

Global Union for Sustainability

Pune, Tuesday 4th June,
A union was created one year ago in Brazil during the Earth Summit Rio + 20 with a purpose to advance the theme of Sustainable Development. Its Asia Pacific forum was officially launched by TERRE Policy Centre, a think tank based in India. This union is called the Global Union for Sustainability (GUS). It is a movement of companies, organizations and individuals, who decide to publicly commit themselves to conduct basic, practical and measurable actions for the purpose of advancing sustainable development themes. TERRE have taken the role of coordinating the project in Asia Pacific. TERRE itself has committed in 2012 to promote spirit and objectives from GUS and participates in its diffusion. On 4th June, the eve of the World Environment Day, a group of children from Pune who were the first to take a pledge after a presentations of the best CSR practices from

two premier IT companies - Infosys and Persistent. Not only did these children commit to reduce their water consumption but more importantly they also set an example that there is no age bar to get involved and take action in favor of sustainable development. The pledges by children and their messages of hope for the future were followed by Number of groups & individuals who made their own commitments to act at their



level and become ambassador of sustainable development for the society around them.

For this event, TERRE started the preparatory efforts at the ground level by involving individuals. TERRE believes that people in their day to day actions have power to change things progressively. Now is time to think big and act bigger. We invite all companies and organization to join the movement!



From the Chairman's Desk



Energy Efficiency is Sixth Fuel

Never before I heard so intense reverberations on promotion of energy efficiency at global and local level. In USA-second largest consumer of energy in the world after China-a new Secretary of Energy Dr. Moniz, during his first public speech last month made it clear that energy efficiency will be the focal point during his tenure. He is convinced that energy efficiency standards of appliances and buildings and fuel efficiency of vehicles enacted over the last four years will save American families trillions of dollars over a few decades. In Paris few days back International Energy Agency released a report titled 'Redrawing the Climate-Energy map' which stated, that the world is not on track to limit the global temperature increase to 2 degrees Celsius. The current energy consumption trends, says the report, is more likely to result in a temperature increase of between 3.6 °C and 5.3 °C. The positive

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Energy Efficiency is Sixth Fuel

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message it gave was that there is a set of proven measures that could stop the growth in global energy-related CO₂ emissions by the end of this decade at no net economic cost. One of the priority actions it suggested was targeted energy efficiency

measures in buildings, industry and transport that could account for nearly half the emissions reduction in 2020, with the additional investment required being more than offset by reduced spending on fuel bills.

In New Delhi, India Energy Efficiency Services Limited (EESL), a Joint Venture of the power related companies of government of India stated that the overall size of energy efficiency market is estimated to be Rs. 74,000 crores. (About USD 15



billion) and that till now, only 5% of this market has been tapped. EESL is the first enterprise in South Asia working exclusively for implementation of energy efficiency in India. TERRE Policy Centre took the actions on energy efficiency at the grass root level.

There, USA's Princeton University scholars in Energy and Environment exchanged the experiences with and local Yashwantrao Chavan Institute of Science to take concrete steps for making more energy efficient campuses in its 50 high schools in rural area of state of Maharashtra. The schools had already done base line survey of their electricity consumption to take on the targets

to reduce the energy consumption.

The cost saving achieved due to reduced electricity consumption can be put to use for betterment of students welfare or additional measures like use of renewable energy.

The similar interaction was held between Princeton Energy and Climate Scholars (PECS) and College of Engineering Pune (COEP), one of the top twenty engineering colleges in India.

College campuses are the crucibles to mold precious metals called 'youth'. Injecting the best practices of making the campuses energy efficient is like adding the value to the molding and learning process. I would say that charity begins at home and the energy efficiency begins at campuses. Energy efficiency is like sixth fuel, which does not result into global warming like fossil fuel, does not carry risk of accidents like nuclear fuel, not costly like solar, does not displace people and harm the biodiversity like hydro, does not pollute air like bio-mass! More importantly, India does not have to import it. The sixth fuel pays the user!



Quick Question

According to the World Health Organization, which is the most polluted city in the world?

☐ Los Angeles, California

☐ Mexico city, Mexico

☐ New Delhi, India

☐ Shanghai, China

Last Issue's Answer

400 years long does it take a Styrofoam cup to decompose.

Quick Answer
Marisol, Spain

If you know the answer, send in your entry to us at terrepolicycentre@gmail.com



Energy efficient Campus & Exchange of Research on Energy & Environment

From the 28th May to the 2nd June 2013, seven PhD students from Princeton University USA, members of Princeton Energy and Climate Scholars (PECS), joined TERRE Policy Centre in Pune for the Energy Efficient Campuses Project. For one week they shared their researches and exchanged best sustainable practices followed by Princeton campus. While Satara and Pune students and professors have shared their own researches and practical examples about energy efficiency.

Princeton University campus have made exemplary efforts in the campus to make it sustainable. The university has implemented its Princeton's 2020 Sustainability Plan which follows three main lines: Green House Gases (GHG) Emissions, Resource conservation and Research, Education and Civil Engagement. Some of its goals are to decrease campus CO2 emissions and reduce waste by 40%. The University owns

around 3 300 fixe solar panels which provide 5.4 Mega Watt per year, i.e. 6% of energy uses in the Campus and the plans are being implement the share.

Annette Trieweler, Carole Dalin, Dan Li, Hang Deng, Manghui Diao, Tristen Hohman and Zhong Zheng are seven brilliant Princeton's PhD students who shared their research work. Robert Socolow Professor and Director of Princeton Environmental Institute and founder of PECS, through a pre-recorded message conveyed that such international and multi level collaboration would "encourage Indian students to create groups like PECS".

Brief reports of the two seminars :

1. Seminar in Yashwantrao Chavan Institute of Science (YCIS), Satara on the 30th May.

Rajendra Shende reminded in

his key note address stated that though Princeton students have access to many modern instruments for their research and though Princeton has many Nobel laureates, even in adverse conditions in rural India, students could innovate. Indian students think of going abroad but opportunities also exist in our country! There is opportunity to learn from scholars of Princeton University and at the same time they can also learn many things by coming to India and interacting with Indian students.

Dr. S. H. Pawar, Vice Chancellor of Shivaji University gave a presentation on the global energy crisis and particularly India's power shortage. He reminded that energy is "the first of the top 10 problems for next 50 years" while reiterating that many sustainable solutions are possible. He also explained that India has already taken one rule about

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Energy efficient Campus & Exchange of

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The presentations ranging from on Tropical carbon land sink, nitrogen fixation, and nutrient limitation with CO₂ fertilization (research project of A. Trieweler) to the Use of Biogas as a Fuel in Bhadurwadi village (presented by Khot Sagar Shankar).

S. S. Jalak, Dr B. T. Jadhav, Principal and Dr. A. B. Pawar Principal explained YCIS's efforts related to energy efficiency such as a survey for electricity consumption and plans for conservation in the campus. A data of ideal consumption in every building has been developed. Number of practical actions has been taken to reduce the energy consumption, like replacement of all old tube-lights of high voltages by energy efficient tube lights with electronic chokes, filament bulbs by CFL bulbs. Dr. A. Burungale, Principal, resolved to "reduce electricity consumption in YCIS campus by 10 percent".

YCIS, TERRE and Princeton Students will now develop the guidelines for energy efficient campus. Similar exchanges are being planned in Princeton University in near future.



2. Seminar in College of Engineering Pune (COEP) on Saturday 1st June

Prof. Anil Sahasrabudhe, Director of COEP received TERRE Policy Centre and Princeton's students for the second seminar on research exchanges and the energy efficient campus. Vinitaa Apte, President TERRE Policy Centre, introduced TERRE's work and mission.

The event was also the first activity under the Project on Smart Mini Grids by COEP under the World Bank. The presentations by the Princeton scholars generated intense discussion. An excellent presentation from Dr. Suryawanshi on the practical examples about hot water systems and solar panels set up in the campus.

The interaction is expected to lead to concerted actions to make energy efficient campus including smart grids.

Number of the month: June 2013

15.5 According to the International Labour Organisation (ILO) - which meets in Geneva until 20 June at the occasion of the 102nd International Labour Conference, representatives of governments, employers and trade unions in 185 countries - some 15.5 million children under 18 years old would work in the domestic sector, which a little more than half between 5 and 14 years.

Three-quarters of these children are girls (11.3 million aged 5 to 17 girls). The statistics, very difficult to collect, indicate that it is in Asia that we find the greatest number of these children, 113 million, and in Africa, 65 million. Around the world, children work in households, making the cleaning, cooking, gardening, collecting water, monitoring children or elderly care. The boundary between domestic labor, abuse or family context is often difficult to identify. "When performed at home, under reasonable conditions, and under the close supervision of these tasks can be an integral part of family life and personal development," write the authors of this report. Families are often the cause of child labor. Unable to pay for education, often in rural societies and believing there is a chance for their children to join an urban center, they entrust them to another branch of the family or an association. But at the end, it rarely goes as planned. Working hours exceed ten, twelve hours, no weekend, holiday or time off, salary, when it exists, is random, etc. To Jose Ramirez - Head of International Program on abolition of child labor - , if the situation is improving, especially with the adoption in 2011 of ILO Convention on domestic work, there is still much progress to be made.

Source: Report of the ILO: Ending child labor in domestic work and protecting young workers

When comparing an average house to an energy efficient house, it is possible to reduce annual energy bills up to 40 percent. Prudent homeowners should consider developing an energy conservation plan for their home. This is both environmentally friendly and economically sound action. The following can be the problem areas and small ways to make it into energy efficient.

Hot water

- 👉 Repair leaky faucets.
- 👉 Reduce the temperature setting of your water heater to warm. (120 F)
- 👉 Wash clothes in warm or cold water using the appropriate water level setting for the load.
- 👉 Install low flow showerheads.



Lighting

- 👉 Turn off lights when not in use.
- 👉 Use task lighting whenever possible instead of brightly lighting an entire room.
- 👉 Control outdoor lights with sensor timers so they stay off during the day.
- 👉 String LED lights during the holidays.



Cooling

- 👉 Open windows at night to bring in cool night air; close them during the day
- 👉 Shade west facing windows.
- 👉 Close your blinds and drapes during the day.
- 👉 Draw cool night air into the house with whole house fan.
- 👉 Install an evaporative cooler.
- 👉 Use air conditioner only when needed and install energy efficient models.
- 👉 Regularly change air conditioning system filters and clean the condenser.
- 👉 Plant deciduous shade trees on the west and south sides of your house.



For both heating and cooling purposes, caulking can result in major energy savings. The cracks and gaps around your home can be filled with caulk to prevent air from leaving or entering it. You can use caulk to close gaps along the baseboard, gaps around windows and doors, and cracks in your walls, corners, ceiling, and floor. The process is simple and inexpensive.

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