has said in its 2004 Revision of the World Population Report. By 2050 India's masses would swell to 1592mn while China's will be contained at 1392mn and together they will account for about 27 percent of the world's population. The report also predicts that by 2050 the world's population would soar by 40 percent to touch 9.1bn.

(TH, 25.02.05)

## This Pacemaker is a Mood Elevator

Scientists in Toronto, Canada, have conducted successful trials of a "brain pacemaker" that can make depressed people happy by electronically stimulating the brain.

The process consists of drilling two small holes in the area of the brain responsible for modulating sadness and two thin electrode-tipped wires are inserted. Next a pulse generator implant - the pacemaker - is attached under the chest. The wires are hooked up to this to provide constant brain stimulation. The results have been described as "like a miracle".

(Tol, 02.03.05)

## A Palm-Held Field Arsenic Detector

Teachers and students at the Institute of Engineering and Management, Kolkata, India have invented an electronic arsenic detector that is handy and cheap enough to be a fixture in every home.

A special chemical is poured into a glass of water and then exposed to the sun. An electronic chip is then dipped into the mixture. The detector will indicate if the arsenic content is above the limit specified by the World Health Organisation. Trials of the instrument are on.

(Tol, 04.03.05)

## Rice Genome Mapped

In a development that would immensely help rice breeders worldwide with opportunities for better varieties of rice, scientists from the Beijing Institute of Genomics have come out with fine genome maps of two widely grown sub-species of rice.

The study will help produce better and high-yielding varieties of rice that is the staple of more than half the world's population. As per Food and Agricultural Organization projections, by 2030, the total demand for rice will be 38 percent higher than the annual amounts produced between 1997 and 1999.

(DTE, 31.03.05)

## Basic Needs

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## Malaria Threat to Mankind

A research report jointly from the Kenya Medical Research Institute, Nairobi and the Centre for Tropical Medicine, Oxford University, UK, has said that more than half a billion people the world over - nearly double previous estimates - were infected in 2002 by the deadliest form of malaria caused by the mosquito-borne parasite Plasmodium Falciparum. They calculate that one in three in the world - a total of 2.2bn - are at risk.

There is however hope: geneticists have unraveled the DNA of both the mosquito and the parasite, and have to look for weak spots that could lead to weapons to fight them.

(TH, 11.03.05)

## Nicotine-Free Pill may Chill Addiction

Researchers are racing to develop a potentially lucrative drug that would make smoking as treatable as erectile dysfunction, high cholesterol and acid reflux disease. Major pharmaceutical companies see the huge potential of sales for a vaccine or a nicotine-free pill that could end addiction at the chemical level for smokers.



Researchers feel that it is realistic to be able to help addicts stop smoking with a pill. Also it has been shown that nicotine patches, gums, lozenges and sprays help wean smokers off cigarettes by slowly reducing their dependence on nicotine.

(ET, 10.03.05)

## Safe Motherhood

Expecting mothers who take antidepressants may have babies who experience withdrawal syndrome in the first few days of life, finds a new study by Spanish scientists using a worldwide drug alert system. The neonatal withdrawal symptoms could include convulsions, irritability, abnormal crying and tremors.

The study suggested that pregnant women who need to be treated for depression should be prescribed the minimum effective dose or advised psychotherapy.

(Tol, 06.03.05)

## Repeal of Law Promoting Breastfeeding?

In the name of simplifying laws and licensing regimes, the Union Ministry of Food Processing Industries have proposed repeal of the Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act, 1992 (IMS Act).



One of the underlying effects of the law was promotion of breast feeding, and Indian organizations that have been upholding the advantages of mother's milk are up in arms as repeal of the law would allow unfettered promotion of 'infant formulae' derailing the decade-long initiative towards breast-feeding. They fear the repeal of the IMS Act would endanger 60mn children less than five years old. Half of them are undernourished and 2.4mn of them die annually.

(DTE, 15.03.05)

**E**nvironmental degradation and poverty are major threats to the world. These two are entwined in a complex way by which each reinforces the other and makes it even more difficult to control both, particularly for poor countries that experience resource constraints. They have often been made the cause of conflict of interests between the poor South and the rich North and remain two important issues that question the propriety of the process of globalisation.

Poverty issues of the South are possibly not well understood or debated in the developed countries, where they are comparatively more concerned with environmental issues. This has led to the evolution of economic policies with an environmental bias both in the individual developed countries and the international policy environment where the domestic policies of the developed countries often set



the pace. This lopsided development of policy has led to the evolution of environment protection norms that emphasise on preventing the exploitation of the environment, while missing the very people within the environment that the policy tries to protect.

This advocacy paper from CUTS explores the possible linkages between environmental standards and poverty reduction. It provides a conceptual analysis of issues like the problem of poverty, impact of poverty on environment; and the impact of environmental standards on poverty. It analyses how environmental standards that focus on preventing use of resources could dilute the ability of the poor to gain capabilities to rise above poverty and affect the overall welfare and stability in the poor countries. Alternatively, the paper points out the need for measures to ensure stable income to the poor to raise their capabilities and reduce environmental degradation.

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