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1. The cost of a polluted environment.

More than 1 in 4 deaths of children under 5 years of age are attributable to unhealthy environments. Every year, environmental risks – such as indoor and outdoor air pollution, second-hand smoke, unsafe water, lack of sanitation, and inadequate hygiene – take the lives of 1.7 million children under 5 years, say new WHO report. Top 5 causes of death in children under 5 years linked to the environment. The report, Don't pollute my future! The impact of the environment on children's health, provides a comprehensive overview of the environment's impact on children's health, illustrating the scale of the challenge. Every year: 570 000 children under 5 years die from respiratory infections, such as pneumonia, attributable to indoor and outdoor air pollution, and second-hand smoke; 361 000 children under 5 years die due to diarrhoea, as a result of poor access to clean water, sanitation, and hygiene; 270 000 children die during their first month of life from conditions, including prematurity, which could be prevented through access to clean water, sanitation, and hygiene in health facilities as well as reducing air pollution; 200 000 deaths of children under 5 years from malaria could be prevented through environmental actions, such as reducing breeding sites of mosquitoes or covering drinking-water storage; and 200 000 children under 5 years die from unintentional injuries attributable to the environment, such as poisoning, falls, and drowning.





NEWS LETTER

Did you know?

New Delhi tops list of cities with most degraded hearing - As per latest ranking of 50 large cities in hearing loss and urban noise pollution, urban areas such as New Delhi Guangzhou, Cairo and Istanbul-topped the list of cities where hearing was most degraded. Likewise, cities least afflicted by noise pollution-including Zurich, Vienna, Oslo and Munich-registered the lowest levels of decline in hearing.

2. With Norway in Lead, Europe Set for Surge in Electric Vehicles.

On Europe's northern margins, lightly populated Norway has been at the cutting edge of electromobility for years, even decades now. The capital of Oslo, like most of Norway's cities and towns, boasts bus-lane access for electric vehicles (EVs), recharging stations aplenty, privileged parking, and toll-free travel for electric cars. The initiative began in the 1990s as an effort to cut pollution, congestion, and noise in urban centers; now its primary rationale is combating climate change. Today, Norway has the highest per capita number of all-electric [battery only] cars in the world: more than 100,000 in a country of 5.2 million people. Last year, EVs constituted nearly 40 percent of the nation's newly registered passenger cars.

Not resting on its laurels, the Norwegian experiment shows every sign of accelerating. Earlier this year, Norway opened the world's largest fast-charging station, which can charge up to 28 vehicles in about half an hour. The country, joined by Europe's No. 2 in e-mobility, the Netherlands, intends to phase out all fossil fuel-powered automobiles by 2025. Elon Musk, CEO of the U.S. electric car company Tesla Motors, responded to Norway's declared goal by tweeting: "What an amazingly awesome country. You guys rock!"

Norway is the clear electric vehicle pacesetter in Europe, which now has about 500,000 electric vehicles. China leads the world in EV usage, with about 600,000 all-electric vehicles on its roads and an ambitious plan to deploy 5 million EVs by 2020. The U.S. ranks third globally, with fewer than 500,000 EVs. But electric vehicle momentum is picking up in the U.S., as evidenced by the 400,000 people who have paid \$1,000 to be on the waiting list for Tesla's \$35,000 Model 3 car.



Did you know?

Egyptian researchers turn shrimp shells into biodegradable plastic - Researchers at Egypt's Nile University are developing a way to turn dried shrimp shells that would otherwise be thrown away into thin films of biodegradable plastic they hope will be used to make eco-friendly grocery bags and packaging.

News Across the Globe

Tiny Floating Garden Is Successfully Cleaning The Most Polluted Waterway In The U.S.

- For more than a century the Gowanus Canal in New York City has been the victim of extreme pollution. It's notorious for being one of the most polluted waterways in all of the U.S., thanks to sewage runoff, waste disposal, and industrial pollution from gas plants, chemical plants and paper mills.
- The situation is so dire, it earned Gowanus a spot on the Environmental Protection Agency's list of superfund sites - eligible for a \$500 million cleanup plan that is to be completed by 2022. In the meantime, another smaller project is underway and it's proving to be quite successful. The project is called GrowOnUs and it takes the form of a floating green oasis...GrowOnUs, an experiment in floating infrastructure, is a garden made up of 30 different plant species that act as sponges to mitigate the chemicals in the water. The plants are grown inside metal culvert pipes and made buoyant by eco-friendly construction materials such as recycled plastic bottles, coconut fibres and bamboo...
- Plants atop the floating island include seaside goldenrod, smooth cordgrass, sumac and swamp rose mallow. According to Takepart, the plants interact with the canal water and improve it through a process called phytoremediation, which is the treatment of environmental issues through the use of plants that can rid of pollutants without having to dispose of them elsewhere. The environment beneath the island is substrate for mussels, which act as cleaners in dirty water...Currently, only plants cover the floating garden, but there is hope that it could one day be used to grow herbs and food crops

News Across the Globe

Versova sealink gets green nod

In a major boost for the proposed nine-km-long Bandra Versova Sealink (BVSL), the state environment department has granted environment clearance for construction of the Sea Link to the Maharashtra State Road Development Corporation (MSRDC). The plan of a sealink between Bandra and Versova was revived after scrapping the construction of a coastal road between Bandra and Versova following strong opposition from environmentalists and locals of Bandra, Juhu and the fishermen of surrounding areas. Thus, the sealink now becomes a part of the Brihanmumbai Municipal Corporation's (BMC) ambitious plan to construct a coastal road connecting southern and northern ends of the city. The MSRDC has set a deadline of 2020 to complete the project with an estimated cost of Rs 7,500 crore. The eight-lane project will be built 900 metres into the sea. It was proposed earlier as the Western Express Highway and SV Road were saturated.



NEWS LETTER

Did you know?

WHO says India ranks among the world's worst for its polluted air. Out of the 20 most polluted cities in the world, 13 are in India

3. Solar-Powered Water Wheel Removes 350 Tons of Trash From Baltimore Harbor

They say you can't reinvent the wheel, but in May 2014, the Waterfront Partnership did just that. The Baltimore nonprofit installed "the world's first permanent water wheel trash interceptor" to clean up the city's polluted Inner Harbor

The wheel, which is powered by solar panels and water currents, has pulled a whole lot of trash from the harbor in less than two years. As recently reported by Waste Dive, the \$750,000 floating trash guzzler has removed more than 350 tons of litter from Baltimore's landmark and tourist attraction to date.



This includes 80,000 plastic bottles, more than 90,000 foam containers, 36,000 plastic shopping bags, 66,000 snack bags and 4 million cigarette butts.

Affectionately known as Mr. Trash Wheel, the floating contraption has the capability to collect 50,000 pounds of trash per day.

As EcoWatch reported, the wheel receives power from Jones Falls River's current near the harbor, which turns the wheel and lifts trash from the water into a dumpster barge. An array of 30 solar panels keeps the wheel turning when the water current isn't enough. Officials from Singapore, Rio and nearly 30 U.S. cities, including Philadelphia and Honolulu, have called Baltimore to learn about the wheel, Waste Dive reported.

"Our primary goal was to keep trash out of the Harbor and Chesapeake Bay and ultimately support an initiative to make the Harbor swimmable and fishable by 2020," Adam Lindquist, director of the Waterfront Partnership-launched Healthy Harbor Initiative, told Waste Dive.

Did you know?

Ever wondered why you feel hotter than it really is outside? The average heat index in India is increasing significantly per decade at the rate of 0.56°C and 0.32°C in summer and monsoon respectively, a recent research by India Meteorological Department and Indian Institute of Tropical Meteorology has found.

News Across the Globe

European union could require new homes to have electric car chargers

- Starting in 2019, all new or refurbished homes and apartment buildings in Europe will be required to have electric vehicle recharging stations built on the premises, according to a draft directive from the European Union.
- The new rule, to be published by the end of the year, is meant to help nations curb transportation-related greenhouse gas emissions, cut air pollution, and reach climate targets. Norway and the Netherlands, for example, both plan to phase out diesel engine vehicles by 2025

News Across the Globe

Sweden Is Recycling So Much Trash, It's Running Out...

- Sweden has transformed its waste-infrastructure program to accommodate the burning of trash. They have taken a process that used to be heavily pollutant and modernized it to create incredible amounts of energy with a low waste output. They've even figured out how to turn a lot of that polluting gas into biofuel.
- Currently, the Swedish population recycles 1.5 billion bottles and cans annually, which is an amazing amount, relative to the population of about 9.6 million (in 2013).
- There are 32 of these amazing reconversion plants, dedicated to turning trash into energy, throughout the country and they are actually at a point where they need to import trash to keep them going. They continue to import trash from the UK, Italy, Norway, and Ireland.



NEWS LETTER

Did you know?

Air pollution can alter the effectiveness of antibiotics and increases the potential of disease, new study reveals

- Researchers from the University of Leicester have for the first time discovered that bacteria that cause respiratory infections are directly affected by air pollution -- increasing the potential for infection and changing the effectiveness of antibiotic treatment. A major component of air pollution is black carbon, which is produced through the burning of fossil fuels such as diesel, biofuels, and biomass. The World Health Organization describes air pollution as the "largest single environmental health risk."
- Air pollution is thought to be responsible for at least 7 million deaths per year, which equates to an eighth of all global deaths.



Still, it will take great strides to make the harbor actually swimmable and fishable in less than five years. In June, the Waterfront Partnership and Blue Water Baltimore graded the harbor an overall "F" in their 2014 Healthy Harbor Report Card.

According to the Baltimore Biz Journal, the high level of fecal bacteria pollution, which comes from sewer overflows and poor stormwater infrastructure, makes the harbor "hundreds of times higher than what is considered safe for human contact."

The Report Card did however acknowledge projects that have improved water quality, with the water wheel being one of them.

"A number of projects are going on in Baltimore City and County that should result in better water quality scores," according to a press release. "Four of these projects, that are detailed in the report card, include the Blue Alleys project, the Water Wheel, expanded street sweeping and stream restoration."

4. Theme for WORLD WATER DAY 2017: "Why Waste Water?"

World Water Day is held annually on 22 March and the theme for the year 2017 by UN General Assembly is "Why Waste Water?"

- Water is the essential building block of life. But it is more than just essential to quench thirst or protect health; water is vital for creating jobs and supporting economic, social, and human development.
- Man is using water more than nature can recharge and polluting water faster than nature can recycle in rivers and lakes.
- The theme for 2017 is "Why Waste Water?" in support of UN Sustainable Development Goal 6 i.e. to ensure availability and sustainable management of water and sanitation for all by 2030.
- It includes a target to halve the proportion of untreated wastewater and increase water recycling and safe reuse of treated water.

Did you know?

Turning food waste into tires

- Tomorrow's tires could come from the farm as much as the factory.
- Researchers at The Ohio State University have discovered that food waste can partially replace the petroleum-based filler that has been used in manufacturing tires for more than a century.
- In tests, rubber made with the new fillers exceeds industrial standards for performance, which may ultimately open up new applications for rubber.

News Across the Globe

Mumbai's water quality index is bad as air quality index

- According to a survey by Maharashtra Pollution Control Board (MPCB) the water quality index of Mumbai is bad much like air quality index. According to the survey Mumbai's expensive real estate is surrounded by polluted water. Water quality index at Malabar Hill, Nariman Point, Gateway of India, Worli sea face, Juhu and towards the Bandra end of the Mithi River, showed high pollution as a result of a surge in domestic waste being deposited in these areas.
- Under the National Water Monitoring Programme of the Union environment ministry the MPCB carried out a survey in Maharashtra at 188 locations between March and August 2016. The water quality monitoring was carried out fewer than four parameters- pH, dissolved oxygen, biochemical oxygen demand fecal coliform.

News Across the Globe

Zero-emission bus for the future starts rolling in Kolkata

A climate-sensitive Scania future bus that has almost zero-emission while travelling long distances with its AC on was flagged off in Kolkata. This is the city's first hybrid bus that runs on ethanol or diesel or a blend of both. This bus will ply between Kolkata and Asansol regularly. Singh also rolled out free Wi-Fi in all long-distance buses. Significantly, this bus is designed and manufactured keeping in mind Indian cycle of seasons and road condition. Scania has a 400-million climatic wind tunnel at the Scania Technical Centre in Sodertalje, Sweden, enabling trucks and buses to be operated in simulated climatic conditions. The air channel system can produce snow and rain of various types and intensity, and the fan can simulate everything from a -35°C arctic wind to a 50°C desert storm. It can generate blazing hot sun to freezing snowstorms - all in a week. This helps the company to assess the impact of the changing environment on the bus and its impact on the environment.



NEWS LETTER

Did you know?

Water scarcity affects more than 40 per cent of the global population and is projected to rise. Over 1.7 billion people are currently living in river basins where water use exceeds recharge.



Did you know?

Approximately 70 per cent of all water abstracted from rivers, lakes and aquifers is used for irrigation.

News Across the Globe

Telecommuting

Once a perk of a small percentage of jobs, a growing number of companies have adopted telecommuting as a cost-effective, productivity-boosting business resource. Home-workers access the Internet and corporate intranets via affordable, high-bandwidth connections, communicate using low-cost calling plans or services such as Skype and Vonage, and collaborate with products such as Citrix GoToMyPC and GoToMeeting. In turn, telecommuting has reduced commuter traffic.

News Across the Globe

Virtualized Data Center

As vendors such as Microsoft and VMware compete for virtualization mindshare and dollars, businesses around the world continue to reduce their energy consumption and power bills by investing in this powerful technology. Some business customers saved an average of \$470,000 annually by using its virtualization software, said Microsoft. For its part approximately half of all organizations studied reduced both floor space and rent costs, as well as power consumption, enabling them to reap an average savings of 16%, or about \$700,000 a year for a 5 megawatt data center, according to VMware. The University of Miami, for example, slashed its energy costs by 80% after moving to a Microsoft-based virtualized data center, Microsoft said.

- This year, we focus on wastewater and ways to reduce and reuse as over 80% of all the wastewater from our homes, cities, industry and agriculture flows back to nature polluting the environment and losing valuable nutrients and other recoverable materials.
- We need to improve the collection and treatment of wastewater and safely reuse it. At the same time, we need to reduce the quantity and pollution load of wastewater we produce, to help protect the environment and our water resources.



- Reducing and safely treating and reusing wastewater, for example in agriculture and aquaculture, protects workers, farmers, consumers, promotes food security, health and wellbeing.
- In our homes, we can reuse grey water in our gardens and plots.
- In our cities, we can treat and reuse wastewater for green spaces.
- In industry and agriculture, we can treat and recycle discharge for things like cooling systems and irrigation.
- By exploiting this valuable resource, we will make the water cycle work better for every living thing.
- And we will help achieve the Sustainable Development Goal 6 target to halve the proportion of untreated wastewater and increase water recycling and safe reuse.



NEWS LETTER

Did you know?

Today, there are over 663 million people living without a safe water supply close to home, spending countless hours queuing or trekking to distant sources, and coping with the health impacts of using contaminated water.

5. SHEFROL Plant- A Sustainable and Viable Wastewater Treatment Solution

This Low-Cost Technology Is Helping a Puducherry Village Treat Its Wastewater, and It Uses Plants!

Based on an innovative technology designed by Professor S.A. Abbasi from Pondicherry University, Chinna Kalapet's low-cost wastewater treatment plant (called SHEFROL bioreactor) uses aquatic plants to absorb chemicals, pathogens and microorganisms from wastewater, making it fit for irrigation purposes.

A SHEFROL plant treats wastewater using two aquatic plants – four leaf clover, and water hyacinth – that act as natural agents of phytoremediation. Used for in-situ removal of contaminants in the environment, the term 'phytoremediation' comes from the Greek word for plants ('phyto').

In this innovative system, the wastewater flows as a thin sheet through the roots of select aquatic plants in specially designed trenches made from plastic sheets. As the plants grow, thriving on the waste, they continuously detoxify the water. As a result of the intensive 'water-root-microorganism' contact made in these units, over 80% of wastewater treatment is completed quickly (in about 2 hours)



as compared to 2 days or more needed in other systems.

The treated, turbidity-free water can then be used for irrigation in farms and gardens. No foul smell emanates from the water treatment plant, which doesn't use any kind of chemical. A simple system, it can be set up or dismantled easily as well as scaled up or scaled down as per need.

With the cost of the pilot plant Prof. Abbasi set up on campus coming to only Rs. 600, SHEFROL also proved to be an inexpensive technology. Encouraged by its easy and efficient way of functioning, Pondicherry University soon set up SHEFROL plants in several places, in and around the campus.

In 2011, supported financially by the Department of Biotechnology, SHEFROL's patent claim was registered and published in the Official Journal of The Patent Office, India. It remains undisputed.

In 2014, a SHEFROL plant was set up in Chinna Kalapet by PhD. student of Pondicherry University, Ashraf Bhat, as part of his thesis work with the guidance of Assistant Professor Tasneem Abbasi. Till then, water used to stagnate in the

Did you know?

2.4 billion people lack access to basic sanitation services, such as toilets or latrines.

News Across the Globe

Ocean Plastic Cleanup

Could this plastic-capturing platform clean up the ocean's trash?

Plastic is a major threat to marine life and marine ecosystems and also causes about \$13 billion in damages to marine ecosystems each year. To solve this daunting issue, Boyan Slat, a 20-year-old former aerospace engineering student, has an ambitious plan to clean half the Great Pacific Garbage Patch in a decade with his Ocean Cleanup, project. The project involves a static platform that passively corrals plastics as wind and ocean currents push debris through V-shaped booms. Floating filters then catch all the plastic off the top three meters of water where the concentration of plastic is the highest, while allowing fish and other marine life to pass under without getting caught. Some have described the project as the "world's first feasible concept to clean the oceans of plastic."

A related honorable mention goes to sportswear company Adidas for developing shoes and clothes made from trash that is recovered from the ocean. The sportswear giant will also phase out plastic bags in its 2,900 retail stores around the world.

News Across the Globe

Vertical Farming

The Vertical Harvest farm is a three-story hydroponic greenhouse on a 30 foot by 150 foot plot of land in Jackson, Wyoming. The company is capable of producing more than 37,000 pounds of greens, 4,400 pounds of herbs and 44,000 pounds of tomatoes. Photo Credit: Vertical Harvest

Food deserts, in which a whole neighborhood is far removed from grocery stores that sell healthy food, are a big issue in communities here and around the world. Due to the lack of fresh food, people eat fast food or pre-packaged goods that are inexpensive but high in fat, calories and sugar, and could lead to obesity, diabetes and heart disease.

However, sky-high farms are sprouting up around the world in places where traditional agriculture would have been impossible. In places such as perpetually wintry Jackson, Wyoming, forward-thinking planners are developing a three-story hydroponic greenhouse called The Vertical Harvest that can produce more than 37,000 pounds of greens, 4,400 pounds of herbs and 44,000 pounds of tomatoes a year. This means eating a nutritious and sustainable meal could be easy as looking up.

Not only can vertical farms defy any weather, they also adapt to disaster and can even help save lives, such as Caliber Biotherapeutics in Bryan, Texas that's growing tobacco-like plants in vertical farms to make new drugs and vaccines.



NEWS LETTER

Did you know?

More than 80 per cent of wastewater resulting from human activities is discharged into rivers or sea without any pollution removal.



Did you know?

2.6 billion people have gained access to improved drinking water sources since 1990, but 663 million people are still without.

News Across the Globe

Desalination

Drought solution? An invention from MIT and Jain Irrigation Systems can turn salt water into clean drinking water using solar energy.

With parts of the planet perilously low on fresh water, a team from the Massachusetts Institute of Technology and Jain Irrigation Systems have come up with a method of turning brackish water into drinking water using renewable energy. This solar-powered machine is able to pull salt out of water and further disinfect the water with ultraviolet rays, making it suitable for irrigation and drinking.

The technology recently won the top \$140,000 Desal Prize from the U.S. Department of Interior that recognizes innovators who create cost-effective, energy efficient and environmentally sustainable desalination technologies that can provide potable water for humans and water for crops in developing countries.

area where wastewater from the houses was let out, leading to the breeding of mosquitoes.

The SHEFROL plant was set up to remedy this civic problem. Every day, grey water (house-hold sewage) from 38 houses is fed into the plant that has a capacity of 10,000 litres. Costing only around Rs. 15,000, the plant consists of a sedimentation tank and channels created by sand bags placed in pits. This is covered by a non-permeable sheet that ensures wastewater does not seep into the ground as aquatic plants grow on top of it.

The low-maintenance plant (the villagers took just a day to learn how to operate and maintain it) takes only six hours to treat the wastewater, which is then used to irrigate a Casuarina plantation in the village.

The inventors of SHEFROL want more places in India to take up this robust, efficient and inexpensive green technology. They point out the fact that when compared to conventional wastewater treatment systems, SHEFROL has several advantages – a standard Sewage Treatment Plant costs around Rs. 50 lakh to set up and maintain whereas an eco-friendly SHEFROL plant of same capacity can be set up for as little as Rs. 20,000, with efficiency in both cases being almost similar!

News Across the Globe

Emission

Free Transportation

This solar-powered electric bike has solar cells on the wheels that send renewable energy directly to the bike's battery. On a full charge, it can go up to 30 mph. Photo Credit: Solar Bike

Is North America experiencing a biking renaissance? Americans are driving less, more cities are encouraging people to bike and electric bikes sales are soaring. We here at EcoWatch have seen a lot of amazing two-or-three-wheelers lately—from cargo bikes to this Segway with pedals—but one of our recent favorites is the "Solar Bike" created by Danish solar engineer Jesper Frausig that's powered by the clean, green energy of the sun.

Another cool electric bike we've seen is the "Adam" concept bike with a detachable battery/speakers/navigation unit/power outlet on the handlebar that works—and looks like—a perfectly normal bicycle when the battery pack is taken off.

For any suggestions,

Please write to: consult@3ekoolstof.com

Reach us at: 3e Koolstof Environmental Services Pvt. Ltd., #14, 1st Floor
Presidency Zone-1, Bendoorwell Circle, Mangaluru - 575 002. Karnataka, India.
www.3ekoolstof.com