Climate Change Community

Community Update
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FROM THE RESOURCE PERSON

Dear Members,

Greetings of the festive season!!

We are delighted to present the 58th Edition of the Community Update, today.

We thank you for your continued cooperation and support to this endeavor of knowledge sharing amongst all of you.

The Action Groups that is presently active is on **Easy (not so easy) Solutions to Address Climate Change.** The Compendium is almost ready and will include:

- Material that is home based and easily understood and usable by people- to include basic details of where to get it from, cost, advantages, its impact on climate change etc.
- Simple indexing
- Already available material can be collated together.
- Simple solutions for mass utilization to be highlighted in the compendium.

The Compendium is getting the final touches for discussing the same at the stakeholders consultation later this month.

Please send us your comments and suggestions for the above action group. The work of the above action group is expected to conclude latest by 15th November, 2014. This extension was inevitable as the scope of the compendium had increased significantly.

We look forward to hearing from you at the earliest.

Thanks & best regards,
Ramesh Kumar Jalan
Resource Person & Moderator
Climate Change Community,
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New Delhi

DEVELOPMENT IN THE SECTOR

Initiative in capacity building launched by STADD : Innovation & Capacity Enhancement (ICE)

The complete article is available online at: http://stadd-ice.com/ .

STADD:ICE is an initiative promoted to strengthen capacities of professionals working in the field of international cooperation. Looking to the need to function in a collaborative mode across the globe, we aim to build human capacity of donors, international NGOs, government institutions, and corporates to help them achieve their potential.

As you know, we stand at crossroads where advocated management approaches are not effective in addressing key societal problems. Management approaches used currently such as Logical Framework Approaches (LFA), Project Cycle Management (PCM) and Results based Management (RbM)) have served as tools in planning efficiently for measurable results, also justifying investment conveniently. However they have neglected essential and challenging aspects of sustainable development such as change, transformation, and improvement in human capacity.

We believe coping with development challenges that emerge as a consequence of escalating globalisation, speedier communication, increasing complexities, and collapse of institutions and organisations; cannot be dealt with yesterday's solutions, standardised management procedures, or business as usual mind-set. What we need is a deep systemic change to be initiated and sustained by professionals at all levels of an organisation. They need to act as change makers who embody professionalism, are inspired by passion, and driven by purpose. Development thus requires a transformation of mind sets, attitudes, and organisational culture that can then lead to a transformation towards deep genuine collaboration gravitating around a shared vision.

Cooperation across traditional boundaries to initiate and sustain changes inspired by a human centred vision, and safeguarded by societal values has now assumed urgency

You will agree that co-operation enacted through professionals who have a diversity of perspectives, and are energized through commitment and purpose to co-create a better future hold the key. Our programmes provide new perspectives on leadership and management, and are designed to develop in people the capability to innovate continually, and expand their spectrum of competency. This is crucial for translating an ambitious vision into a daily organisational practice and is what has inspired us to design our learning solutions.

We believe humans have an innate ability to continually evolve by changing self, influencing communities and societies around them. The world is today experiencing changes that calls for responsible and fundamental actions to be undertaken by individuals, organisations, and societies as a whole.

As professionals working in the international cooperation space we are being challenged to develop our competency base to co-create innovative solutions for sustainable development. At the same time, cooperation across traditional boundaries to initiate and sustain changes inspired by a human centred vision, and safeguarded by societal values has now assumed urgency. This has made us realise that the subject of capacity development needs to shift gears. Driven by this conviction we feel the time has come for an independent professional intervention to build human capacity of development professionals engaged at bringing about societal change.

Our belief that investing in human capacity development never made more sense has led to development of our business focus that focuses on strengthening human capacity to enable transformations along sustainable lines. STADD:ICE has thus been promoted as a professional unit by capacity development professionals with many years of experience in the subject of human capacity development.

Landmark Initiatives for Energy Efficiency Launched

The complete article is available online at: http://pib.nic.in/newsite/erelease.aspx?relid=109253 .

Shri Dharmendra Pradhan, Minister of State (I/C) for Petroleum & Natural Gas has called for adopting energy efficient techniques for ensuring energy security of the nation. He was speaking at a function in New Delhi on 2nd September, 2014 after launching three landmark initiatives for Energy Efficiency.

These three initiatives are:

- **Design Guidelines for Energy Efficient Multi-Storey Residential Buildings**
- **Star Ratings for Diesel Generator Sets**
- **Star Ratings for Hospital Buildings**

The Minister said by adopting energy efficient equipment and techniques, valuable money, much needed for the nation's development and for providing basic amenities to the rural masses can be saved.

He said crude oil worth about Rs. Six lakh crore is imported annually and if the energy efficient techniques could bring down the consumption by even 10 %, it will usher in a big change.

Emphasising that conservation and efficiency is the only way forward, the Minister said that technology should be adopted in a befitting manner.

Speaking on the occasion, Secretary, Ministry of Power, Shri. P.K. Sinha said that the Design Guidelines are the first initiative of the government to bring energy efficiency into the design of homes.

He said that hospital buildings are highly energy intensive commercial buildings and the introduction of **star labels for hospital buildings provides both energy benchmarking and recognition for a fast - growing sector.**

He also said that these labels will help hospitals benchmark their own energy consumption and also identify opportunities for improvement.

The launch ceremony was attended by over 300 stakeholders in the energy sector, along with Shri. R.N.Choubey, Addl. Secretary, Ministry of Power, Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency and several officers of Ministries of Power, Coal, NRE, Petroleum & Natural Gas, Delhi Development Authority and Town & Country Planning Organisation.

Experts call for out-of-box climate solutions

The above article is available at : http://timesofindia.indiatimes.com/city/kolkata/Experts-call-for-out-of-box-climate-solutions/articleshow/41971231.cms .

India is a country that's most vulnerable to climate change due to its unique geographical position and burgeoning population, warned former Union environment minister Jairam Ramesh. Speaking at a seminar on 'Global Warming—Its Cause & Effect on Economy', Ramesh said development and high GDP growth can go hand in hand with lower carbon emissions and sustainable practices.

The former minister explained that with 60% of the country's population dependent on agriculture, failure of or poor monsoons severely affects the economy. "No other country is as dependent on the monsoons as India since 60% of our farmlands are rain-fed," he said. India's 7,000-km coastline along which 200 million people reside is vulnerable to rising sea levels. India's third vulnerability is the receding Himalayan glaciers. This affect the flow of North Indian rivers on which 1 billion people in North India, Bengal and Bangladesh are dependent," he said.

Most of India's mineral resources, which are required for the country's development, lie in forested belts and mining them would mean destroying more forests that act like a carbon sink. "This is India's fourth vulnerability," Ramesh said.

Ramesh and his fellow speakers — eminent physicist Bikash Sinha and environmentalist Kartikeya Sarabhai — at the seminar organized by the Research Center for East & North Eastern Regional Studies, Kolkata (CENERS-K) at the International Management Institute strongly underlined the need for India to take immediate action on addressing environmental issues, reducing its carbon footprint and evolving a sustainable development model. Kartikeya, the son of famous scientist Vikram Sarabhai, said sustainable development holds the key to India's secure future.

Referring to Gandhi's philosophy, Sarabhai said contrary to general opinion, Gandhiji never advocated frugality but taking smart decisions that would safeguard India's environment.

Bikash Sinha, too, said that India has to evolve its own development model and not follow America. "We have to believe that climate change poses a huge challenge to us. Unfortunately, most people don't believe this," he lamented. Sinha warned that Bengal was in a "precarious situation due to rise in sea levels caused by global warming".

Sinha said the challenges posed by climate change necessitate out-of-the box solutions. "For instance, harnessing solar energy in just the Sahara desert could meet the energy needs of the whole world. Harnessing geothermal energy is an urgent action area and the ongoing prospecting at Bakreshwar holds great hope, he added. The physicist rued the damage caused to environment over the decades in the name of development and said that technology now owes an apology to ecology.

India could emulate Germany that made an energy transition a decade ago. We have to find a way to generate more electricity to meet our energy needs without putting more carbon dioxide in the air. We have to harness wind, solar and nuclear energy.

Not going down the path of sustainable development is no longer an option before us. This is the time for India to make a bold departure from its past. We can have 8% growth with lower carbon dioxide emissions.

Solar ammonia process may spur fertiliser revolution

The above article is available at : http://www.scidev.net/global/agriculture/news/solar-ammonia-process-may-spur-fertiliser-revolution.html .

"STEP ammonia does not need connection to the electrical grid and hence is suitable for poor and rural areas which have less developed infrastructure."

Low-energy ways to make ammonia — a vital constituent of fertilizer — could enable developing countries to manufacture their own fertilizer instead of importing it.

One such technology published last month (8 August) in *Science* produces the chemical directly from air, steam and sunlight, and could offer an alternative to the conventional Haber-Bosch method. This relies on high temperatures and pressures, and so requires vast amounts of energy: globally it consumes more than 1 per cent of total energy generated each year.

The new method, developed by Stuart Licht of George Washington University in the United States and his colleagues, makes ammonia by bubbling steam into a cheap molten salt mixed with nanoscale iron particles, and passing an electric current through.

Core to the team's concept is 'Solar Thermal Electrochemical Production' (STEP), a process where sunlight is harvested and used to help power chemical reactions, reducing the need for energy input from other sources. Licht's team has also developed methods for making cement and treating water using STEP.

Although their published ammonia production method uses mains electricity, solar energy can in principle provide both the electrical current and heat required.

"STEP ammonia does not need connection to the electrical grid and hence is suitable for poor and rural areas which have less developed infrastructure," Licht says. He adds that any STEP process could be used on a small scale.

Paul Makepeace, a fertilizer specialist at the International Fertilizer Development Center in Nairobi, Kenya, says such an approach "is certainly of interest" in Sub-Saharan Africa.

Currently Nigeria is the only country in the region that makes ammonia, and it does this using the Haber-Bosch process.

"This method's use and development will depend on its competitive advantage and the ability to deliver manufacturing capacity to African countries where fertiliser is a significant foreign exchange-spend," says Makepeace.

But he adds that the STEP process "seems like it has a long way to go" to reach commercialisation. Licht concedes that his group is "not geared towards technology spin-out", and says he hopes industry or government will fill that role.

Indeed, another electrolytic approach to making ammonia from air and water is due to be commercialized this year, says Makepeace. NHThree, a company based in Richland, United States, is building an ammonia synthesis plant for Bolivia's Royal Silver Company.

NHThree heats steam to form hydrogen ions and applies an electrical current to drive them across a membrane to react with nitrogen from the air to form ammonia. The company's method does not directly exploit solar energy, but still uses 30 per cent less energy than the Haber-Bosch method, according to its website.

NHThree's founder Jason Ganley says the method "will be best suited to sites with plentiful cheap, or off-cycle, renewable power".

This is because to compete with current technologies it will need very low energy prices, but "there may be opportunities present in Africa such as Ethiopia's Grand Renaissance Dam, that make this technology viable," says Makepeace.

The important thing is to keep our eyes open to this technology," he adds.

J & K floods grim reminder of climate change

The article is available at : http://www.thehindu.com/news/national/climate-change-may-have-caused-kashmir-floods-centre-for-science-and-environment/article6397920.ece.

Unprecedented rains, unplanned urbanisation are behind the J&K floods, the Delhi-based environment research and advocacy organisation said.

The worst floods in Jammu and Kashmir in the past 60 years and the subsequent devastation are due to a combination of unprecedented and intense rain, mismanagement, unplanned urbanisation and a lack of preparedness, Sunita Narain, director-general, Centre for Science and Environment (CSE), said on Wednesday.

A CSE analysis showed the floods were a manifestation of an extreme weather event linked to climate change. Ms. Narain said the changing rainfall pattern in India was part of extreme events which followed a trend. She called for a national action plan to forecast floods.

In the IPCC fifth assessment report, it said the intensity of rainfall in India would increase. A study by B.N. Goswami of the Indian Institute of Tropical Meteorology in 2006 had predicted changes in rainfall across India and especially over the Himalayan range, which would have a high impact in the region, apart from the west coast and central India.

The study of data between 1950 and 2000 showed that the incidence of heavy and very heavy rainfall (more than 100 mm and 150 mm/ a day) had increased and moderate rainfall decreased.

Jammu and Kashmir does not have a flood forecasting system, not even a separate disaster management plan, said Ms Narain. In 2004, a remote sensing data-based study of Jammu and Kashmir had shown that 55 per cent of wetlands, drainage channels and water bodies had been encroached upon. Ms Narain said Jammu and Kashmir had an intricate system of water management. The lake areas had diminished, the holding capacity of many water bodies had gone down, and houses were built in places they should never have been, she pointed out.

The CSE called for more research on environment, and a shift from denial to internalising climate change adaptation.

Science: What can it do for the Sustainable Development Goals?

Further details are available at: http://www.scidev.net/global/mdgs/feature/what-can-science-do-for-the-sustainable-development-goals.html .

The Sustainable Development Goals (SDGs) are taking shape, with the zero draft of 17 proposed goals published last month and now being revised for the UN General Assembly this September. This is part of preparations for the post-2015 development agenda that will follow the expiration of the Millennium Development Goals (MDGs) next year.

Scientists are playing an active role in drafting the SDGs, through, for example, the Sustainable Development Solutions Network and the UN's science advisory board.

But not everyone thinks the SDGs are as specific as they should be on improving science capacity and recognising its importance to such goals. Here, for example, we hear that science needs to be unpacked for ordinary people to use it, and that research on climate change and micronutrients needs to be put on the goals' agenda.

One of the big issues is whether or not climate change should be included in the SDGs, or ignored completely. The MDGs were focused on poverty alleviation, and some thought that climate change was extraneous to what they were trying to do. But the strength of climate science is now at a point where the environmental dimension is coming into the picture.

Fighting poverty is interlinked with fighting climate change and that is what the sustainable development — not just development goals — speak to.

There have been two types of resistance to including the urgency of climate change mitigation in the SDGs: there is already a framework to tackle it, and/or it would just be too complicated to take into account. These arguments are still being fought, but it is healthy to at least have this debate, as the scientific argument needs to be made.

In the SDGs, there will be a focus on universal actions — also requiring richer nations to do more to curtail overconsumption and pollution at home. This is a significant paradigm shift regardless of what we achieve in the end.

The scientific research shows that the poorest countries are the most vulnerable to the effects of climate change, so this double hit of poverty and vulnerability needs to be factored into the goals that are set.

Research has a lot to offer the SDGs, but it needs to be translated into practical, actionable activities and it is this bridging between research, policymaking and practice that is so critical.

The real hurdle for research is to go beyond communication in journals to make a difference to the ultimate beneficiaries: the citizens of each country. Meeting the challenges of uptake requires packaging and communicating research findings so that they are accessible to a lay audience, including policymakers.

Developing world scientists should play a critical role at the design stage of research priorities. Too often research projects are formulated in Europe and experts from the global South are asked to join. This is the wrong way to go about it — it should be a joint endeavour from the start.

These researchers can bring to the table a better understanding and deeper insight into the problems and challenges in their own countries.

While political process drives the decisions on which health issues should be in the SDGs, science implicitly contributes to the debates in terms of what works, and what doesn't, in the implementation of interventions to achieve health improvements.

A lack of implementation capacity, good governance, political commitment and health system readiness are major bottlenecks to implementing improvements in health in low- and middle-income countries.

These countries are mostly in favour of health system strengthening and universal access to services by all people based on the scientific evidence that failing health systems — including a

lack of funding support, financial access to care, health workers and infrastructure for service delivery, especially at the primary healthcare level — are the main bottlenecks to not being able to achieve health-related MDGs, notably in Sub-Saharan African countries, such as Sudan and Zambia.

Science could have contributed more to the evidence on why some countries are not achieving health-related MDGs, generating lessons to avoid mistakes in achieving health improvements in the post-2015 SDGs agenda.

The SDGs are taking a much broader approach to health, for example, than the MDGs, and this has been down to the UN Open Working Group on SDGs inviting many of the world's leading scientists to speak to the negotiators about the challenges.

The medical profession, among others, have been very effective at consolidating decades of careful scientific research and disseminating it widely in a way that reaches the policymaker community.

When it comes to the implementation stage of the goals, local scientific knowledge will become very important. It hasn't yet been included in a systematic manner in the negotiations.

The SDGs must apply to the world as a whole, yet their implementation is dependent on the specifics of local knowledge and conditions. There needs to be problem-solving at regional, national and international levels that takes this into account.

But, science should have — and needs to — do more on the 'so what?' question. So, for example, many policymakers accept that climate change is a real challenge, but they struggle to understand what they should do about it. Those are the questions that haven't really been asked in most countries, rich and poor.

The solutions side of things is where science really needs to get more engaged, as there is much less evidence on solutions and how to implement the systematic transformations that are needed.

Science tells us it is not enough to reduce hunger by half — one of the MDGs — we need new goals targeting the availability of the right foods, with essential micronutrients, not just calories. We have put the emphasis on eliminating hunger by producing enough cereals that provide calories — energy.

This is a good starting point, but it is clearly insufficient, as we need not just more food, but better quality food to achieve healthy growth. We know that micronutrient malnutrition prevents children from growing, and affects their immune system and brain development.

Preventing death is not enough. Until we cover the basic needs for healthy growth and brain development, we are condemning millions of children to frequent infections, poor growth and a life of poverty.

Yet, it is important to note that local, quality food production systems should be an aspiration, as otherwise you are dependent on supplying vitamin capsules or fortifying the food — which is an expensive and unsustainable option.

Scientists know that if things go wrong in the early years it is very hard to rectify, but unless you have the appropriate delivery systems and the basic infrastructure at a national level this can be difficult to achieve.

The linkage between improved agricultural food systems and the alleviation of extreme poverty, hunger and malnutrition in the developing world is increasingly recognised and reflected in the internationally proposed SDGs.

Science and innovation are of critical importance to address the challenges of increasing agricultural productivity, making food healthier, improving the quality of diets and conserving biodiversity. Enormous advances have been made in most of the basic sciences underpinning agriculture.

Progress over the horizon of the SDGs will require a renewed focus on the 'science of delivery', particularly the efficient and rapid translation of scientific discoveries to deliver positive impact at the scale of millions of people.

The critical role that CGIAR will play in the future is to facilitate the application of advanced technologies to address the needs of subsistence and poor farmers in developing countries who are most in need. This is because there are unique challenges facing the delivery of technology to poor farmers include including the development and deployment of low-cost and robust technologies.

Success in the global developmental agenda over the horizon of the SDGs and beyond will require enhanced agri-food system performance in parts of the world that have the least scientific capacity to achieve it on their own, and enhanced agri-food system performance for sectors of the rural population, women in particular, who have not had full or fair access to science-based innovations.

Looking back at the headway made on health-related MDGs 4, 5 and 6, which focus on child deaths, maternal health, HIV/AIDS, malaria as well as other diseases, little did we know how much of this progress would be fundamentally dependent on scientific advances. Today, that pessimism has been replaced by great optimism, thanks to scientific progress and new technological innovations.

A simple, quick and cheap diagnostic for HIV infection, together with readily available and affordable antiretrovirals, have turned the situation around. In 2012, an estimated 63 per cent of all HIV-positive pregnant women in the world received antiretroviral prophylaxis or treatment. In some parts of the world, mother-to-child transmission of HIV has been virtually eliminated.

As we ponder the development goals needed to reach a sustainable future for our planet, the potential role of science should not be relegated to backroom and corridor discussions, but should be an integral part of what will be needed to achieve the SDGs.

Good News On The Recovery Of Earth's Ozone Layer

The complete article is available at: http://www.countercurrents.org/nazareth140914.htm .

For the common man who may not be familiar with the word Ozone ---lets first understand what is Ozone? According to the WMO (World Meteorological Organization) the Ozone is a special form of oxygen with the chemical formula O3. And the oxygen we breathe which is totally vital to life on earth is O2.

Ozone constitutes a very small part of our atmosphere, but its presence is nevertheless vital to human well-being. Most ozone resides high up in the atmosphere, between 10 and 40km above

Earth's surface. This region is called the stratosphere and it contains about 90% of all the ozone in the atmosphere.

So, why do we humans need to care about atmospheric ozone ?The Ozone in the stratosphere absorbs some of the Sun's biologically harmful ultraviolet radiation. Because of this beneficial role, stratospheric ozone is considered "good" ozone. In contrast, excess ozone on the Earth's surface that is formed from pollutants is considered "bad" ozone because it can be harmful to humans, plants, and animals. The ozone that occurs naturally near the surface and in the lower atmosphere is also beneficial because ozone helps remove pollutants from the atmosphere.

A decade or so ago the world was woken up rudely to the fact that the earth's protective ozone layer had developed a huge hole through which harmful cancer causing UV rays were being emitted. Scientists sent alarm bells ringing and countries took steps to help reduce the problem and try to recover or repair the hole. Thankfully the Assessment for Decision-Makers, a summary document of the Scientific Assessment of Ozone Depletion 2014, a new assessment by 300 scientists, is being published by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO), and is the first comprehensive update in four years on the issue. The document says that the ozone layer is well on track to recovery in the next few decades thanks to concerted international action against ozone depleting substances.

The stratospheric ozone layer, a fragile shield of gas, protects the Earth from harmful ultraviolet rays of the sun. Without the Montreal Protocol and associated agreements, atmospheric levels of ozone depleting substances could have increased tenfold by 2050. **According to global models, the Protocol will have prevented 2 million cases of skin cancer annually by 2030, averted damage to human eyes and immune systems, and protected wildlife and agriculture, according to UNEP.**

"There are positive indications that the ozone layer is on track to recovery towards the middle of the century. The Montreal Protocol – one of the world's most successful environmental treaties – has protected the stratospheric ozone layer and avoided enhanced UV radiation reaching the earth's surface," said UN Under-Secretary-General and UNEP Executive Director Achim Steiner.

"However, the challenges that we face are still huge. The success of the Montreal Protocol should encourage further action not only on the protection and recovery of the ozone layer but also on climate. On September 23, the UN Secretary General will host Heads of State in New York in an effort to catalyse global action on climate. The Montreal Protocol community, with its tangible achievements, is in a position to provide strong evidence that global cooperation and concerted action are the key ingredients to secure the protection of our global commons," he added.

"International action on the ozone layer is a major environmental success story," said WMO Secretary-General Michel Jarraud. "This should encourage us to display the same level of urgency and unity to tackle the even greater challenge of climate change. This latest assessment provides solid science to policy-makers about the intricate relationship between ozone and climate and the need for mutually-supportive measures to protect life on earth for future generations."

The key findings of the report are given in brief below:

- Under full compliance with the Montreal Protocol, the ozone layer is expected to recover to 1980 benchmark levels- the time before significant ozone layer depletion- before the middle of the century in mid-latitudes and the Arctic, and somewhat later in the Antarctic.

- The Montreal Protocol and associated agreements have led to decreases in the atmospheric abundance of gases, such as CFCs (chlorofluorocarbons) and halons, once used in products

such as refrigerators, spray cans, insulation foam and fire suppression.

- Total column ozone declined over most of the globe during the 1980s and early 1990s. It has remained relatively unchanged since 2000, but there are recent indications of its future recovery.

- The Antarctic ozone hole continues to occur each spring and it is expected to continue occurring for the better part of this century given that ozone depleting substances persist in the atmosphere, even though their emissions have ceased.

- The Arctic stratosphere in winter/spring 2011 was particularly cold, which led to large ozone depletion as expected under these conditions.

- The climate benefits of the Montreal Protocol could be significantly offset by projected emissions of HFCs (hydrofluorocarbons) used to replace ozone depleting substances.

- The Montreal Protocol has made large contributions toward reducing global greenhouse gas emissions. In 1987, ozone-depleting substances contributed about 10 gigatonnes CO2-equivalent emissions per year. The Montreal Protocol has now reduced these emissions by more than 90 per cent. This decrease is about five times larger than the annual emissions reduction target for the first commitment period (2008–2012) of the Kyoto Protocol on climate change.

- Hydrofluorocarbons (HFCs) do not harm the ozone layer but many of them are potent greenhouse gases. They currently contribute about 0.5 gigatonnes of CO2-equivalent emissions per year. These emissions are growing at a rate of about 7 per cent per year. Left unabated, they can be expected to contribute very significantly to climate change in the next decades.
- Replacements of the current mix of high-GWP HFCs with alternative compounds with low GWPs or not-in-kind technologies would limit this potential problem.

- The annual Antarctic ozone hole has caused significant changes in Southern Hemisphere surface climate in the summer.

- Ozone depletion has contributed to cooling of the lower stratosphere and this is very likely the dominant cause of observed changes in Southern Hemisphere summertime circulation over recent decades, with associated impacts on surface temperature, precipitation, and the oceans.

- In the Northern Hemisphere, where the ozone depletion is smaller, there is no strong link between stratospheric ozone depletion and tropospheric climate.

- CO2, Nitrous Oxide and Methane will have an increasing influence on the ozone layer

- What happens to the ozone layer in the second half of the 21st century will largely depend on concentrations of CO2, methane and nitrous oxide – the three main long-lived greenhouse gases in the atmosphere. Overall, CO2 and methane tend to increase global ozone levels. By contrast, nitrous oxide, a by-product of food production, is both a powerful greenhouse gas and an ozone depleting gas, and is likely to become more important in future ozone depletion.

The Scientific Assessment Panel is expected to present the key findings of the new report at the annual Meeting of the Parties to the Montreal Protocol, to be held in Paris in November 2014. The

full body of the report will be issued in early 2015.

The Scientific Assessment of Ozone Depletion 2014 was prepared and reviewed by 282 scientists from 36 countries (**Argentina, Australia, Austria, Belgium, Botswana, Brazil, Canada, People's Republic of China, Comoros, Costa Rica, Cuba, Czech Republic, Denmark, Finland, France, Germany, Greece, India, Israel, Italy, Japan, Korea, Malaysia, New Zealand, Norway, Poland, Russia, South Africa, Spain, Sweden, Switzerland, The Netherlands, Togo, United Kingdom, United States of America, Zimbabwe.)**

Announcements

Media workshop on climate change adaptation in Sikkim from November 17 to 19

The Centre for Environment Education (CEE) and The Third Pole (TTP) – under the Indian Himalayas Climate Adaptation Programme (IHCAP) supported by Climate Change and Development Division (CCD-SDC) of the Embassy of Switzerland in India – are jointly organizing the second media workshop on adaptation to climate change in the Indian Himalayan Region. **It will be held in Sikkim November 17-19, 2014.**

Senior thematic experts and policymakers will make presentations to journalists and interact with them. The workshop will include a field trip to facilitate ground-level reportage of adaptation to climate change. This workshop will focus on climate change effects and adaptation in the eastern Himalayas.

Any journalist who wishes to take part should send a mail to joydeep.gupta@thethirdpole.net definitely before **September 30, 2014**, accompanied by two relevant clips or links to the stories.

Journalists from print, TV, online & radio are all welcome to apply.Participants reporting on ecological and climate change issues in the eastern Himalayas from **North-East, West Bengal, Bihar, Jharkhand and Orissa will be given preference.**

The organizers will arrange travel, accommodation and food for the selected journalists.

The third and fourth workshops in the series will be held in 2015.

Deconstructing Carbon before UN Climate Summit

The article is available at:
http://www.footprintnetwork.org/en/index.php/GFN/blog/deconstructing_carbon_before_un_climate_summit#sthash.aSRTcf5v.dpuf .

Charged up by activists mobilizing for the UN Climate Summit in New York next week, we delved into our carbon Footprint data to see if we could shed light on the very intractable debates swirling around nations' responsibilities for reducing emissions. The intrepid research analyst David Zimmerman found while EU countries toot their horns about declining emissions the picture is not so simple.

Here's what David discovered after creating an index starting 1993: EU emissions are actually increasing (except for a 2009 recession dip) when you account for all emissions resulting from consumption by EU residents. The measurement includes goods produced outside the EU but

ultimately consumed inside its borders, and excludes goods produced within the EU that are consumed outside its borders.

Nations Emissions
Not surprisingly, domestic emissions in countries like the US, the UK, and Switzerland were actually lower than the overall carbon emissions globally associated with the products their citizens consume –because they have large Ecological Footprints and consume many goods produced beyond their borders.

It's in each nation's self-interest to establish policies to reduce its citizens' carbon and Ecological Footprints. The alternative is more political, economic, and climate instability and uncertainty.

That's why Global Footprint Network President Mathis Wackernagel is supporting two initiatives related to the UN Climate Summit in New York.

Dr. Wackernagel is a founding signatory to a letter asking world leaders to take urgent action on climate change to limit global warming to less than 2 degrees centigrade. He also has joined a coalition of countries, companies, NGOs and indigenous peoples organizations in endorsing the New York Declaration of Forests, which calls for halving the rate of loss of natural forests globally by 2020 and striving to end forest loss by 2030.

Climate Finance for Cities and Buildings: a Handbook for Local Governments

The objectives of this Handbook are to help raise awareness among local stakeholders regarding climate finance and its potential in the built environment, given the important role that this sector has to play in climate change mitigation. It also aims to help local governments to use climate finance mechanisms as an opportunity to increase the energy performance of their district whilst creating additional revenue, improve resource efficiency and support their wider climate strategies.

This Handbook can be accessed online at: www.unep.org/publications .

The importance of cities in climate policy refers to the simple reality that they house the majority of the world's population and associated human activities, and that they account for approximately two-thirds of global energy use and over 75% of energy-related greenhouse gas (GHG) emissions. This is also true for the buildings sector, which generates up to 30% of all energy related GHGs. At the same time, cities as well as buildings have a unique and significant emission reduction potential but, in both cases, they often lack the knowledge and financial resources necessary to act.

In the international arena, climate finance has become an important means to support GHG emissions mitigation projects and programmes. This being said, existing mechanisms do not specifically target local authorities, cities or building stakeholders and as a result there is a great disparity between the low proportion of climate finance projects and programmes focused on cities and buildings, compared to their GHG mitigation potential.

There is a need to adapt existing and developing mechanisms to suit the complex built environment and urban context, whilst building capacity to facilitate the inclusion of climate finance as a means to supporting cities' climate change strategies. To support this, guidance is needed to help local policy makers and city managers navigate through the key climate finance mechanisms and to understand their relevance to cities and buildings, as part of wider GHG

mitigation strategies and a means to access finance to support these.

In response, this Handbook has been prepared to provide local governments and other interested parties with an overview of climate finance mechanisms, both existing and in development, and their relevance to the built environment and the urban context.

The objectives of this Handbook are to help raise awareness among local stakeholders regarding climate finance and its potential in the built environment, given the important role that this sector has to play in climate change mitigation. It also aims to help local governments to use climate finance mechanisms as an opportunity to increase the energy performance of their district whilst creating additional revenue, improve resource efficiency and support their wider climate strategies.

The characteristics of carbon and climate finance are discussed, which, defined very broadly concern the transfer of (usually international) finance and/or other resources from developed to developing countries for climate-related actions. For simplicity, the term 'climate finance' is used throughout this Handbook, to encompass both carbon finance projects and broader climate finance programmes.

It is important to recognize that climate finance is not just about GHG emissions. It should be considered as just part of wider climate change mitigation and adaptation strategies, and as a means to fund both GHG emissions reductions and important benefits for quality of life and sustainable development. So cities should be interested in climate finance not just from a climate change perspective but also as an enabling factor for delivering key benefits for their population.

The International context to this Handbook includes recent negotiations under the United Nations Framework Convention on Climate Change (UNFCCC), with ambitions to reach a new, legally binding agreement by 2015 for meaningful GHG emission reductions, but against a backdrop of slow progress to date. The role that cities have to play is increasingly being recognized at the international level, and some cities are already showing leadership above and beyond that of national commitments.

The characteristics of cities and buildings from a climate change perspective give rise to both challenges and opportunities. Whilst every city is unique and has a difference GHG emissions profile, the main contributing sectors are generally buildings, transport, waste, industry and electricity production. Opportunities for reducing GHG emissions from these sectors often align with broader sustainable development goals, whether through improved living conditions, access to clean energy, a better transport service or more efficient waste management.

Key challenges for mitigation range from physical ones – the sheer complexity and diversity of the buildings sector for example – to institutional barriers, such as a lack of integration between national targets and local policy, funding or technical expertise. Accurately measuring GHG emissions (and other indicators) can also pose significant challenges, particularly where limited data is available and a lack of consistency in approaches hinders comparisons.

Considerable efforts are however underway to provide the tools and methodologies to set robust baselines, track progress and provide the information necessary to engage in climate finance mechanisms. Indeed, 'Measurement, Reporting and Verification' (MRV) of GHG mitigation activities is a crucial aspect of climate finance, to ensure the transparency of funding received, of the claimed emissions reductions and to demonstrate that they are additional to what would have been achieved otherwise.

Key principles of MRV are set out in this Handbook along with particular considerations for the

urban context (such as conducting a citywide GHG inventory), whilst signposting readers onto more detailed guidance linked to specific climate finance mechanisms.

The key carbon and climate finance mechanisms are described, and their relevance to the urban context considered - beginning with an overview of the Clean Development Mechanism (CDM) in its various forms. The order in which the various mechanisms are addressed reflects a transition that is underway to move from the established individual, large scale CDM projects, towards small scale projects encouraging more widespread participation and which can now be brought together under one umbrella Programme of Activities (PoA) – and potentially on a multi-sector citywide scale.

The involvement of developing countries is being encouraged more strongly through Nationally Appropriate Mitigation Actions (NAMAs), in which carbon finance may be integrated with climate change policy and targets and broader sustainable development goals. Discussions are also underway for a New Market-based Mechanism (NMM) – to be determined in the coming year, to encourage GHG mitigation across broad sectors of the economy in a bid to increase its cost effectiveness and uptake in both developed and developing countries.

Relevant case studies are show-cased throughout this document, in order to demonstrate and share experience from implementing GHG mitigation projects using climate finance and developing associated tools from around the world.

Cleaning the Ganga River : What Needs To Be Done Differently

The complete article is available online at: http://www.epw.in/commentary/cleaning-ganga-river.html .

The central government has made cleaning of River Ganga one of its foremost priorities. A former administrator involved with the Ganga Action Plan suggests that a bottoms-up approach of involving local communities and stakeholders in the regeneration of the river would be the only possible way in which the new initiative will avoid the failures of the past.

Past efforts at cleaning the Ganga River had invariably received political support at the highest level in the central government, but the results were meagre compared to the funds and administrative time invested. The author was responsible for managing the West Bengal part of the Ganga Action Plan (GAP) in the late 1980s, and so these observations reflect the benefit of 20/20 hindsight, as well as having been engaged in different aspects of water management in several parts of the world.

The key lesson learned from the past and ongoing World Bank financed effort is quite stark: systemic factors, perpetuated by two centuries of state public works departments' (PWD) practices of "projectising" civil engineering solutions cannot be reconciled with the desired outcome of a clean and well maintained, mixed land use riverfront development which turbocharges local urban economies by galvanising civic action to clean the river.

Mind the GAP

The GAP was conceived during Prime Minister Rajiv Gandhi's term in office with three components of central government funds to Uttar Pradesh, Bihar and West Bengal. The largest and most capital-intensive allocation ended up supporting investments in sewer lines, drains and in rehabilitating sewage treatment plants (STPs) along the river. The second component was to build crematoria in the large urban centres, so that the ancient practices of cremating bodies using firewood (but often in practice dumped half burned into the river) could be replaced with

more sanitary and respectful disposal of the dead. The third component was to beautify riverfronts or "ghats", many of which had great historic and cultural significance, but had over the centuries been reduced to unsanitary bathing and washing spots for pilgrims and the urban poor alike.

Although the second and third components of the GAP were of more direct local community interest, the anxiety to disburse central funds quickly in the three states (none of which were known for administrative efficiency) led the central government to focus on the "hardware" part. This included how to monitor investments in civil works schemes (for example, laying of sewer lines, interceptor drains and refitting derelict STPs with new electrical and mechanical equipment).

These civil engineer driven efforts ignored the communities that potentially stood to benefit, and there was even less interest in engaging urban planners, architects and social activists who could have contributed their knowledge of the existing urban form, explained the heritage potentials and helped us understand the multiple layers of rights and interests of the various stakeholders. The latter ranged from temple mahants, owners of local industries and shopkeepers to the Doms, rickshaw pullers and tourist guides who earned a livelihood by the river.

Furthermore, while an expert committee was set up to evaluate the performance of STPs throughout India, the lessons learned (notably that the STPs invariably failed to perform after a couple of years of operation in all parts of India) were not considered during the rush to disburse funds and report back to the Prime Minister's Office.

The second component – the electric crematoriums – were designed and constructed for operation by the municipalities, although the business model in other parts of the world, where cremation is a common form of disposal, has invol-ved public-private partnerships (PPPs). Bereaved families in India will vouch that cremations are a harrowing experience, although experience from Japan and Korea suggest that well-designed PPP contracts not only enable cities to get access to the latest energy efficient technologies, but a more professional approach of consoling the bereaved family members rather than be subject to extortion at the time of their grief.

The third component of beautifying the ghats was at odds with the global experiences in successful waterfront development (in cities as diverse as Singapore, Foshan, Baltimore and Bangkok). The common link in these successful efforts was the generation of economic value from the redeveloped shore areas, which was shared transparently with city residents who had housing, customary and informal rights in those areas. All these efforts were preceded by careful and systematic planning aimed at generating land value increases through mixed use development while intensively engaging the communities that stood to benefit.

The failures of GAP have been widely accepted, and since 2011, the World Bank has been supporting the Ministry of Environment and Forests in a second effort for cleaning the Ganga through the $1.5 billion National Ganga River Basin project. While the project document asserts that the design has learnt its lessons from the failures of the GAP, its twin foci are on building capacity in the entire river basin, while allocating core investments for civil engineering solutions implemented through the very same state civil engineering agencies that failed to deliver on the GAP promise. It is, therefore, not surprising in the least that the latest project supervision (February 2014) report has concluded that implementation performance has been unsatisfactory at a time when this flagship programme is well into the third year of its implementation!

Successful cleaning of the Ganga requires a different vision and leadership than what can be expected from the "silo-ed" sectoral agencies in these relatively poor performing state

administrations.

Actions are required on three fronts. These are:

- To ensure that the incentives among project implementation agencies are consistent with the prime minister's vision of a "Swachcha Bharat".
- To start with institutional innovations that first secure community acceptance of a mixed use urban plan that generates economic value along important cities on the Ganga's riverbanks.
- The leverage of technology and financing opportunities linked to demand-driven urban development that helps create incomes and employment, along with a better physical quality of life.

To achieve this, I would suggest a four-step process in which the appropriate sequencing of actions is critically important.

The first step would be to have community engagement in assessing the situation, and utilising the expertise of urban planners and architects to develop a vision on protecting the river, as well as the cultural heritage along its banks. The most important asset in a city is the waterfront land that residents and the municipality own or have rights to. Any programme to clean the river has to begin by exploring how best this asset can be leveraged to not only reduce the outflow of liquid and solid wastes to the river, but also generate economic value to local stakeholders.

An illustration will be in order here. In ancient cities like Varanasi, there are multiple layers of rights to land, which often lead to resistance when the government seeks to acquire land. However, the same communities respond well when future plans incorporate their economic interests. For example, riverfront development has the potential of generating significant increases in land values, and community support is robust when these increases are captured and/or shared with them in a transparent manner.

Similarly, areas of historic and cultural heritage have significantly higher long-term economic benefits when they are protected from redevelopment, provided innovative solutions such as selling of air rights to other parts of the city safeguard these property owner interests. In this context, the Gujarat and Maharashtra land pooling and readjustment mechanism (as opposed to the land acquisition model followed in Uttar Pradesh, Bihar, Jharkhand and West Bengal) provides a more practical institutional mechanism to secure community engagement.

Importance of the Locality

The next step is to reach agreements with communities, city and state administrations and national governments on who will bear what costs in this process of urban regeneration that accompanies cleaning the river. This step will involve finding common ground and agreement (often as a consequence of "tough" negotiations) on how responsibilities and economic benefits will be shared between them and other stakeholders.

In cities across the world that have successfully implemented such programmes, the primary beneficiaries have been households, businesses and industries in neighbourhoods that benefit from the urban renaissance. For example, Varanasi, Allahabad, Patna and Kolkata are already major destinations for tourists, and an improvement in the physical environment of the waterfront will greatly enhance their attractiveness to tourists and investors alike. The key is for residents of the city wards being able to share the economic benefits of land value increases in an equitable and transparent manner.

There are several planning tools available to ensure that this happens. These include innovations in planning regulations, investigating options to preserve cultural and built heritage while enhancing land value capture, utilising information and communications technologies to plan,

execute and sustain the development of the waterfronts, along with tax (or betterment levy) implications, to name a few. The widespread familiarity with social media makes deep community engagement much more cost effective compared to what was possible even five years ago.

The third step is to delegate implementation responsibilities to organisations best suited to deliver the desired outcomes. In other words, one should apply the "subsidiarity principle" of managing change at the lowest appropriate level. It is necessary to start with the mohallas and wards, and assign implementa-tion responsibilities to neighbourhood institutions. The works should begin with separation of solid wastes, move on to explore options for improving sanitation and hygiene, and finally work out neighbourhood plans that communities endorse fully.

For example, in low-income communities of Brazil, the idea that these residents need to manage their respective "horizontal condominiums" (just as rich people maintain common areas in high rise or vertical condominiums viewed in TV soap operas) has been a useful way of securing community engagement in improving their neighbourhood physical environment.

Beyond neighbourhoods, planners and policymakers need to assess which type of institution is best suited to manage urban services. For example, funeral infrastructure in countries where cremation is prevalent is best managed through professional private sector entities, regulated by municipalities. Other increasingly attractive technologies, such as conversion of waste to energy or rooftop solar distributed generation need to leverage financing and technology through PPPs. Mixed land use that safeguards the housing rights of the urban poor has led to significant increases in land values in Bangkok city without social conflicts.

Finally, the Funds

The fourth step is to release Government of India funds for engineering design only as a last step, after the responsibilities, rights and contracting arrangements have been worked out. The success of the programme will depend on the extent to which the institutional and incentive structures are aligned to the desired goal of cleaning the Ganga.

The sequencing of the policy formulation and planning process will be the key factor in achieving good results. Today, with the benefit of social media and the availability of a lot of expertise both within India and in other Asian countries that have undertaken similar programmes, the visioning and institutional restructuring could be undertaken fairly quickly. The good news is that the initial phases of agreeing on the urban plans, securing a common vision, negotiating and finalising the work programme are time intensive, but not resource intensive. However, once there is an agreement to move forward, funds can be allocated and disbursed much faster, but linked to achieving the outcomes specified in the work programme. These may involve leveraging smart subsidies and viability gap funding for PPPs rather than channelling central government resources to these relatively inefficient state agencies.

Greenhouse Gas Emission Estimates of U.S. Dietary Choices and Food Loss

The complete article is available online at: http://onlinelibrary.wiley.com/doi/10.1111/jiec.12174/full .

Dietary behavioural choices have a strong effect on the environmental impact associated with the food system. Here, we consider the greenhouse gas (GHG) emissions associated with production of food that is lost at the retail and consumer level, as well as the potential effects on GHG emissions of a shift to dietary recommendations.

Calculations are based on the U.S. Department of Agriculture's (USDA) food availability data set and literature meta-analysis of emission factors for various food types.

Food losses contribute 1.4 kilograms (kg) carbon dioxide equivalents (CO_2-eq) capita−1day−1 (28%) to the overall carbon footprint of the average U.S. diet; in total, this is equivalent to the emissions of 33 million average passenger vehicles annually.

Whereas beef accounts for only 4% of the retail food supply by weight, it represents 36% of the diet-related GHG emissions.

An iso-caloric shift from the current average U.S. diet to USDA dietary recommendations could result in a 12% increase in diet-related GHG emissions, whereas a shift that includes a decrease in caloric intake, based on the needs of the population (assuming moderate activity), results in a small (1%) decrease in diet-related GHG emissions.

These findings emphasize the need to consider environmental costs of food production in formulating recommended food patterns.

Community-Based Adaptation to Climate Change: Scaling it up

The complete article is available at: http://www.amazon.in/Community-Based-Adaptation-Climate-Change-Scaling/dp/0415623707 .

As climate change adaptation rises up the international policy agenda, matched by increasing funds and frameworks for action, there are mounting questions over how to ensure the needs of vulnerable people on the ground are met.

Community-based adaptation (CBA) is one growing proposal that argues for tailored support at the local level to enable vulnerable people to identify and implement appropriate community-based responses to climate change themselves.

Community Based Adaptation to Climate Change: Scaling it up explores the challenges for meeting the scale of the adaptation challenge through CBA. It asks the fundamental questions: How can we draw replicable lessons to move from place-based projects towards more programmatic adaptation planning?

How does CBA fit with larger scale adaptation policy and programmes? How are CBA interventions situated within the institutions that enable or undermine adaptive capacity?

Combining the research and experience of prominent adaptation and development theorists and practitioners, this book presents cutting edge knowledge that moves the debate on CBA forward towards effective, appropriate, and 'scaled-up' adaptive action.

National River Linking Project: Dream or disaster?

The Project is back in the news now but how much do you know about it? We cover the basics including its history, aim, costs and impact on the environment and people in this comprehensive piece.

The article is available at: http://www.indiawaterportal.org/articles/national-river-linking-project-dream-or-disaster

The National River Linking Project (NRLP) formally known as the National Perspective Plan, envisages the transfer of water from water 'surplus' basins where there is flooding to water 'deficit' basins where there is drought/scarcity, through inter-basin water transfer projects.

Digging further into the term 'surplus' as per the Government, states that it is the extra water available in a river after it meets the humans' requirement of irrigation, domestic consumption and industries thereby underestimating the need of the water for the river itself. The term 'deficit' has also been viewed in terms of humans only and not from the river's perspective, which includes many other factors.

But before we get deeper into the subject in terms of feasibility and so on, let's first understand the aim, benefits claimed, cost and history of the project.

History behind river interlinking

While the timeline has the history since the project's conception 125 years ago, our focus is on the most recent event which brought it back into the limelight.

In 2002, the then President of India Abdul Kalam mentioned the river linking project during a speech. He proposed it as a solution to India's water woes after which an application requesting an order from the Supreme Court on that matter was submitted. The application was converted into a writ petition and finally, in October 2002, the Supreme Court ordered the Central Government to initiate work on inter-linking the major rivers of the country.

In the same year, a task force was appointed and a deadline of 2016 was set to complete the entire project that would link 37 rivers but nothing concrete happened until almost a decade ago. On Feb 27, 2012, **the Supreme Court ordered the constitution of a "Special Committee for Interlinking of Rivers" headed by the Minister of Water Resources**.

The UPA Government was not in favour of the interlinking project, but with the coming of the NDA Government, river linking is once again in the limelight. Budget 2014-15 has earmarked Rs. 100 crore to expedite the preparation of Detailed Project Reports for this purpose.

Scope of the Project

The National River Interlinking Project will comprise of 30 links to connect 37 rivers across the nation through a network of nearly 3000 storage dams to form a gigantic South Asian Water Grid. It includes two components:

Himalayan Rivers Development Component under which 14 links have been identified. This component aims to construct storage reservoirs on the Ganga and Brahmaputra rivers, as well as their tributaries in India and Nepal. The aim is to conserve monsoon flows for irrigation and hydropower generation, along with flood control. The linkage will transfer surplus flows of the Kosi, Gandak and Ghagra to the west. A link between the Ganga and Yamuna is also proposed to transfer the surplus water to drought-prone areas of Haryana, Rajasthan and Gujarat.

Peninsular Rivers Development Component or the Southern Water Grid, which includes 16 links that propose to connect the rivers of South India. It envisages linking the Mahanadi and Godavari to feed the Krishna, Pennar, Cauvery, and Vaigai rivers. This linkage will require several large dams and major canals to be constructed. Besides this, the Ken river will also be linked to the Betwa, Parbati, Kalisindh, and Chambal rivers.

Proposed benefits of the Project

The river interlinking project claims to generate total power of 34,000 MW (34 GW). Out of this,

4,000 MW will come from the peninsular component while 30,000 MW from the Himalayan component.

The addition of hydropower is expected to curb the drinking water woes of millions and supply water to industries in drought-prone and water-scarce cities in south and west India but do we need such a big project to end our water woes?

Not according to Parineeta Dandekar, who works with South Asia Network on Dams, Rivers & People (SANDRP). "There are a number of cheaper, socially and environmentally-benign options available to us, which can result in even larger benefits than a grand project. These include increasing irrigation and project-specific efficiency, rational cropping patterns, putting to use our existing mega infrastructure which is under-performing, using water equitably, harvesting rainwater and managing demand better, among others."

"In many places across India, such initiatives have shown their positive potential while larger scale projects have failed miserably. Best example is Maharashtra, which has the country's largest concentration of large dams and the least irrigation potential. When this is known, how can we ignore these aspects and still hanker after large dams and schemes based on such infrastructure like Interlinking? Doing so is irresponsible and foolishly optimistic, without understanding our reality", she adds.

The project claims to provide additional irrigation to 35 million hectares (m ha) in the water-scarce western and peninsular regions, which includes 25 m ha through surface irrigation and 10 m ha through groundwater. This will further create employment, boost crop outputs and farm incomes and multiply benefits through backward (farm equipment and input supplies) and forward linkages (agro-processing industries). Along with this the project is expected to create several benefits for navigation and fisheries.

Cost of the Project

The total cost of implementation is Rs. 560,000 crore at 2002 price levels with an annual outlay of Rs. 16,000 crore over 35 years. This cost consists of three components which are Rs.106,000 crore for the peninsular component, Rs.185,000 crore for the Himalayan component and Rs. 269,000 crore for the hydroelectric component. **In terms of usage, the cost is estimated as Rs. 135,000 crore for the power component and Rs. 425,000 crore for irrigation and water supply.**

Out of all the interlinking projects, the Ken-Betwa river link has been approved and the Government is now keen to approve the Daman Ganga-Pinjal Link (Gujarat and Maharashtra) and Par-Tapi-Narmada Link (Gujarat) whose detailed project reports (DPRs) are ready for consideration.

Perceived impact of the Project

"Disaster", is what Himanshu Thakkar from SANDRP and Shripad Dharmadhikary from the Manthan Adhyayan Kendra say when asked about the interlinking project. Experts also refute the core basis of the project, which terms the river either 'surplus' or 'deficit'.

In the words of Ashish Kothari from Kalpavriksh, a non-profit organisation that works on environmental and social issues, "The proposal is based on the serious ecological myth that river waters which drain into the sea, are going 'waste'. When rivers wind through forested, cultivated, and settled lands, they carry with them large amounts of silt. This silt is deposited along the way, enhancing the productivity of the surrounding lands, and finally of the coastal waters. This is the basis of the rich agriculture of the plains of India, and of the rich fisheries off our coasts. The river also pushes out the sea, which would otherwise invade deep into the land, and erode the coast."

Himanshu Thakkar says, "There is no scientific basis to arrive at the conclusion that any river basin is surplus or deficit, since we have not done full assessment or implementation of options in any river basin or even a sub basin".

The project could also create many water conflicts both at the state and international level. The country is already reeling due to many inter-state water conflicts like the Ravi-Beas Water Dispute between Punjab-Haryana-Rajasthan and the Cauvery Water Dispute between Kerala-Karnataka-Tamil Nadu-Puduchery to name a couple.

At the international level also, India is at crossroads with Pakistan over the sharing of the Indus' water, with Bangladesh over the Teesta's water, with China over the Brahmaputra's water and with Nepal over the Mahakali's water.

Second issue of BioPower India - Issue 2; April to June, 2014.

This newsletter provides a range of information relating to the biomass energy sector including how to tap rural markets, barriers to scalability etc.

This issue can be downloaded from the following link: http://www.in.undp.org/content/dam/india/docs/EnE/BioPower-Apr-Jun-14.pdf .

In this issue, the focus is on state-level issues, challenges and opportunities in the biomass power sector.

The lead article 'Odisha: An Overview of the Biomass Scenario' presents a review of the state policy framework for supporting biomass power projects; the status of recent projects; challenges faced by biomass developers in the state; and the 'catchment area' (a geographical area that could economically and sustainably provide enough biomass to a power plant over the life of the project) approach as a remedy for ailments in the sector.

In the Policy and Regulatory section, the amendments in the Rajasthan Electricity Regulation Commission (RERC) Regulation 2014 is presented; the policies and strategies outlined by the Government of Punjab for the management and utilization of paddy straw including the renewable electricity tariff policy of Punjab is highlighted.

It is important to bring forth the issues and challenges in some of the states because the biomass sector needs support from the state governments to remove the barriers faced by the sector and provide it the much required impetus.

The Central Electricity Regulatory Commission has recently come up with revised tariff structure for the biomass sector. However, the revision of tariff by states has not been able to keep pace with the increasing costs of biomass, making large biomass power projects commercially unsustainable. There is an immediate need for clear policy/guideline for fixing the variable cost by the states.

The states also need to devise a strategy to ensure fuel price security for sustained power plant operation and simplify and shorten the time required for statutory approvals/clearances for a biomass power plant.

The other two lead articles in the issue dwell on the hybrid solar and biomass power generating systems and biomass gasifiers for powering telecom towers. The international story for this issue

covers an overview of the biomass scenario in Sri Lanka.

We look forward to your feedback and comments for making this Quarterly Magazine more informative.

SUMMARY OF THE NINTH MEETING OF THE OPEN-ENDED WORKING GROUP OF THE BASEL CONVENTION: 16-19 SEPTEMBER 2014

The complete summary is available online at: http://www.iisd.ca/vol20/enb2038e.html

With the twelfth meeting of the Basel Convention's Conference of the Parties (COP-12) less than eight months away, it was up to delegates at OEWG-9 to make meaningful progress on key technical and legal issues to help advance the implementation of the Convention. As the only open-ended subsidiary body of the Basel Convention, the OEWG plays a key role in reviewing intersessional work and pre-negotiating technical, legal and other decisions for adoption by the COP. Despite these functions, the OEWG was also asked to reflect on its own future arrangements in view of the need to make more efficient use of available resources, but was unable to reach agreement on this issue.

Focusing on two key technical and legal matters before OEWG-9, namely, technical guidelines on persistent organic pollutant (POP) wastes, mercury wastes, and electrical and electronic waste (e-waste), and a glossary of terms used in the implementation of the Basel Convention, this brief analysis considers whether OEWG-9 succeeded in paving the way for a positive resolution of these issues at COP-12. It also reflects on the OEWG's role in facilitating the work of the COP by providing a venue to review and discuss key issues on the COP's agenda.

TECHNICAL GUIDELINES

As anticipated by most participants, the review of eight technical guidelines, six on POP waste, one on mercury waste and one on e-waste, took a large bulk of delegates' time at OEWG-9. Regarding the POP and mercury wastes guidelines, the OEWG completed its work and, pending further revisions during the intersessional period, the technical guidelines should all be ready for adoption at COP-12. Since the implementation of these guidelines will help not only to implement the Basel Convention but also further the goals of the Stockholm Convention on POPs and the new Minamata Convention on Mercury, some said the guidelines were a concrete example of what strong collaboration between the chemicals-related conventions can achieve.

The outcomes on the seven of the guidelines were among OEWG-9's major achievements, and many delegates attributed this success to the fact that, under the strong leadership of specific countries and organizations, the small intersessional working groups tasked with the guidelines had achieved substantial progress in the run up to OEWG-9. This was not the case for the guidelines on e-waste, however, with no lead country taking ownership of the guidelines and no financial resources provided to the Secretariat for the production of an analysis of the issue of exemptions to help move the process forward.

In spite of this, the OEWG reached agreement on an outcome on the e-waste technical guidelines that, while not solving the underlying issue that prevented the adoption of the guidelines at COP-11, could lead to a successful outcome at COP-12. The issue that remains to be resolved, which is contained in paragraph 26(b) of the draft guidelines, concerns the set of specific conditions under which non-functional used electronic equipment exported for repair or refurbishment would not be considered waste under the Basel Convention and would therefore not be subject to its control

system. According to one seasoned negotiator who participated in the COP-11 discussions, agreement on the matter at COP-11 was thwarted by a combination of industry pressure to include exemptions that would make it possible for exports of used equipment as non-waste to continue, a rejection of any such exemptions by several developing countries, and the absence of leadership to develop a compromise text.

Given the limited progress achieved intersessionally, many delegates feared that OEWG-9, like COP-11, would not be able to resolve the impasse. Some parties, including a regional group, insisted that the OEWG should not attempt to negotiate paragraph 26(b) but focus instead on general principles that could be agreed by all. This, they said, would help secure adoption of the guidelines at COP-12 and leave it up to each country to determine the conditions under which used equipment would be considered non-waste, thereby simply confirming the status quo. An environmental NGO repeatedly cautioned against this approach, urging parties to clearly define those conditions in paragraph 26(b) in order to prevent unscrupulous actors from exporting e-waste disguised as used equipment, thereby externalizing the environmental and human health costs of its improper disposal.
In the end, the decision to discuss the specific issue of exemptions in a small but representative group made up of regional, industry and environmental group participants proved to be fruitful. To the surprise of many delegates, the small group was able to draft a new paragraph 26(b) with a single set of conditions under which used equipment would be considered non-waste. In addition to this text, which was presented as the "preferred option," the group drafted an alternative, interim solution to guide parties in producing their own set of conditions, in case no agreement could be reached on paragraph 26(b).

The OEWG decided not to discuss the specific conditions produced by the smaller group. Instead, it agreed to replace the options that were listed in paragraph 26(b) of the draft guidelines with the single new set of conditions crafted by the group, in addition to the interim solution, for consideration by the COP. This means that it will be up to interested parties to engage with others during the intersessional period to achieve a positive outcome at COP-12. Musing about what a "positive outcome" would look like, one delegate said it would be one that enables legitimate actors to export used electronic equipment while preventing illegitimate ones from adding to the burden of countries that cannot manage hazardous waste in a way that protects the environment and human health. Noting that there is now a single set of conditions to discuss and negotiate, and recalling Japan's offer to provide financial resources to conduct further intersessional work on the guidelines, many left OEWG-9 feeling optimistic about the prospect of achieving such an outcome, which they said would reaffirm the relevance of the Basel Convention by tackling a major waste stream that continues to grow worldwide.

LEGAL ISSUES – OR ARE THEY?
In addition to the technical guidelines produced by various intersessional groups, the OEWG had before it an innovative product drafted by a small intersessional working group on legal clarity: a glossary providing easy-to-understand definitions of key terms found in the Basel Convention or otherwise used by parties in their day-to-day implementation of the treaty.

The glossary was developed in response to an initiative to improve the effectiveness of the Basel Convention by, among other things, providing clarity around the interpretation of key terms that parties might find difficult to understand and that have implications for how customs officials and other national enforcement authorities implement the Basel Convention control system. For instance, the Convention's definition of "waste" makes reference to national legislation and intentionality (i.e., substances or objects that are "intended to be disposed of"), thereby allowing considerable room for interpretation, while the definition of "hazardous waste" makes reference to national legislation and to a complex list of waste categories and hazardous characteristics.

Several delegates questioned whether the small intersessional working group had exceeded its mandate by defining terms not found in the Basel Convention or its guidelines, and some cautioned that the glossary could effectively be construed as a new set of legal definitions under the Convention. A few participants also expressed concern about some of the definitions proposed, such as a reference to economic value in the definition of "goods," which they said could easily lead to waste being considered a good, given that virtually everything had at least some economic value.

Recalling that the objective of producing a glossary was to enhance the effectiveness of the Basel Convention, other delegates urged focusing on whether the glossary could help parties implement the Convention at the national level, in particular by helping government officials, such as customs officers and port authorities, distinguish between waste and non-waste and between hazardous and non-hazardous waste. This, they claimed, could require defining terms not included in the Convention but directly related to the interpretation of core Convention terms. Along these lines, a few delegates suggested that the glossary could be seen as a reference tool with various definitions that parties could use as guidance in their implementation of the Convention, rather than a document providing a set of "legal" definitions.

In the end, the OEWG took a flexible approach and agreed that the small intersessional working group should expand to increase participation and continue its work and, under the OEWG's specific instructions, revise the glossary for possible adoption by the COP. Leaving the meeting, one participant said the decision was evidence that most delegates were finally persuaded by the view that the glossary could truly serve to enhance the implementation of the Basel Convention at the national level. Another, while also buoyed by progress achieved, looked ahead to issues still to be defined at COP-12 or beyond, such as the purpose and legal nature of the glossary, wondering how the OEWG would address this in years to come.

Biogas as an alternate fuel for transport and energy self-reliance in rural areas : good case of social technology.

Centre for Rural Development and Technology, IIT Delhi has successfully developed small scale biogas up-gradation and bottling technology for vehicular application for rural areas.

It can be a decentralized system, which can be set up in dairies, goshalas (cattle shed run on charity in villages) or run by rural entrepreneur etc.

We have set up two such systems at Goshalas in Rajasthan . In one goshala at Bhilwara, Rajasthan, 110 cum of biogas is generated from cow dung available from 300 cows.

The biogas is used for cooking of 15 laborer residing in the goshala, 20 kW power generated to supply electricity needed in the goshala and remaining gas is upgraded using IIT Delhi biogas upgrading technology and used to run a three wheeler for meeting transport need (milk, cattle feed etc.) of the unit.

It has been in operation since 2009 without any problem. This gives a self-reliant energy system to that village.

A biogas driven car has been tested for more than 20000 km run on upgraded biogas in past two years at IIT Delhi.

We have evaluated a total potential of biogas generation in India from various sources (organic wastes).

The use of bottled upgraded biogas can reduce the burden of import of fossil fuels in rural areas for tractors, transport vehicles and two wheelers.

It is a good case of social technology use and biogas as a major sources of biofuels for energy self-reliance in rural areas for cooking, electricity and transportation needs.

Video links:

- Pilot Biogas plant unit in a Goshala in Bhilwara, Rajasthan for power generation and running three wheeler set up by IIT Delhi. It is available at: http://web.iitd.ac.in/~vkvijay/Biogas%20based%20systems%20-Bhilwara.avi
- Biogas enrichment and bottling facility and lab at IIT Delhi for operating a biogas car. It is available at: http://web.iitd.ac.in/~vkvijay/Biogas%20operated%20%20car%20-iitd%20technology.avi

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A Himalayan disaster awaits India

The complete article is available at: http://timesofindia.indiatimes.com/india/A-Himalayan-disaster-awaits-India/articleshow/43103103.cms.

Many of the 200-odd glacial lakes in Nepal, Sikkim and Bhutan are unstable and, in the event of an earthquake in the Himalayas, could burst and cause catastrophe in northern and eastern India.

Celebrated mountain climber Maya Sherpa and Nepali environmentalist Kunda Dixit, while sounding this alarm, said that the lakes have been formed by receding glaciers and melting snow on the Himalayas.

More than climate change-induced global warming, it is the alarming increase in deposition of soot particles on the icy heights of the Himalayas that is causing the snow to melt.

Rising vehicular pollution and emissions from thermal power plants, brick kilns and factories in north and eastern India are to blame for this dangerous phenomenon. The soot particles are funnelled by winds to the higher reaches of the Himalayas from the north Indian plains and deposited on the snow. As a result, heat from the sun's rays is absorbed by these particles, causing the snow to melt and form lakes.

Many of these lakes are held by fragile moraine (glacial debris) which, in the event of an earthquake, will give way and cause the lakes to burst. With rising affluence in India, vehicular and industrial emissions will also rise, thus causing more soot particles to get deposited in the Himalayas and expediting the process of the snow melting and forming more unstable lakes.

Many of these lakes are huge and hold enormous volumes of water. The Tso Rolpa, which lies northeast of Kathmandu, is for instance 2km long, a kilometer wide and more than 75m deep. Lake 464 near Baruntse Mountain in eastern Nepal is also as large and very unstable. If these lakes burst due to an earthquake, the Glacial Lake Outburst Flood would be devastating not only for Nepal, but also for India. The danger of 'Himalayan tsunamis' hitting the Indian plains is real and present, and increasing by the day.

The face of the higher reaches of the Himalayas is changing very rapidly. Even on the summit ridge of the Everest there is less snow now. Camp 3 on the way to Everest was totally snow-clad even a few years ago, now it is all rock and boulders. More icefall is happening now and the whole Himalayan range, especially the eastern Himalayas, is thawing, and that's very dangerous.

High-Level Event Implementing Sustainable Energy for All and High-Level Luncheon on the SE4ALL Global Energy Efficiency Accelerator Platform

The complete article is available at: http://www.iisd.ca/energy/se4all/se/ .

The High-Level Event "**Implementing Sustainable Energy for All**" and the Launch of the Global Energy Efficiency Accelerator Platform took place yesterday in New York, US.

Organized by the Sustainable Energy for All (SE4ALL) initiative, the two events preceded the UN Climate Summit 2014 that takes place today, also in New York, US.

The High-Level Event "**Implementing Sustainable Energy for All**" featured high-level multi-stakeholder panels on financing SE4ALL, investing in energy efficiency, accelerating innovation in renewable energy, and scaling up at the country level.

The High-Level Luncheon on the SE4ALL Global Energy Efficiency Accelerator Platform convened at the Millennium Plaza Hotel, marked the launch of the Global Energy Efficiency Accelerator Platform, and recognized the countries, cities, companies, international organizations, and civil society partners participating in this initiative.

A press conference was also held on "**Mobilizing Finance to Halve Energy Poverty**" during which a cooperation agreement was signed between SE4ALL and Power Africa, USA.

How the United Nations System Supports Ambitious Action on Climate Change: The United Nations System Delivering as One on Climate Change and Sustainable Development

The complete article is available at: http://energy-l.iisd.org/news/un-report-reviews-efforts-to-deliver-as-one-on-climate-change/.

Addressing climate change is at the forefront of global attention this month as world leaders assembled at the United Nations for the Climate Summit, called by UN Secretary-General Ban Ki-moon yesterday to discuss how best to accelerate progress on this increasingly urgent issue.

Government representatives attending the Summit were joined by business leaders, UN officials, and non-governmental voices to highlight existing and emerging efforts to drive down global carbon emissions and strengthen resilience – covering issue areas such as energy, cities, agriculture, forests, financing, short-lived pollutants, and transportation.

The Summit held yesterday is not part of the formal climate negotiations, but **aims to build momentum toward a new global agreement** to be reached in Paris during the Conference of the Parties (COP 21) late next year.

Ahead of the Climate Summit 2014, the UN released a report, titled **'How the United Nations System Supports Ambitious Action on Climate Change: The United Nations System Delivering as One on Climate Change and Sustainable Development.**' The report outlines how it is contributing to the delivery of action on climate change, and stresses that action is being coordinated across all UN agencies who are 'delivering as one' in support of sustainable

development.

The report covers both climate change mitigation and adaptation, calling for a carbon-neutral future in which global average temperature increases remain below 2°C compared to pre-industrial levels. The report notes that there are sufficient resources, an appropriate international framework and demonstrated results in place to support further ambitious and coordinated action on climate change.

The report brings in examples of action from across the UN system, addressing issues as varied as transport, forestry, agriculture and food security, and public health. Within each sector, it presents case studies on successful partnerships and projects, outlines UN commitments and frameworks for action, and notes challenges.

The report also highlights UN contributions to processes such and training and capacity building, resource mobilization, science and information, and stakeholder engagement. The report is a joint publication by 40 UN agencies, funds, programmes and other entities.

The report is available at:
http://www.imo.org/MediaCentre/HotTopics/GHG/Documents/HLCP%20WGCC%20How%20the%20UN%20System%20Supports%20Ambitious%20Action%20on%20Climate%20Change%20(2).pdf

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India's farmers beating climate change with technology

The complete article is available at: http://www.bbc.com/news/business-29257401

During the sowing and planting season, when water was needed the most, rain was largely absent. However, for farmers like Lovepreet Singh in the northern Indian state of Haryana, all is not lost.

He has been getting help from new technology, like the GreenSeeker - a handheld gadget that works as a crop sensor. As Mr Singh points to a patch of crops, the sensor emits brief bursts of red and infrared light. By measuring the amount of each type of light that is reflected back from the plant, the device can calculate and display the health of the crop.

Lovepreet Singh says using technology has saved some of his harvest He uses it to assess how much nitrogen the soil needs in each section of land. This is just one of the gadgets he uses, meaning that what might once have been a disastrous harvest is not looking as bleak as it could have done, according to Mr Singh. "Using technology has helped us a lot," he says.

"I get better weather forecasts so I can plan when to sow seeds or spray the plants. Otherwise I would spend a lot of money and labour on my fields and unexpected rains would just wash everything away. "While my profits haven't gone up dramatically, technology is helping me reduce my losses." With more than 50 acres of land, Lovepreet Singh's entire family lives off the farm. Like him, most people here are completely dependent on agriculture for their livelihood.

But not everyone can afford to invest in expensive technology - the GreenSeeker comes in at nearly 40,000 rupees. So the local agriculture society helps them by procuring it and letting farmers use it for free.

The GreenSeeker is a crop vigour mapping system, which lets farmers know precisely how much fertiliser to use. The company claims that the device can increase yields by up to $32 a hectare.

They are also using another new technology in these parts, called laser land levelling. Laser-controlled devices are mounted on tractors, and these help farmers level the land into a flat surface. This method of tilling helps them save 25-30% of water during cultivation.

Another method to save water and labour costs is to introduce direct seeding by machine for the paddy crop. This replaces the usual method of making paddy nurseries and then transplanting the seedlings manually.

Traditionally, Indian farmers spend a lot of money hiring labour after every harvest to clean the residual crop. They then make huge piles of the waste and burn them - polluting the environment and often creating a thick, grey smog over cities like Delhi. Now, to avoid burning the crops, "happy seeders" have been introduced.

These are attachments mounted on tractors, that help sow wheat even when the paddy residue is still standing on the fields. The state government has introduced a subsidy to help farmers buy the machine, as it costs over 100,000 rupees.

Leaving the crop residue in the fields helps increase the organic matter, better controlling moisture and temperature levels.

Surrounded by lush green farms in Karnal, Haryana, it is hard to imagine that farmers here could be worried about climate change. Once known as the grain basket of India, farmers here are now worried about a lack of fertility in the soil, and decreasing groundwater levels.

Experts have warned that the impact of climate change means that in the coming years, the yield here will go down significantly. Rice farmers in the area are the first ones to be affected. One way to combat this is to reintroduce traditional crops such as maize, which was once a staple here. Maize was once considered a poor man's food but now it is in demand, much of it going to China as poultry feed.

The area where maize is grown has almost doubled in Haryana in the last few years. It is now selling for about the same price as rice and costs a lot less to grow. "Switching to maize has been my best decision so far. My forefathers once grew only maize here before the whole region switched to basmati rice," he says.

"I still grow some rice but I have switched half my fields to maize because this uses at least 70% less water compared to a paddy crop. We can harvest it a month faster too, saving us a lot of money."

Taraori is one of dozens of villages in this state to start adapting the way they do things as a result. The village is part of an initiative led by the global consultancy, Climate Change, Agriculture and Food Security (CCAFS) in India. People here have been helped to move to so-called "climate smart" technology, trying to mitigate the impact changing weather patterns are having.

The Asia Development Bank recently warned that the impact of altered weather patterns could cause huge damage to the Indian economy, wiping off the equivalent of about 9% of GDP each year by the next century. So it is critical to adapt, says Surabhi Mittal, an agricultural economist from the International Maize and Wheat Improvement Centre. "A two-degree increase in temperature is going to impact the yield of wheat the most," she says. "That means the producers and consumers are going to suffer. Wheat yields might go down. That means food prices are going to be higher for consumers. "That also means that there is a huge additional subsidy that the government would have to bring in."

The local government is slowly changing its agricultural policy to recognise the effects of changing climate. And while not all farmers here have switched to new techniques, seeing neighbours who succeed when they do so is bound to be a strong incentive.

The Cities That Are Leading on Climate Change

The complete article is available at: http://sustainablecitiescollective.com/david-thorpe/550656/cities-are-leading-climate-change?utm_source=feedburner&utm_medium=email&utm_campaign=Sustainable+Cities+Collective+%28all+posts%29 .

The winners of the second annual **City Climate Leadership Awards** were revealed by C40 and Siemens at an award ceremony in New York City earlier this week.

The Awards recognize cities all over the world that have achieved excellence in urban sustainability and leadership in the fight against climate change.

The winning cities are (in alphabetical order, showing the categories in which they won):

- ✓ **Amsterdam, Netherlands (Finance & Economic Development)**
- ✓ **Barcelona, Spain (Intelligent City Infrastructure)**
- ✓ **Buenos Aires, Argentina (Solid Waste Management)**
- ✓ **London, UK (Carbon Measurement & Planning and Air Quality)**
- ✓ **Melbourne, Australia (Adaptation & Resilience)**
- ✓ **New York City, USA (Energy Efficient Built Environment)**
- ✓ **Portland, USA (Sustainable Communities)**
- ✓ **Seoul, Korea (Green Energy)**
- ✓ **Shenzhen, PRC (Urban Transportation)**
- ✓ **Taipei, Taiwan (Citizen's Choice)**

There was some surprise at London's selection for air quality, given that its Mayor, Boris Johnson, was forced to appear this month before the Government's Environmental Audit Committee (EAC) to explain why the UK is facing legal action from Brussels for failing to meet air quality targets in London. But **the awards are clearly intended to recognize innovations that will make a difference in the future, rather than present performance.**

C40 Chair, Rio de Janeiro Mayor Eduardo Paes said: "I commend the winning cities for their leadership and commitment, and am confident that their knowledge and experience will help drive other cities to implement on-the-ground solutions faster and more efficiently".

Through cooperation and collaboration, cities continue to deliver the results that are having a global impact.

Pressure Builds on World Leaders to Act on Climate Change

The complete article is available at: http://sustainablecitiescollective.com/dirt/554661/pressure-builds-world-leaders-act-climate-change?utm_source=feedburner&utm_medium=email&utm_campaign=Sustainable+Cities+Collective+%28all+posts%29 .

In the wake of the world's largest global protest on climate change — with some 300,000 people marching in New York City this past weekend and another 300,000 more marching in 2,000 locations across the world, 120 world leaders met at the United Nations in an effort to build political momentum for a legally-binding global agreement on climate change next year in Paris. The meeting was the first large-scale meeting of world leaders on climate change in five years. The meeting occurs amid new reports that carbon dioxide emissions are at their highest levels yet, with 2.3 percent growth in emissions this past year, and the world is at its hottest since global temperatures have been recorded.

The UN summit may have raised pressure on countries to act, particularly China, which has long stated that it will move on climate change once the United States does. Well, the U.S. has acted, with President Obama moving to curtail emissions from coal power plants and taking other measures in order to reduce emissions by 17 percent by 2020 and make "further ambitious cuts by 2050," reports The New York Times. In response, a representative from China, whose leader, Xi Jinping, decided not to attend, said China will reduce its carbon intensity by 40 percent by 2050. The Guardian quotes Chinese vice-premier Zhang Gaoli, who said: "As a responsible major developing country, China will make an even greater effort to address climate change and take on international responsibilities that are commensurate with our national conditions."

Former U.S. Vice President and Nobel Prize winner Al Gore said the meeting was a "net positive." "There is no question that a considerable amount of momentum was generated here. I think it was a tremendous boost to the whole movement that is towards the Paris agreement."

Some European countries agreed to support the efforts of developing countries to mitigate and adapt to climate change. France, which will host the big climate negotiations, announced $1 billion for a global climate change fund. South Korea and Switzerland pledged $100 million and other countries also agreed to contribute $100 million. Last year, Germany committed $1 billion as well. Critics say the $2.3 billion in commitments falls far short of the $15-20 billion needed.

Much of the heavy lifting on climate change will be done at the local levels. News on that front was promising. New York City Mayor Bill de Blasio announced an ambitious new plan to cut his city's emissions by 80 percent by 2050. Boston, San Francisco, and Stockholm have made similar pledges. If only all the world's other cities, which account for 70 percent of total carbon dioxide emissions, follow suit. There were also agreements among companies and non-profits to change business as usual. The Guardian reports that "more than 400 companies from 60 countries all signed on to support putting a price on carbon." Furthermore, in two particularly environmentally damaging sectors — palm oil and paper manufacturing — some of the biggest firms agreed to stop "destructive logging by 2030, and restore an area of forest equivalent to the size of India."

However, criticism abounded about the lack of concrete commitments among the world leaders. The Elders, a group of esteemed wise men and women from around the world, who even put out a full-page ad in The New York Times to support the global climate marches, were dismissive of the usual talk. One of The Elders, Graça Machel, the widow of Nelson Mandela, said in her speech at the UN: "There is a huge mismatch between the magnitude of the challenge and the response we heard here today. The scale is much more than we have achieved." Of the protesters, she said: "can we genuinely say we are going to preserve their lives, and ensure their children and grandchildren and great-grandchildren inherit a planet which is safe and sustainable?"

TRAINING cum WORKSHOP: GREEN LAWS & COASTAL ENVIRONMENT; Bhubaneswar, 18-19 September, 2014 .

Despite best efforts of coastal communities like traditional marine fishermen, Chilika fishermen, salt workers, farmers and artisan communities due to manmade interventions and environmentally unsustainable development projects besides impact of extreme weather conditions caused by Climate Change-have changed the landscape of 482kms long Odisha Coastline.

On the other hand, when communities are struggling to restore their lost livelihood over exploitation of natural resources in terms of Industrial Projects, Hotel & Tourism projects, Commercial Aquaculture, Sand Mining, Roads & Buildings, Hatcheries, Fishing by outside Trawlers and Mechanized Boats, expansion of existing Ports and upcoming Ports all these above have threatened the fragile Environment & Ecosystem services of coastal areas.

Moreover, the ongoing debate over conservation of wildlife vis-à-vis livelihood protection of coastal communities especially fishermen has also added fresh impetus to the ever-existing conflict in this region.

Coast Council Odisha and EIA Response & Resource Centre New Delhi Jointly organized a training programme on Coastal Environment and Green Laws on 18th and 19th September 2014 at CYSD in Bhubaneswar. The meeting was attended by 70 participants from 8 coastal districts. Environmental and forest clearance mechanism, scope of National Green Tribunal in addressing emerging environmental issues in coastal areas of Odisha were highlighted.

The participants from Paradip, Dhamra and Gopalpur Port areas besides upcoming ports like Astarang have echoed that the existing pollution by the ports and dredging activity are threatening marine flora & fauna and in particular the Olive Ridley Turtles.

Delegates from Balesore district and Rushikulya River Mouth had expressed their anguish over the mushrooming of aqua culture firms along the coastline violating the Costal Regulation Zone notification (CRZ) and discharging the untreated waste water directly to the sea.

In recent past the coast has witnessed serious oil spillages in Paradip and Gopalpur area threatening the delicate marine fauna. There has been sharp decline in Ilishi (Hilsa) fish along the Paradip coastline.

In his opening remark Ambika Nanda, State Representative UNDP argued on the need of community participation and awareness which would contribute significantly for community based conservation efforts.

The workshop also discussed the Environment (Protection) Act, 1986, Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972, the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 besides provisions of CRZ Notification, OMFRA, and National Green Tribunal etc.

While discussing the implementation of CRZ in Odisha, Mr Jagannath Bastia of Beach Protection Committee, Puri questioned the seriousness of Sate Coastal Zone Management Committee which hardly meet and even if the meeting takes place the committee does not take cognizance of CRZ

violations.

Bio-shield should be promoted along the coast by planting mangroves which can resist the storms and act as a soil binder.

Villagers of Podampeta in Ganjam who are facing the wrath of sea erosion highlighted that out of 350 families in the village, the government has shifted only 150 families and that to without basic amenities and livelihood security.

Odisha Traditional Fish Workers Union(OTFWU), questioned the policy of state government in preventing the fishermen for six months from fishing in Devi and Rushikulya river mouth areas, which are near the Bhitarakanika Sanctuary without providing appropriate compensation package and subsistence allowance. Presently the fishermen communities are forced to leave their old age and traditional way of living and migrate to other states in search of jobs because of the restriction imposed by forest department without providing any alternative livelihoods.

It was decided to submit a details memorandum to HLC constituted by Union Government on violations of Environmental Laws and proposed amendments like fixing penal provisions and accountability besides identifying cases to pursue with National Green Tribunal.

Excerpts from the Speech delivered by H.E. Narendra Modi, Prime Minister of India at the UN General Assembly in New York on 27th September, 2014.

The complete speech is available at: http://pmindia.gov.in/en/news_updates/english-rendering-of-the-pms-statement-at-the-general-debate-of-the-69th-session-of-the-united-nations-general-assembly-unga/ .

Excerpts from the Speech delivered by H.E. Narendra Modi, Prime Minister of India at the UN General assembly in New York on 27th September, 2014, relevant to climate change and sustainable development:

"…….we must seek a more habitable and sustainable world.

There are debates and documents on these issues. But, we see many things around us that should cause us alarm. And, also many things that we no longer see – forests, birds and animals, clean rivers and lakes and blue skies.

I want to say three things:

One, we should be honest in shouldering our responsibilities in meeting the challenges. The world had agreed on a beautiful balance of collective action - common but differentiated responsibilities. That should form the basis of continued action. This also means that the developed countries must fulfil their commitments for funding and technology transfer.

Second, national action is imperative. Technology has made many things possible. We need imagination and commitment. India is prepared to share its technology and capabilities, just as we have announced a free satellite for the SAARC countries. Third, we need to change our lifestyles. Energy not consumed is the cleanest energy.

We can achieve the same level of development, prosperity and well being without necessarily going down the path of reckless consumption. It doesn't mean that economies will suffer; it will

mean that our economies will take on a different character.

For us in India, respect for nature is an integral part of spiritualism. We treat nature's bounties as sacred. Yoga is an invaluable gift of our ancient tradition. Yoga embodies unity of mind and body; thought and action; restraint and fulfilment; harmony between man and nature; a holistie approach to health and well-being. It is not about exercise but to discover the sense of oneness with yourself, the world and the nature. By changing our lifestyle and creating consciousness, it can help us deal with climate change. **Let us work towards adopting an International Yoga Day.**

….Let us fulfil our pledge on a Post-2015 Development Agenda so that there is new hope and belief in us around the world. **Let us make 2015 also a new watershed for a sustainable world**. Let it be the beginning of a new journey together".

Green Consumer Day: 28th September, 2014: Make the Right Choice". Citizens pledged to practice 3Gs in their daily life such as 'Go Green, Think Green and Act Green.

Further details are available at: http://www.dailypioneer.com/state-editions/bhubaneswar/green-consumer-day-held-in-angul.html .

On the occasion of Green Consumer Day, it is time to think and re-think of what we buy, how much we buy and the impact it has on us and on our common precious environment.

Motivated by the universal need that has arisen, it is the day to carefully list down individual ways in which all of us can make a difference.

Some Green Buying Tips to Keep in Mind:

- Walk or cycle to your marketplace
- Find out where your food comes from. Read and Research about it.
- Buy local, always
- When buying, make the intelligent choice keeping your ecological footprint in mind
- Buy only when (and what) you really need to. The best way to be a green consumer is by not having to buy anything at all!
- Reduce, Reuse and Recycle.

Remember, the choices we make today have a long shelf life and an even longer half-life! It not buying can stop the killing, buy responsibly can indeed take us into a sustainable future.
The problems of consumerism and its impact on the environment is an area of major concern in today's world. Awareness building on the importance of recycling-reusing-reducing should be taken up seriously.

The Green Consumer Day is celebrated on 28th September every year. This day is intended to build awareness around how even the smallest actions we take as individuals can help or harm the Planet. This global celebration highlights the problems of consumerism and its impact on the environment.

A green consumer is someone who is very concerned about the environment and, therefore, not only purchase products that are environmentally-friendly or eco-friendly but also consider 'Environment' in his daily life.

Urban sustainability research with a local flavour

The article is available at: http://www.scidev.net/global/cities/scidev-net-at-large/urban-sustainability-research.html .

There's something incongruous about travelling for several hours by at least three modes of transport to attend a conference about sustainable cities in the middle of the countryside.

But the International Conference on Urban Regeneration and Sustainability held this week near Siena, Italy, promised substantial presence from the developing world and a diverse programme covering sustainability from the technical to the political through the work of architects, scientists and engineers.

Irene Moreno Millan, coordinator of the event which is organised by the UK's Wessex Institute of Technology and the University of Siena, tells me that this isn't atypical. There's funding for sustainability and environmental issues in the developing world these days, she says.

Notably, several delegates from Malaysia and South Africa were linked to government — sometimes an elusive aim, even for larger meetings.

There was a refreshing absence of grand narratives of mega cities and global urbanisation trends which are, understandably, the undercurrent of many discussions about cities and sustainability. Here there was a focus on case studies — and so a chance to discover gems of insight from local research.

On the first day, what jumped out was a link between solid waste management and child education. A small study by Vincent Nakin, of Walter Sisulu University, and colleagues, which included interviews with 30 people living around a waste dump in South Africa's O.R. Tambo district municipality in the Western Cape area, found that children often run away from school to scavenge the site for raw materials that they can sell.

In another session, Malaysian civil engineer Muhd Fadhil Nuruddin talked about research into using microwave-incinerated rice husk ash to reduce the cement content – and so the carbon footprint – of concrete. There is several years worth of research into this, he said, but commercialisation hinges on convincing an often conservative construction industry.

But perhaps the most provocative contribution came from a PhD student whose talk was tucked away at the very end of the second day. In an energetic presentation Shilpi Singh said urban issues are a relatively recent academic interest in India — and went on to question whether planning as currently done in parts of the country is the way to create sustainable cities.

Singh, from the Jawaharlal Nehru University in New Delhi, focused on the example of gated communities in the city of Gurgaon, where she says a divide between the 'old' underdeveloped settlements and a 'new' area with high-security high-rises could be seen as the latest manifestation of social segregation. Such developments flout existing planning laws, she explained — and as a result they restrict mobility, privatise public land and services, exclude people of a certain class and attract informal, unpaid and underage employment. Urban studies as a field has only started growing in the past decade or so. But what's mainly emerging is in the social-political and cultural side of things. Understanding of "planning as planning", in the more technical sense, is still to be worked on.

Course on Energy Sector Strategies to Support Green Growth.

The complete announcement is available at: *http://einstitute.worldbank.org/ei/course/energy-sector-strategies-support-green-growth* . **Application Ends On: October 06, 2014 ; Log-in Dates: February 01, 2015 - February 24, 2015**

This course covers essential aspects of renewable energy and energy efficiency policies and discusses how they can contribute to green growth strategies.

The overall objective of this course is to provide a better understanding of the policy instruments used to promote the deployment of renewable energy and energy efficiency technologies in developing countries.

The course begins with an overview of the range of policy tools available, including price instruments (e.g., feed-in tariffs), quantity instruments (e.g., tradable renewable energy certificates) and standards (e.g., building codes for energy efficiency). As an example, the course discusses the opportunities provided by these policy tools, together with the challenges of implementation. The course ends with a discussion on how these policies can be integrated into overall green growth strategies at the national level.

The course also examines how public policy and financial support can support innovation, research and development of new technologies in the energy sector. It discusses global patterns of innovation and a range of policies to encourage the development, deployment and diffusion of green technologies.

The course is unique in covering a broad spectrum of energy sector strategies, including both renewable energy and energy efficiency. It helps develop the mindset and knowledge base required for anyone wishing to pursue a more in-depth analysis on energy systems planning.

Vision Statement for the U.S.-India Strategic Partnership: Chalein Saath Saath: Forward Together We Go

The complete vision statement is available at: http://inbministry.blogspot.in/2014/09/vision-statement-for-us-india-strategic.html .

Chalein Saath Saath, forward together we go. As leaders of two great democratic nations with diverse traditions and faiths, we share a vision for a partnership in which the United States and India work together, not just for the benefit of both our nations, but for the benefit of the world.

We have vastly different histories, but both our founders sought to guarantee freedoms that allow our citizens to determine their own destiny and pursue their personal aspirations. Our strategic partnership rests on our shared mission to provide equal opportunity for our people through democracy and freedom.

The currents of kinship and commerce, scholarship and science tie our countries together. They allow us to rise above differences by maintaining the long-term perspective. Every day, in myriad ways, our cooperation fortifies a relationship that matches the innumerable ties between our peoples, who have produced works of art and music, invented cutting-edge technology, and responded to crises across the globe.

Our strategic partnership is a joint endeavour for prosperity and peace. Through intense consultations, joint exercises, and shared technology, our security cooperation will make the region and the world safe and secure. Together, we will combat terrorist threats and keep our homelands and citizens safe from attacks, while we respond expeditiously to humanitarian disasters and crises. We will prevent the spread of weapons of mass destruction, and remain committed to reducing the salience of nuclear weapons, while promoting universal, verifiable, and non-discriminatory nuclear disarmament.

We will support an open and inclusive rules-based global order, in which India assumes greater multilateral responsibility, including in a reformed United Nations Security Council. At the United Nations and beyond, our close coordination will lead to a more secure and just world.

Climate change threatens both our countries, and we will join together to mitigate its impact and adapt to our changing environment.

We will address the consequences of unchecked pollution through cooperation by our governments, science and academic communities.

We will partner to ensure that both countries have affordable, clean, reliable, and diverse sources of energy, including through our efforts to bring American-origin nuclear power technologies to India.

We will ensure that economic growth in both countries brings better livelihoods and welfare for all of our people. Our citizens value education as a means to a better life, and our exchange of skills and knowledge will propel our countries forward. Even the poorest will share in the opportunities in both our countries.

Joint research and collaboration in every aspect—ranging from particles of creation to outer space -- will produce boundless innovation and high technology collaboration that changes our lives. Open markets, fair and transparent practices will allow trade in goods and services to flourish.

Our people will be healthier as we jointly counter infectious diseases, eliminate maternal and child deaths, and work to eradicate poverty for all. And they will be safer as we ensure the fullest empowerment of women in a secure environment.

The United States and India commit to expand and deepen our strategic partnership in order to harness the inherent potential of our two democracies and the burgeoning ties between our people, economies, and businesses.

Together we seek a reliable and enduring friendship that bolsters security and stability, contributes to the global economy, and advances peace and prosperity for our citizens and throughout the world.

We have a vision that the United States and India will have a transformative relationship as trusted partners in the 21st century. Our partnership will be a model for the rest of the world.

Global Footprint : Living Planet Report : WWF.

The Living Planet Report is available at: http://ba04e385e36eeed47f9c-abbcd57a2a90674a4bcb7fab6c6198d0.r88.cf1.rackcdn.com/Living_Planet_Report_2014.pdf

Humanity's demand on the planet is more than 50 percent larger than what nature can renew,

according to Global Footprint Network's latest data, published in the 2014 edition of the Living Planet Report. The biennial report, produced by WWF in collaboration with Global Footprint Network and the Zoological Society of London, was launched today in Geneva, Switzerland.

Released just over a week after the UN Climate Summit in New York City and massive marches around the world, the report shows that for the past 40 years, humanity's demand on nature has exceeded what our planet can replenish. During the same period, vertebrate wildlife populations have declined on average by more than half, as measured by the Living Planet Index.

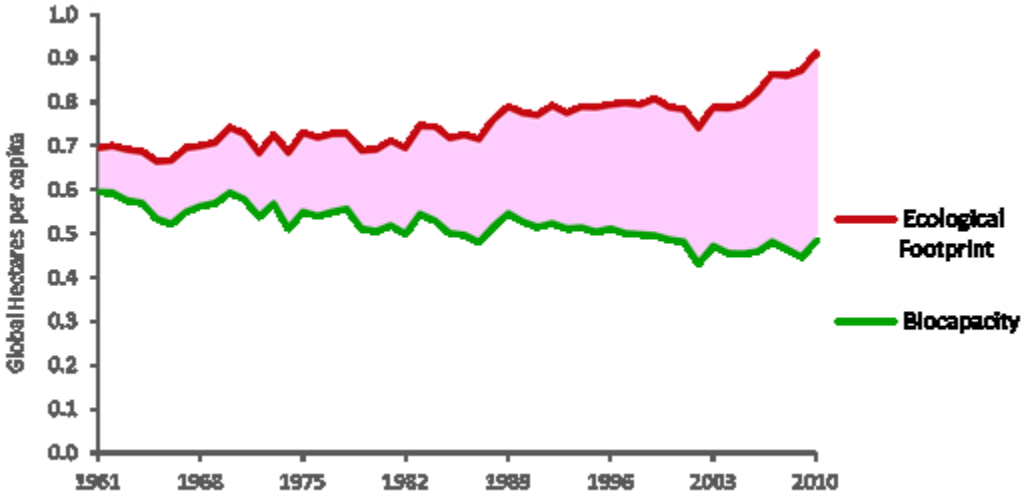
"It is no coincidence that our Ecological Footprint has climbed while biodiversity has plummeted. Overshoot is a core pressure on biodiversity, and WWF is the leading conservation organization recognizing and addressing this link," said Mathis Wackernagel, President and Co-founder of Global Footprint Network. "Living within the budget of nature is not just beneficial for our own welfare and resilience but also for the well-being of countless other species on our planet."

According to Global Footprint Network's calculations, **it would take 1.5 Earths to renew all the ecological services humanity demands: food and fiber production, accommodation of built structures as well as the sequestration of CO2 from fossil fuel burning.**

In other words, it now takes more than a year and six months for Earth to replenish what humanity demands in one year. Global overshoot is possible because we can cut timber more quickly than trees regrow, pump freshwater faster than groundwater restocks, and release CO2 faster than nature can sequester it.

While humanity's cropland and fishing Footprints have increased, carbon has been the dominant component of humanity's Ecological Footprint for more than half a century. And for most years, it has been on an upward trend.

Carbon accounted for more than half the global Ecological Footprint, at 53 percent, in 2010, the latest year the most complete dataset is available. Land used for food production is another major factor in humanity's increasing Footprint. The Figure below tracks the per-person resource demand Ecological Footprint and biocapacity in India since 1961. Biocapacity varies each year with ecosystem management, agricultural practices (such as fertilizer use and irrigation), ecosystem degradation, and weather, and population size. Footprint varies with consumption and production efficiency.



Links of the latest issues of monthly newsletters released by: www.ThinktoSustain.com :

Climate Change Newsletter; September 2014 Issue:
http://news.thinktosustain.com/newsletter/climate-change-newsletter-49.html

Corporate Sustainability Newsletter; August 2014 Issue:
http://news.thinktosustain.com/newsletter/corporate-sustainability-newsletter-42.html

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NASSCOM Foundation: Announcement of the launch of the NASSCOM Social Innovation Forum 2015 !

The Forum is a technology for good platform which will identify and support innovations that leverage Information Communication Technology (**ICT**) to address critical social problems and foster inclusive development in India.

Applications are now open for the challenge! The forum is **inviting applications** from six categories; Not-for-profit, Social enterprise, Corporate - CSR, Corporate – Responsible Business, Government/ Multi-stakeholder partnership, Students, Individual and Groups.

Winners will be recognized on a national platform, get the opportunity to network and connect with leaders from the IT-BPM Industry and receive support in the form of funding and mentoring. For more details visit: http://www.nsif.in/

INVITATION: TARAgram Yatra 2014. 13-16 October, 2014

The focus of the Yatra this year is to look at transitions required for India to respond to the challenges to respond to the post 2015 sustainable development agenda.
The Yatra this year is designed to bring together themes that may potentially of interest to members of the Climate Change Community, SOLUTION EXCHANGE. The biodiversity and livelihoods theme explores work being done by the Keystone Foundation, the green affordable housing looks at low carbon pathways in a highly urbanising world and will visit Kerala to explore the work of Habitat Technology Group, the mainstreaming climate in development planning theme will visit Orchha to discuss Village and District planning processes in light of climate vulnerabilities and the urban water theme will look at drinking water quality, access and sustainability issues in Delhi.

For further details please contact Kriti Nagrath at: kriti.nagrath@gmail.com

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The revised CPHEEO Solid Waste Management manual to be released soon!

The article is available at: http://southasia.iclei.org/resources/news/article/strengthened-institutional-structures-appropriate-technology-the-revised-cpheeo-solid-waste-manag/

ICLEI South Asia is supporting the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, under their Indo-German Environment Partnership (IGEP) Program, in revising the existing CPHEEO manual on municipal Solid Waste Management (SWM) in order to better support

political decision-makers, administrative staff, supervisors and service providers in implementing an integrated municipal solid waste management system throughout the country. ICLEI South Asia has been identified for supporting this process in the role of a national expert.

The first edition of the Manual was released by the MoUD in the year 2000 along with the Municipal Solid Waste (Management & Handling) Rules, 2000. After fourteen years, the Ministry of Urban Development recognized the need for the Manual to be updated to include new technologies and strengthened institutional structures in order to move towards sustainable waste management and is therefore being supported by the GIZ-IGEP programme in its revision.

"With rapid urbanization and changes of lifestyles, MSW has become a pressing problem resulting in severe environmental deterioration and aesthetic concerns. The estimates show that approximately 80% of the waste is being dumped in open spaces, posing a serious health hazard to citizens. The need of the hour is to adopt a financially sustainable and economically viable model for managing solid waste", said Mr. Pramod Kumar, Director, MoUD, highlighting the importance of and need for a solid waste management manual.

The draft manual was discussed in several rounds of meetings with the Expert Committee, the working groups and with different stakeholders for arriving at a draft document for the GIZ team and submitted to the CPHEEO, MoUD, for further deliberations and finalization.

Based on discussions and suggestions from the MoUD, the draft revised manual will now be divided into three parts. Part I is the overall summary of the manual and provides an overview for decision makers while Part II is the main manual with 7 chapters and is comprehensive and addresses technical, managerial and institutional aspects of Municipal Solid Waste (MSW). Part III of the manual shall include all related annexures.

During the national stakeholder workshop, each chapter in the Draft Manual was presented to the audience by the GIZ Team and discussed upon.

The key messages and innovations of the revised manual include:

◦The manual focuses on waste minimization, and waste recycling, promoting the concept of Extended Producer Responsibility (EPR). The revised manual clearly mandates the source segregation of waste into two fractions - dry and wet and a third fraction which includes domestic hazardous waste, where possible.

◦The manual focuses on institutional strengthening, emphasizes data collection and analysis which is a pre-requisite for financial sustainability of the MSWM system. In the technology overview, the revised manual discusses the feasibility of adopting different collection/treatment and processing technologies. Options for collection, transportation, processing and disposal including preferred options such as recycling options, composting of biodegradables and co-processing of the dry fraction of MSW are all described in detail.

◦Guidance on centralized vs. decentralized MSWM is given. The manual also clearly addresses the integration of informal sector right from the planning stage.The strong need to generate awareness through IEC activities and the importance of training to strengthen institutional capacities are also discussed.

The draft manual is currently being revised to include relevant suggestions from the Ministry and other stakeholders.

Many thanks to all who contributed to this issue of Update!

If you have items to feature in the Updates, please send it to Solution Exchange for the Climate Change Community at : se-clmt@solutionexchange-un.net.in

Solution Exchange is a UN initiative for development practitioners in India. For more information please visit www.solutionexchange.net.in