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EDITORIAL

GOING GREEN: AN ECOFRIENDLY DRIVE FOR THE SUSTAINABLE FUTURE

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We enter our office building and go straight to the parking lot. What do we get to see there? Parking is not allowed in the basement. Just to increase vegetation. Not only this, there are preferred car parking areas for car pooling vehicles and recharge stations for alternative fuel vehicles. Now imagine this! Our office uses sensitive air conditioners that automatically alter the room temperature depending upon the number of people in the room. It also uses eco-friendly paint on walls. The structure of the building is in such a way that it uses 95 per cent natural light. Well, don't be surprised we are simply working in a green environment! Corporate India is waking up to the benefits of green architecture including lower running costs and a better brand image. Companies are increasingly acknowledging the benefits of green architecture not just from an environmental perspective, but even from a cost management angle.

The Green Revolution has begun

Different companies may have different reasons but the most important reason for a company to move towards a green architecture is its commitment towards conservation. Several corporate offices are designed to use less energy, water and natural resources and create less waste. They have state-of-art facilities as per guidelines of LEED (Leadership in Energy and Environmental Design) India Green Building Rating System for Construction. People are the most important assets of accompany and it is vital to provide them with a healthy work environment. This becomes more important to corporate, as they operate 27x7. Green environment provides occupants access to natural light and outside view which has a soothing effects on them. Productivity of the people with access to natural light can be about 15 per cent higher, experts feel. Corporate India has realised its employees need a healthy environment to be truly productive. Some campuses have economically designed workplaces and green areas to give employees a "world class environment".

WHY GREEN COLOUR REPRESENTS ENVIRONMENT?

The colour green is an off shoot of the old English verb 'growan' which means to grow. Green has traditionally been associated with hope and growth and also represents nature. Over a period of time, the colour has virtually become a synonym for environment.

'Cell' the sun, save the earth

Researchers have developed solar cells 20,000x as thin as human hair strand, which they believe will power the nanoscale gadgetry of tomorrow, according to a study carried out in Paris. From consumer devices to bioterrorism monitors to in-body diagnostic, this ultramicroscopic technology is poised to take centre stage in less than a decade from now. But finding the sources to power it has become a headache. Researchers and colleagues at Harvard University describe silicon nano wire they devised that can convert light into electrical energy. Virtually invisible to the eye, a single strand can crank out up to 200 picowatts. Two hundred billionths of a watt may not seem much, but at nanoscale it is enough to provide a steady output of electricity to run ultraflow power electronics. It is also clean, highly efficient and renewable.An individual nanoelectric device will consume very little power, but to do something interesting will require many interconnected devices and thus the power requirement, even for nanosystems, can be challenge, research says. Monitoring bioterrorism threats, for example, would require an entire array of nano sensors, nanoprocesors to analyse the signals received, and nano-transmitters to relay information to a centralised facility.

Oh! Zone, no-zone

An international team, led by AR Ravishankars of US National Oceanic and Atmospheric Administration (NOAA), has found that nitrous oxide (N_2O), commonly called laughing gas, has replaced chlorofluorocarbons (CFCs) as the potent destroyer of ozone in the earth's upper atmosphere. "The dramatic reduction in CFCs over the last 20 years is an environmental success story." But manmade nitrous oxide is the elephant on the room among ozone-depleting substances. "Nitrous oxide is among the most important ozone depleting gas. It will continue to be so unless something is done" Dr Ravishankara was quoted by the New Scientists as saying. The team calculated the "ozone depletion potential" of nitrous oxide to come to the conclusion it is threatening the ozone layer which shields earth from the sun's ultraviolet rays. Nitrous oxide is produced naturally when in soil or water is eaten by microbes.

Pay day: Clean up our planet

For the individual, going green means rethinking personal habits. For business houses, green sensibilities mean corporate social responsibilities in conservation. But how about a career in environment? A green job involves working with an enterprise that aims to reduce its own and other people's footprint. It could be an architect who designs energy-efficient buildings; a man engaged in sustainable farming; a designer selling organic cloths; a company that install water recycling systems. Though the term "green job" is a few years old, it's relatively new for India and has huge potential. Corporate feel that green jobs will be equivalent to the next IT revolution in India. The investment that is going into restructuring our economy toward sustainability will dwarf even the IT revolution.

FUTURE TENSE

- 2.7°C–4.3°C increase in temperature likely over the next 70 years
- 6% - 8% increase in rainfall likely by the next century

Research by the International Labour Organization (ILO) says the global market for environmental products and services will double from the existing $ 1.35 trillion by 2020.it also found there were 2.3 million potential jobs in the renewable energy sector. The ILO said that the "clean technology" was the third largest for venture capital in the US. What's more, green jobs could pay 20% more than any others, according to a recent report on employment trends in the US and UK. India is the third largest market for green goods and services, with a 6% share of the global market, according to a British government estimate. It is also felt that green technologies in India will attract Rs 7,60,000 crore in spending between 2008 and 2017. In India, green jobs mainly lie in managing natural resources such as water and land. In fact, each of the country's 600,000 villages will require a water and waste manager in the future. The alone means 1.2 crore green jobs. Most green companies provide sustainable energy solutions to households and enterprises.

Global warming: Heat's on

For most of us, the only effect the word "global warming" has to make us freeze over. But if decades of warming by environmentalists of a climate crises have fallen on deaf ears it's not really our fault but theirs. Activists fail to move the public, not because they are wrong about the problems but because the solutions they offer are unappealing to most people. They called for tightening belts and curbing appetites, turning down the thermostat and living lower on the food chain. They rejected technology, business and prosperity in favour of returning to a simpler way of life. No wonder the movement got so little traction. We trash the planet not because we are evil because our industrial systems leave us with no choice. Our high-rises, factories and farms, freeways and power plants were conceived before we had a clue how the planet works. They are primitive inventions that have been designed by people who didn't fully grasp the consequences of their actions. But as comprehension has grown, a market has emerged for more sensible alternatives.

Sun shines, city lights

Imagine a city where buildings use solar power to help generate their own energy, and waste less because they use power-saving lighting and are well-insulated, where public transport is affordable and efficient, where vehicles pollute less because they are powered by electricity or hydrogen. A green city is an ecologically healthy city. Currently no such city exists but in the near future it will be a reality. Today there's a tremendous need for environmental planning to be incorporated into all aspects of urban management. Creating environmentally friendly cities is a big challenge, but the biggest advantage is that the technologies and expertise already exists. Solar, wind and recycling technologies have come in in green buildings and green businesses, in urban environmental restoration projects, urban gardening, and in individuals using foot, bicycle and public modes of transportation in preference to the automobile.

Clean transport, energy-efficient buildings, safe sanitation and economical water use are possible now, not just in the future, often in a manner that is affordable for all. Many of today's cities are breeding grounds for pollution, poverty, disease and despair. But all that can change with careful planning and our cities can be flagships of sustainable development. Respiratory diseases are among the world's killers, and the developing world's growing megacities have the worst air quality. "Air pollution can also be tackled by

cleaning up vehicle exhausts and preventing the release of toxic fumes from burning plastic and other refuge by promoting appropriate waste collection and disposal".

Green is the 'reality'

As the real estate sector begins to show signs of a turn around, it is expected that green buildings will become a major area of focus, especially in the commercial segment. Considering that the construction and maintenance of buildings accounts for almost one-third of all energy consumed, green buildings can not only mitigate environmental damage, but also provide return on investment and improves working conditions for its inhabitants. Research has shown that the productivity of employees increases, when working in a green office, as compared to a regular office. A recent study conducted by the researchers has found that tenants in green building experience increased productivity and fewer sick days. In India too, developers have woken up to the potential that exists in the green building sector. India today, has the second largest stock of rated green buildings in the world, second only in the US. Even minor steps can go a long way in aiding conservation, besides making a work place space more productive. Lights play an important role when it comes to productivity. For instance, the light emitted from LED (light emitting diodes) sources, is soft and thus does not hurt the eyes, unlike other conventional lighting sources. As working hours get longer, small modifications like these, can contribute significantly towards enhancing productivity. The green concept should not be restricted merely to the interiors. Simple measures like planting trees in the premises will improve the quality of the air around the work space. Commercial premises today are also designed, keeping in mind the movement of the sun. So, when the sun is at its brightest the building's design would ensure that sunlight would fall where there is minimal human movement and the same time, provide an alternate source of lighting and also save power in the bargain.

A few home truths

How about a building as intelligent as we are? Bulbs switch off automatically sensing outside light, tap water stops flowing as soon as we withdraw our hands and the garden drip irrigation system waters plants according to their needs. This isn't science fiction. It's the green building.

Eco-consciousness

Green is a theme that is permeating green offices. Research says that promoting environmental consciousness in the office can help employees. Studies suggest employee productivity in natural lighting is better than in artificial lights. To ensure our office is green, proper certification has to be obtained. The US Green Building Council (GBC) awards internationally recognised certificates and The Energy Research Institute (TERI) has also just come up with Teri Griha. According to the Kyoto Protocol, a building's reduction in energy consumption can win it hard cash.

Powerful generation

The 50 per cent reduction in electricity consumption in green buildings can help solve a State's power woes. It has been widely acknowledged that green buildings can definitely help meet the power crisis in a Capital. The green theme thus embraces a wide variety of structures such as corporate offices, gadgets, houses and automobiles. These positive steps could definitely help the world move towards a sustainable future.

Why A Green House?

- Construction costs are recovered in 3-4 years as electricity and maintenance cost is cut by 405
- It does not produce construction waste as most of the material is recyclable
- A green house takes half the time to construct as compared to a conventional house
- It adds to the water balance. If harvested, rain water on one acre of land will save 75,000 litres of water.