Climate Change Community

Community Update
No. 64: 1st May, 2015
In this Issue

FROM THE RESOURCE PERSON

Dear Members,

We are presenting the 64th Edition of the Community Update, today.

We thank you for your continued cooperation and support to this unique knowledge sharing platform facilitated by UNDP.

I would like to reproduce below, the message of the Secretary-General of the United Nations on International Mother Earth Day : 22nd April:

"Each year, on 22nd April, Mother Earth Day, we reflect on our relationship with the planet that supports us. The air we breathe, the water we drink and the soil that grows our food are part of a delicate global ecosystem that is increasingly under pressure from human activities.

From tropical deforestation to depleted ocean fisheries, from growing freshwater shortages to the rapid decline of biodiversity and increasingly polluted skies and seas in many parts of the world, we see the heavy hand of humankind.

As our population grows we have to recognize that our consumption of the planet's resources is unsustainable. We need a global transformation of attitude and practice. It is especially urgent to address how we generate the energy that drives our progress.

Burning fossil fuels is the principal cause of climate change, which increasingly threatens prosperity and stability in all regions. That is why world leaders have pledged to reach a global legal climate agreement in 2015.

Action on climate change presents multiple opportunities to reset our relationship with Mother Earth and improve human well-being, especially for the poorest and most vulnerable.

Sustainable energy for all can increase health, wealth and opportunity for billions of people, as can climate-smart agriculture, more efficient cities and better managed and protected forests.

To generate ambitious action on the ground and raise momentum for a new climate treaty in 2015, I am convening a Climate Summit in New York on 23 September this year. I am inviting Heads of State and Government along with private sector and civil society leaders to showcase initiatives and forge alliances that can help launch a sustainable future.

But they need support and encouragement, for change is never easy. So on 22nd April, International Mother Earth Day, I appeal to all people everywhere to raise their voices.

Speak out on behalf of this planet, our only home. Let us care for Mother Earth so she can continue to care for us as she has done for millennia". The above message of the Secretary General of the UN is available at: http://www.un.org/sg/STATEMENTS/index.asp?nid=7609 .

Last Saturday's Nepal earthquake has destroyed housing in Kathmandu, damaged World Heritage sites, and triggered deadly avalanches around Mount Everest. The death toll is already reported as being in the many thousands. Given past experience, it would not surprise if it were to reach the many tens of thousands when everyone is accounted for.

Nepal is particularly prone to earthquakes. It sits on the boundary of two massive tectonic plates – the Indo-Australian and Asian plates. It is the collision of these plates that has produced the Himalaya mountains, and with them, earthquakes.

Research in the Himalaya is beginning to shed light on these massive processes, and understand the threat they pose to local people.

The April 25 quake measured 7.8 on the moment magnitude scale, the largest since the 1934 Bihar quake, which measured 8.2 and killed around 10,000 people. Another quake in Kashmir in 2005, measuring 7.6, killed around 80,000 people.

These quakes are a dramatic manifestation of the ongoing convergence between the Indo-Australian and Asian tectonic plates that has progressively built the Himalayas over the last 50 million years.

They are but one reminder of the hazards faced by the communities that live in these mountains. Other ongoing hazards include floods and monsoonal landslides, as exemplified by the Kedarnath disaster of 2013 which killed more than 5,000 people.

We floated a query cross-posted with the Disaster Management Community for inputs regarding the compendium of good climate adaptive practices for the semi-arid and mountainous regions of India based on good practices in other major developing/developed economies having similar geo-political conditions, which a member is preparing at the moment.

The Central Government and State Governments along with various UN agencies, International and Local Non-Government organizations have undertaken number of measures to address climate change. They have also identified relevant strategies applicable at the local level. However, the essential and relevant sources of information are not accessible at a single reference point. Therefore, it is planned to develop a compendium of good climate adaptive practices that could capture the following sectors: Water, Agriculture, Forestry and Disaster Risk Reduction and Energy.

Apart from the above mentioned areas, the compendium could add more areas based on the suggestion of the members of the Disaster Management and Climate Change Communities.

The compendium is planned to be used as reference material and for practitioners to adopt successful climate change adaptation and resilience strategies in Indian conditions for the above sectors.

Hence, members are requested to provide inputs on **Successful initiatives and good practices undertaken by the Government and Practitioners on Climate Change Adaptation and Resilience strategies.**

In addition, members may kindly share references, web links and contact details of persons working in the area of Climate Change Adaptation and involved in developing Resilience strategies. The query closed on April 21st, 2015. However, further inputs from members are still welcome.

There is an ongoing query by one of our members (also cross-posted with the Disaster Management Community) who on behalf of the Government of Assam is preparing a document for availing a loan for a fisheries project in Assam as the project funded by World Bank `Assam Agriculture Competitiveness` is ending in July 2015 after implementation for about 10 years .

The major objective of the Assam Agriculture Competitiveness project was to enhance productivity of Agriculture, Horticulture, Livestock and Fishes. I was involved in technical support as Fisheries Expert for development of this component. The project spent about US$ 100 million for the fisheries component and about 75,000 fish farmers were benefited by the project activity of fish farming. Around 6,125 hectare water area was brought under improved fish farming by forming 3162 fish farmers groups known as Common Interest Groups (CIGs). About 25 Focus Production Groups (FPOs) were formed for fish business mainly for fish seeds, feed etc. and are registered under Cooperative Societies Act.

The project has shown good results for integrated fish farming with livestock, especially pig-cum fish farming, fish with horticulture on bunds, paddy-cum fish farming etc. The productivity enhanced from 500 kg pre-project /hectare to 3500 kg /ha /annum under small ponds and for more than five hectare community tanks. The project produced fish of about 2.53 lakhs tons in last ten years with revenue of Rs.134.45 crores. The project reached out to a large number of landless and marginalized farmers and women.

On the policy front, the project supported the preparation of Assam Fish Seed Act 2010, Assam Fish Seed Rules and facilitated strengthening of the existing Assam Fisheries Rules of 1953 to provide an enabling environment for the fishing community to gain long term lease access to their local waterbodies. The impact is very positive and encouraging and consequently, the Assam Government is interested in continuing the support to fisheries sector and plans to avail loan from the World Bank for the purpose. While designing the project, the importance of Disaster Risk Reduction and Climate Change Adaptation needs to integrated, as it will lead to Community Resilience of the fishing community. Hence, suggestions are sought from members of both the Climate Change and Disaster Management communities on the following issues:

- **How can ponds and tanks be created to facilitate fishing to reduce the risk to floods in the state of Assam and consequently enhance livelihood of the poor?**
- **What are the Disaster Risk Reduction activities that can be taken up with the fishing community to reduce their vulnerability to floods?**

In addition, please share Climate Change Adaptation measures, which can be integrated into the project design to reduce the impact of climate change on the livelihood of the fishing community in Assam.

We look forward to your cooperation, inputs and insights. We also urge you to provide all possible support to the tragedy that our neighbor, Nepal is facing at the moment.
Thanks & best regards,
Ramesh Kumar Jalan
Resource Person & Moderator
Climate Change Community,
Solution Exchange-India
United Nations Development Programme, New Delhi

DEVELOPMENT IN THE SECTOR

Smart E-book of the Ministry of Environment, Forest and Climate Change

It was launched by Shri **Prakash Javadekar,** Minister of State (IC) for Environment, Forest & Climate Change, Government of India. The first of its kind Smart e-book showcases the initiatives of the Ministry.

It is available at: http://www.moef.gov.in/content/smart-e-book-ministry .

This e-book gives maximum impact with least text using videos, audio and images. It is also easily readable on all mobile platforms such as iOS, Android and Windows.

The entire e-book is friendly for specially-abled users and it allows users to share its content on various social media platforms such as Facebook, Twitter and Google Plus.

We are sure that you will find it useful and forward the above link to your colleagues, friends and associates.

'ROLLING IN PROFITS: A reference manual on energy-efficient technologies for profitable steel rolling' is aimed to provide a simple ready reckoner of energy efficiency technologies for rolling mills with reheating furnace using pulverized coal as fuel.

The targeted audience for this publication is small unit owners; engineers and foreman.

The publication focus on three key areas where energy efficiency in a steel rerolling mill can be achieved firstly fuel preparation, secondly reheating furnace and thirdly the rolling.

It describes the critical components/areas of rolling mill such as coal procurement, energy efficient pulveriser, swirl burners, recuperator, roll cooling, anti-friction roller bearings, universal spindles & couplings. It provides cost-benefits and the pay-back on investment.

The manual is available at : http://www.in.undp.org/content/dam/india/docs/Rolling%20in%20profits.pdf .

Prime Minister Narendra Modi's Swachh *Bharat* Abhiyan has found an ardent supporter in 15-year-old Priyanka Mathikshara.

An aspiring engineer**, the *Chennai* resident has designed a 35 kg-public dustbin, which has three modules — a solar trash crusher, a level communicator and a solar street light.**

"It crushes the garbage, allowing maximum capacity usage. Once it is full, it sends a message to the nearby dump yard to clean it, so there is no overflowing of garbage. It also features a Wi-Fi system and a CCTV camera," says Mathishara. The design was developed during her stay at Rashtrapati Bhawan, where she was one of the 10 innovators participating in the two-week residency programme that culminated on March 21.

Mathikshara's innovation could work well with 15-year-old Diptanshu Malviya's Wrapper Picker. This motorised device picks up littler and collects it in a storage bin.

There are medical innovations too. If Shantanu Pathak, 27, has designed a mobile pregnancy care solution programme that identifies complications in high-risk pregnancies, **Anand TS, 28, has a solution for transfemoral prosthesis — an indigenous polycentric knee for increased stability on uneven surfaces.**

A student at IIT-Mumbai, Vikas Karade has a software/algorithm that can generate 3D model of bone shapes from its 2D X-ray image. It is an alternative to the conventional method of building 3D models from CT scans.

Described by President Pranab Mukherjee as "creative minds" and "doers", the participants of the residency had two authors and two artists, apart from the innovators. **This is the fourth residency organised under the programme initiated by Mukherjee in December 2013.**

"We got help from technical experts, who guided us through the glitches and suggested cost-cutting measures," says Sarthak Shukla.

Youngest member of the residency, the 14-year-old Ghaziabad boy has a solution for easy access to items kept in the refrigerator — replace the rectangular shape with a cylindrical one and fixed rotatable trays inside.

Rising to the Call: Good practices of climate change adaptation in India has been published by CSE in December, 2014.

This book can be obtained from: http://csestore.cse.org.in/books/greenpolitics/rising-to-the-call.html

The above book is a collection of case studies from all over India on climate variability, the impact it has on lives and livelihoods, and how communities are responding and successfully adapting to them.

Changes in climate are having serious impacts on natural and human systems across the world. Temperatures have risen, major crops in tropical and temperate regions are seeing a decline in productivity. Changes in rainfall patterns and melting snow and ice have altered hydrological systems, affecting the quality and quantity of water resources in the region.

Weather extremes, such as heat waves, droughts, floods, cyclones and wildfires, have also gone up. Ill health is expected to increase in many regions, especially in developing countries with low incomes.

Adaptation is necessary to manage the risks posed by climate change. Rising to the Call is a collection of stories from all over India about the nature of extreme weather events experienced, how communities are responding and successful adaptation practices emerging out of these experiences.

It studies the impacts and replicability of the different approaches to adaptation and brings out valuable insights for developing countries in the region and beyond.

Five regions are considered: **The Indian Himalayan region, the Indo-Gangetic plain, the desert region, central and peninsular India, and coasts and islands.**

Case studies highlight crop diversification, payment for eco-system services, flood-proof housing,

restoration of watersheds, protection of mangroves, groundwater management, weather forecasting and advisory services, flood-resistant rice, and more.

Climate change has begun to hurt India. Cyclone Phailin (2013) alone led to a loss of more than Rs 20,000 crore.

According to the Government of India the expenditure on adaptation to climate variability in 2012 exceeds 2.6 per cent of the GDP, with agriculture, water resources, health and sanitation, forests, coastal zone infrastructure and extreme events being specific areas of concern.

These costs will only rise with increasing frequency of extreme weather events. An Asian Development Bank report suggests that the cost of adaptation would rise to about 10 per cent of the GDP in the near future.

India is home to 33 per cent of the world's poor – this is more than all the poor people of all the Least Developed Countries put together. These people are mostly dependent on agriculture, forest produce, fisheries and animal husbandry, which are already dealing with high levels of climate variability, which will worsen with climate change, exacerbating the vulnerability of these poor and impoverished in India.

This book is a first-of-its kind attempt to examine adaptation with an ear to the ground, with valuable insights for developing countries in the region and beyond. It looks into why some actions worked, and what were the challenges faced.

Magical Bucket: Helping to Create a Clean, Green City

Surabaya, one of the major cities in Indonesia is being transformed from a city surrounded by garbage into a beautiful green city through citizens' efforts. This transformation started from the advent of a magical technology.

The article is available at: http://miracle-kids.net/en/report/2015/rpt_id000242.html .

Waste is normally considered bothersome. However, the volume of waste from households can be reduced with simple ideas. For example, organic waste can be used as compost when segregated from non-biodegradable or inorganic waste.

Surabaya has a population of over 3 million, wherein citizens used to be annoyed by a large volume of waste generated from households. To solve this problem, a local environmental group, Pusdakota, launched a project to compost watermelon rind, mango peel, and banana peel, which account for half of the total volume of household wastes. The segregated wastes are then decomposed by bacteria and turned into an organic fertilizer. With this method, however, it takes several weeks to degrade the waste. In warm or hot climate countries like Indonesia, garbage easily gets spoiled, emitting bad odor and becoming a breeding site for pests.

In order to overcome this disadvantage, a Japanese researcher has introduced a new composting method to Surabaya in cooperation with its citizens and Pusdakota members. The new method uses the functions of fermentative bacteria. To carry out this method, ordinary bacteria, which can be seen in every field, are collected and proliferated. The bacteria proliferated in this way are treated with high temperature, so that spoilage bacteria are killed while fermentative bacteria survive. Using the fermentative bacteria, organic waste placed in a container is completely decomposed in a couple of days. For this reason, this container is often called "magical bucket."

In the magical bucket, organic waste is gone before being spoiled and generates compost instead. This bucket has become popular among households in the city. Citizens began to actively separate organic waste from other waste, which has resulted in reducing the total volume of garbage in the city.

The appearance of Surabaya has now changed. The city became greener than before, because the composts generated through this method is used to fertilize trees and other plants in the city's parks, streets, and gardens. Indeed, new ideas can help transform problems into useful things.

Announcements

Survey on institutional mainstreaming of climate change adaptation.

The Survey Link is available at: https://www.surveymonkey.com/r/CCAMainstream

Greetings from IGES, Japan! This has reference to an ongoing project on adaptation effectiveness being implemented by IGES in collaboration with research partners in the Gangetic Basin countries in South Asia. There is a growing necessity to **identify effective climate change adaptation (CCA)** options and to mainstream CCA into institutions to harness the synergies between CCA, disaster risk reduction and development. Keeping this need in view, the project intend to develop a means to measure the adaptation effectiveness (an index and indicators) for agriculture and allied sectors in a participatory manner and to measure the extent of mainstreaming the CCA into institutions.

Objectives: At this stage of the project, we are conducting an online survey to measure the extent of mainstreaming of CCA into institutions. The objectives of the survey are to: a. assess the extent of mainstreaming CCA into institutions, b. understand the bottlenecks limiting the mainstreaming, and c. identify capacity needs for enhancing the mainstreaming. **Though the survey is aimed at organizations with presence in the Gangetic Basin countries (Bangladesh, India and Nepal), we welcome a broader representation as well.**

Survey Link: https://www.surveymonkey.com/r/CCAMainstream

Structure of the questionnaire: The questionnaire consists of 4 sections divided into several pages:
a. About your organization
b. About yourself
c. Assessing the level of institutional mainstreaming
d. **Bottlenecks and suggestions.**

Assessing the level of institutional mainstreaming is done in six areas (policy, strategy, planning, project cycle management, external relations and organizational capacity) and each area will be assessed on a scale of I-IV wherein I is the least level of mainstreaming and IV is the highest.

Who can participate? Including, but not limited to: Research institutions, NGOs, governments, private sector, bi- and multi-lateral agencies, universities, donors, banks, UN organizations etc.

Number of responses: One response per organization will suffice; we are aiming at large representation of institutions with presence in, but not limited to, South Asia.

Time taken and other helpful guidelines: Takes 10-15 min. We would request to fill when

you have sufficient time to concentrate and with good internet connection.

How the results will be used: The results will help us to understand the current level of mainstreaming of climate change into institutions, bottlenecks faced for mainstreaming and the capacity needs. This information will be helpful for identifying interventions (technological, financial and human resource capacities etc.) to help enable the mainstreaming.

Contact for further clarifications: nre-info@iges.or.jp or prabhakar@iges.or.jp

We will be very grateful if you could kindly pass on this request to other institutions known to you for greater reach.

Thanks a lot in advance for your kind consideration and valuable time.

Current Openings with 100 Resilient Cities.

Further details are available at: http://www.100resilientcities.org/pages/jobs#/-_/ .

Team members at 100 Resilient Cities work in a fast-paced and international environment, collaborating closely with cities, co-workers, and resilience experts all over the world to build the global practice of resilience among governments, NGOs, the private sector, and individual citizens.

Working at 100 RC requires a rare mix: a strong commitment to the mission of building urban resilience, the ability to thrive under dynamic conditions, appropriate international sensitivity, and the capacity to drive progress while managing multiple responsibilities.

To apply for a position with 100RC, please follow the instructions detailed in the following **Current Openings/Job Postings:**

Associate Director, City Relationships

- Associate Director, City Relationships – South/Southeast Asia at 100 Resilient Cities
- Associate Director, City Relationships – Latin America at 100 Resilient Cities
- Associate Director, City Relationships – EMEA at 100 Resilient Cities
- Associate Director, City Relationships – US Domestic at 100Resilient Cities

Associate, City Relationships

- Associate, City Relationships – All Regions and Cities at 100 Resilient Cities

Program Manager, City Relationships

- Program Manager, City Relationships

Knowledge

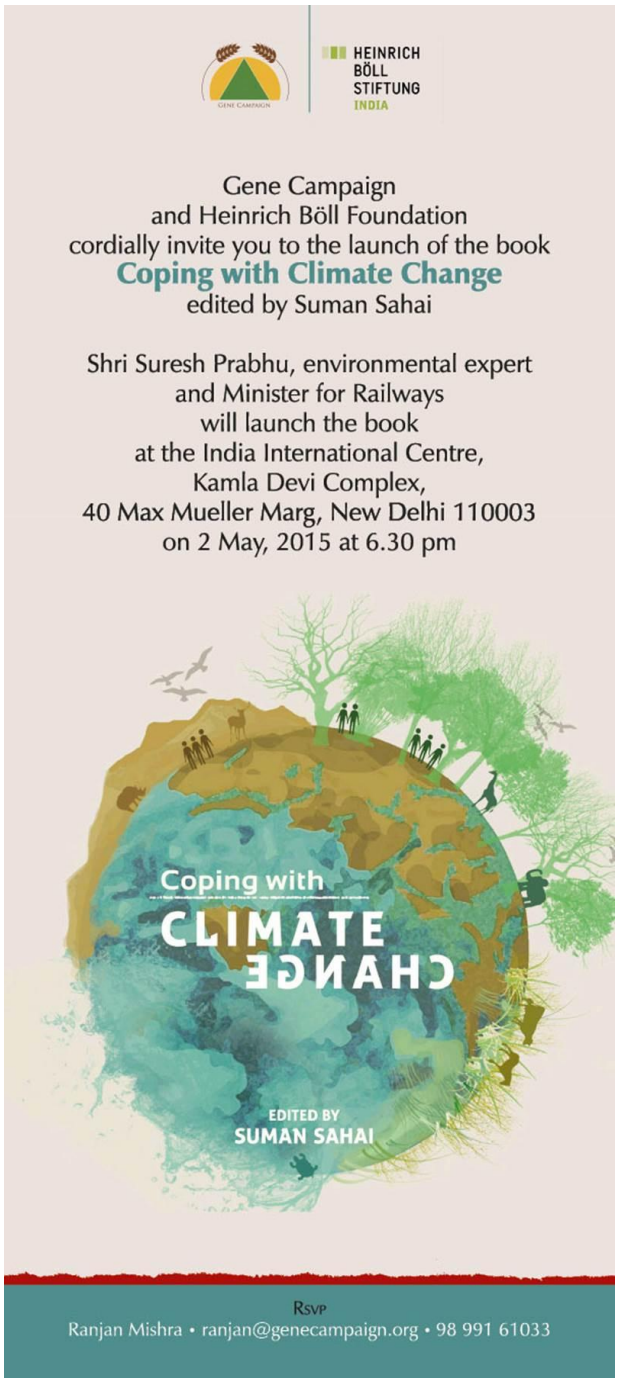
- Associate Director of Knowledge and Impact

Strategic Partnerships & Solutions

- Associate Director, Partner Development
- Associate Director, Service Implementation

Global Communications

- Senior Manager



In 2015, let's redefine what progress looks like. It's Our Turn to Lead

Sustainable Development

One billion people still live on less than $1.25 per day. One of the biggest controversies over a treaty has been the issue that developing countries don't want to give up economic growth no matter the environmental cost, since the US and other developed countries got to pollute their way to the top… read more

Those most affected by climate change are low-income or marginalized populations. The Pacific Island nation of Kiribati, for example - one of the poorest places on Earth — was the first country to declare its land uninhabitable due to sea level rise from climate change, and has asked for help in evacuating its population. Even more people will fall into poverty and food will become scarcer if we don't stop our misuse of the planet.

Eradicating global poverty is possible but only in a world where all countries commit to a low carbon future. We've got the technology. All we need is the will. Sustainability can be the answer to development, the only answer.

Grassroots : Making a Difference
Over 400,000 people came together this past September in NYC for the biggest climate march of all time. Their call for action from the city streets reverberated around the world. They rallied for their leaders to recognize the catastrophic implications of climate change.

Their call did not fall on deaf ears. As Obama said in his speech at the NYC Climate Summit that week, "We cannot pretend we cannot hear them. We must answer their call." Let's make 2015 the year when our world leaders pay attention and answer our call.

Time for a Treaty
Over the past 20 years, there have been a series of failed attempts to create an effective international treaty on climate change mitigation. In 1997, the first major international agreement was passed, The Kyoto Protocol. The US—one of the top polluters—didn't ratify. Since then, many Summits and many efforts to come to agreement—Rio, Copenhagen—have ended in a flop. (see more)- But Paris must be it! Governmental, business, and non-profit leaders must come to an agreement that will cut our emissions and limit our warming to 2°C.

Let's make 2015 the year when our leaders pass a historic binding, global climate treaty.

In observance of Earth Day 2015, today, UNESCO releases its new film Changing Climate, Moving People made by The Energy and Resource Institute (TERI). Changing Climate, Moving People is a 35-minute film, which looks at disaster and climate stress related migration from **three different regions in the country – Uttarakhand, Bundelkhand and Odisha.**

These three states are already amongst the leading sources for internal migration and have been hit by extreme weather events like floods (Uttarakhand), drought (Bundelkhand region) and cyclones (Odisha), which are likely to become more recurrent and stronger as a result of climate change. The film is divided in three parts: each part is looking at a specific region and is investigating the nature of migration from this region.

The film`s objective is to increase awareness, engagement and advocacy on the intertwined and complex linkages between moving people and changing climate, and to support the mainstreaming of migration into climate change policies. This has been built on from the policy recommendations of the National Workshop on Migration and Global Environmental Change in India jointly organized by UNESCO and the Government Office for Science, Foresight (GOS), United Kingdom, in Delhi last year . The Summary Report can be downloaded here: http://unesdoc.unesco.org/images/0022/002285/228502e.pdf .

"People do migrate and will continue to do so in the future. It is primarily the Government`s

responsibility to plan for current and future migration and to take into account the impact of climate change on population mobility in India" stresses Mr Shigeru Aoyagi, UNESCO Director and Representative for Bhutan, India, Maldives and Sri Lanka.

The approach of Changing Climate, Moving People is not limited to understanding migration as a demographic process which may be induced by climate change: the film seeks to show how climate change is and will contribute to the multi-causal nature of migration, and establish the triggers behind migrants' choice to migrate or not to migrate while living in areas affected by environmental change. How do households, communities and individuals decide to migrate? What is the threshold or the build-up of push and pull factors that lead to the decision of migrating? To answer these questions, Changing Climate, Moving People follows the stories of the migrants and their families, to establish the triggers behind their choice to migrate.

Avinash Rout, one of the migrants interviewed in the film explains how whether patterns have an impact on his life. "We grow rice and vegetables. Sometimes the crops get damaged by cyclones and floods, at other times by drought. All we grow is just about enough for us. My wife stays with me at home while my children go outside to study and now they are working too. My son sends me 5000 rupees a month." But not everyone is able to migrate, just like Satti Devi who says "Where can I go? My children are young and there is no one else to look after them".

Today, on Earth Day, the film is accessible through:
UNESCO New Delhi website : http://www.unesco.org/new/en/newdelhi
UNESCO Facebook page : https://www.facebook.com/unesconewdelhi
UNESCO Gender Youth Migration (GYM) portal : http://www.solutionexchange-un-gen-gym.net/

FILM SYNOPSIS
Title: Changing Climate, Moving People (UNESCO)
Film maker: Mr. Saransh Sugandh, TV and Film Unit, The Energy and Resources Institute (TERI)
Duration: 36 minutes

India is highly vulnerable to climate change. And so every crop failure, drought and flood - among many other triggers - pushes many across India to leave their homes, sometimes permanently, and relocate to an entirely different state or region.

As the country sees the monsoon changing its pattern, there are regions that get hit by drought while others reel under floods. There are coastlines which are prone to cyclones. Changing Climate, Moving People looks at disaster or climate stress related migration from three different regions in the country – Uttarakhand, Bundelkhand and Odisha – which have been hit by floods, drought and cyclones.

The **first part of the film – A River Comes Down** – focuses on the Himalayan state of Uttarakhand where the monsoons have been creating havoc year after year; the second part of the film – **The Dry Heat – tells the woe of Bundelkhand**, a semi-arid dry land that has seen a continuous drought period from 2003-2009; the final part of the film – When a Storm Surges in – looks at Odisha's coasts where forests, crops and infrastructure were swallowed by a monster cyclone in 2013, Phailin.

Five priorities for the UN Sustainable Development Goals

The article is available at: http://www.nature.com/news/policy-five-priorities-for-the-un-sustainable-development-goals-1.17352?WT.ec_id=NATURE-20150423

The United Nations is deliberating in New York how to implement the 17 Sustainable Development Goals (SDGs) that it will launch formally in September. Science must be at the heart of its plans. The SDGs place greater demands on the scientific community than did the Millennium Development Goals (MDGs), which they replace. Addressing climate change, renewable energy, food, health and water provision requires coordinated global monitoring and modelling of many factors — social, economic and environmental. **Much remains to be done: the 17 goals comprise 169 targets, 91 of which need to be specified in more detail.** Metrics need to be developed to measure progress towards the targets on local, national, regional and global levels and across sectors. Monitoring and evaluation procedures and standards need to be set up.

To guide action, the connections between targets need to be better understood. Some synergies and trade-offs depend on scale — for instance, greater fertilizer use might increase food production and incomes locally, but would exacerbate pollution. Climate-change mitigation tends to happen at a local scale, but the consequences are global.

We lay out below five priorities for how the scientific community should participate in this process, based on the findings of a scientific review of the draft SDGs conducted by the International Council for Science (ICSU) :

1. **Devise metrics.** Scientists, social scientists and economists need to design a set of practical indices for tracking progress on each SDG. Ensuring access to sustainable and modern energy for all (goal 7), for example, will require indicators of improvements in energy efficiency and carbon savings from renewable-energy technologies (see go.nature.com/pkij7y). Parameters other than just economic growth must be included, such as income inequality, carbon emissions, population and lifespans. Existing methodologies can form the starting points, including environmental impact assessment, natural-asset valuation, cost–benefit analysis and life-cycle costing. Ambiguous terms in the wording of the goals, such as 'sustainable', 'efficient' and 'substantial', need to be defined quantitatively so that the goals can be measurable, comparable and achievable. Scientific analyses of the effectiveness of different scenarios should inform the metrics.

2. **Establish monitoring mechanisms.** Governments and researchers must decide which values need to be tracked, and set up systems to acquire the data. Quantities such as water and energy consumption, emissions and health impacts need to be monitored, as do scientific variables such as water pH, turbidity and metal concentrations. Social scientists should propose what sorts of data on behaviour, values and beliefs should be collected and analysed, how and by whom. Analysis and interpretation must be provided at the same time, ideally by an independent government-backed organization, to consider the data in context. In water-quality monitoring, for example, measurements of physical, chemical and biological features such as pH and chemical oxygen demand are compared against national or regional water-quality standards that relate to impacts on human and ecosystem health. Global collaboration between governments and scientific bodies will be essential in setting up monitoring programmes and in assisting developing nations to implement them.

3. **Evaluate progress.** Scientists should help to choose criteria — such as the water-quality standards — against which progress towards the goals is judged, based on accepted principles of good practice or governance such as social equality or cost-effectiveness. A peer-review mechanism should be established through the UN platform for intergovernmental negotiations to evaluate the performance and implementation of SDG projects and policies every 3–5 years — and suggest reforms where necessary. The Intergovernmental Panel on Climate Change, the Intergovernmental Platform on Biodiversity and Ecosystem Services and other scientific-assessment bodies should set up task forces to decide how they can evaluate relevant aspects of the goals, either by extending their remits or by sharing their experiences

with a central SDG assessment body. The SDG evaluators must also decide how to incorporate the contributions of regions, cities, companies and others into national and international pledges; consider national or local circumstances when evaluating progress; and check whether sustainable development has been incorporated into planning processes and strategies at all levels.

4. **Enhance infrastructure.** Earth observation, ground-based monitoring and information-processing capabilities need to be expanded to give better global coverage, to allow direct comparisons of data by using similar instruments, and to store, analyse and share data. Developing countries will need to collaborate with developed countries to build capacity. Much of this can be achieved if the SDG process engages with Future Earth, a ten-year initiative for global-sustainability research launched at the Rio+20 UN conference in 2012. Future Earth's observing networks, high-performance computing, Earth-system models, theoretical frameworks, data-management systems and research infrastructures need to be enhanced to track human dimensions and societal changes. The Science and Technology Alliance for Global Sustainability should help Future Earth to revise its agenda to include observations of production, consumption and urbanization. The ICSU should work with international bodies such as the World Meteorological Organization, the UN Educational, Scientific and Cultural Organization, and the UN Environment Programme to shape global monitoring networks to serve the SDGs. This will include changing the missions, objectives and targets of existing global observation systems, including those for climate, oceans and ecosystems. Space-based monitoring coupled with on-the-ground observation is crucial for tracking changes on large scales — in natural-resource availability, landscape patterns and management, and social structure. Government investments need to be maintained or increased. Data gathering using smart phones and miniature sensors can capture point-source industrial emissions, waste dumping and unsustainable consumption. Citizen science provides new opportunities. For example, starting in 2008, Beijing residents' use of Twitter to share air-pollution data obtained from home-based monitoring equipment pressured the municipality to improve its air-quality monitoring. Such actions also serve as a check on reporting bias from governments, companies and others. Geographical information systems will be needed to host and share data from the observing networks. Image processing, simulation and decision-making tools are also needed to support sustainability planning, management and enforcement. These should be openly accessible so that citizens can make informed decisions about, say, how to improve air quality or ocean health. Businesses can track their environmental impacts and project future supplies. Developing countries will need to collaborate with developed countries to build capacity in observing, data mining and statistics. Bodies such as the G20 Development Working Group and the InterAcademy Panel should help with this.

5. **Standardize and verify data.** Countries' capabilities to acquire and process economic and social data vary greatly. The likelihood of collecting wrong or useless information is high, owing to a lack of standards and consistent methods and instrumentation. Scientists and governments need to design monitoring and sampling approaches with robustness in mind, and to verify data. Cooperation among authorities and agencies is more effective if partners collect data according to agreed definitions, specifications, methodologies and formats. The Partnership in Statistics for Development in the 21st Century (PARIS21) aims to strengthen national statistical systems to monitor global goals, by promoting such shared principles. Checks must be made, for instance, by implementing complementary monitoring systems, comparing results from airborne and land-based surveillance or by inspecting data-collection methods. Shared online reporting platforms — perhaps modelled on the Google Earth Engine or the NASA Earth Exchange — should provide quality-control services for data from different sources.

All SDG data must be open access and released as soon as possible. Governments, scientists and corporations will need to commit to long-term funding for the collection, calibration and release of data sets, which should be discussed in the SDG political-negotiation process. These commitments could then be checked at the high-level political forum held every year. Sanctions such as economic penalties will need to be considered for governments and companies that do not comply.

Scientists need to support the SDGs. We must help to integrate monitoring and evaluation mechanisms into policy-making at all levels and ensure that information about our planet is easily available to all.

Apples and climate change in Kashmir. As weather warms over the years, there has been a shift in the agricultural pattern in the Himalayas, with apple cultivation gaining altitude, say experts.

The article is available at: http://www.livemint.com/Politics/I5qJce3q8892Frz1IxHL4L/Apples-and-climate-change-in-Kashmir.html .

Kashmir is known for its delicious apples. Apple cultivation is the mainstay of Kashmir's economy (along with tourism and handicrafts) with revenue of Rs.1,200 crore a year, according to the Associated Chambers of Commerce and Industry of India.

But if one refers to Sir Walter Roper Lawrence's book, The Valley of Kashmir (1895), there is no mention of apples. Lawrence served in the Indian Civil Service and was the settlement commissioner of Kashmir at the time. Lawrence writes: "In every way the most important staple in Kashmir is rice and the cultivator denotes all his energy to this crop." There is no mention of the apple in his list of altitudinal and spring crops of Kashmir valley, which included wheat, barley, opium, mustard, flax, pea, beans, maize, rice, cotton, saffron, tobacco, hop, millet, buckwheat, amaranth, pulses and sesame.

Was Kashmir's weather in the 19th century not conducive to apple growing? Experts such as Tej Partap, vice-chancellor of the Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Srinagar, admit that the climatic conditions in the states were different in those times.

Since the beginning of the Industrial Revolution, the concentration of carbon dioxide in the atmosphere has steadily increased. Published literature on climate science reveals that the atmospheric level of carbon dioxide has increased 30%, from 280 to 400 parts per million (ppm) since 1860. Tiny air bubbles trapped in an Antarctic ice core show that atmospheric carbon dioxide concentrations and temperatures from 160,000 years ago to pre-industrial times are closely correlated. Measurement of carbon dioxide concentration and temperature in recent decades confirms that carbon dioxide concentrations have risen to 400 ppm and temperatures have increased 0.5 degree Celsius (1 degree Fahrenheit) over the last 100 years.

"With increasingly warm weather there is already a noticeable change in the agricultural pattern in the Himalayas, with apple cultivation gaining altitude every few years, loss of medicinal plants and deterioration of soil quality," says Partap.

Sonam Lotus, the director of the weather office, who hails from a small village in Ladakh, a cold desert habitat, corroborates. "**As a young boy, I remember that we had no agricultural practices in our village; nothing used to grow as late as 1995, but today my village has apple orchards and other farms."**

Task force appointed to forge consensus on river interlinking. Centre appoints task force, with an aim to speed up implementation of river interlinking.

The article is available at: http://www.indiawaterportal.org/articles/task-force-appointed-forge-consenus-river-interlinking .

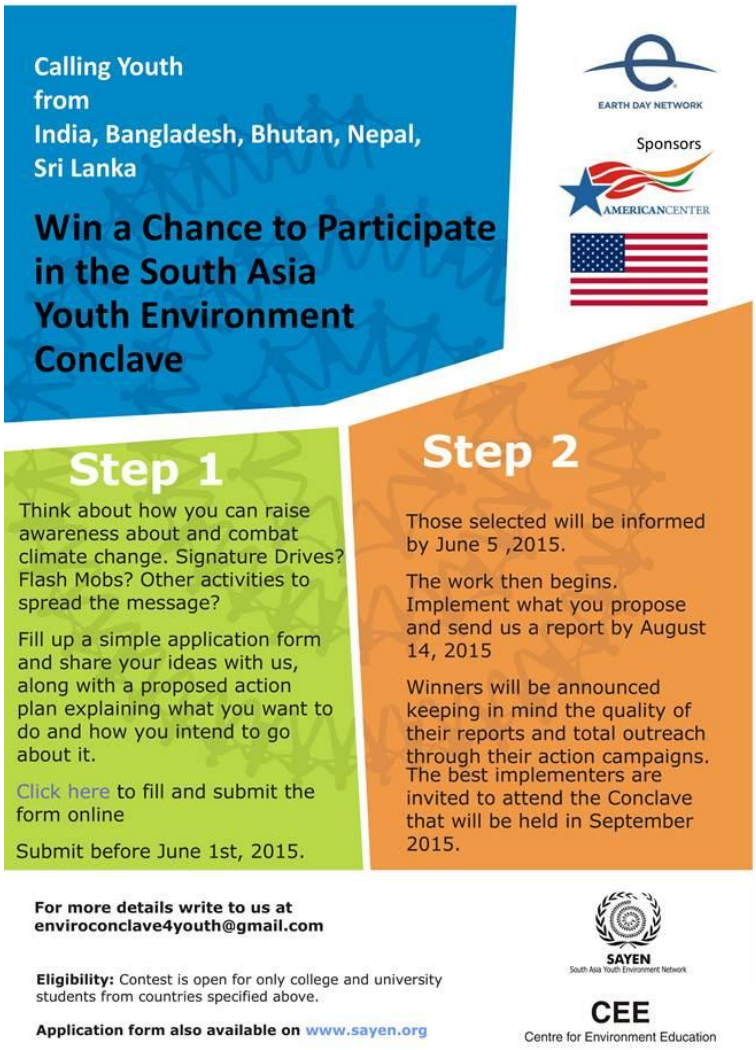
In the wake of emerging differences among the states over the interlinking of the rivers, the Centre has constituted a task force to build consensus between the states.

B N Navalawala (ex-UPSC member) is heading the task force. The task force will also look at alternative options for infeasible links in the current plan. However, the task force only comprises former and serving Government officials while no representation from the states has been considered.

Water Resource Ministry launches the Nirmal Ganga Sahbhagita
The National Mission for Clean Ganga (NMCG) has launched the Nirmal Ganga Sahbhagita scheme to develop a sustainable partnership with 118 Urban Local Bodies (ULBs) located along the Ganga. The objective of the programme is to involve more and more sectors into the Clean Ganga Mission. Along with this, the model mobile phone application was presented during the launch, which would enable the public as well as officials to upload onsite photographs of project implementation which can be viewed through the Bhuvan web portal.

Sewage collection and transport to become mandatory
In order to stop the release of untreated sewage into water bodies and groundwater, the Environment Ministry is all set to make sewage collection and transport mandatory across India. Soon a notification will be issued to all the states in this regard. Along with this, the Ministry has recommended that the state authorities prohibit the use of fresh water for all non-potable purposes such as industrial process, gardening, cleaning of railway tracks and irrigation.

Forest clearance denied to two hydel projects in Arunachal
The Forest Advisory Committee (FAC) of the Union Ministry of Environment and Forests has denied clearance for two hydropower projects (Siyom and Naying) proposed on the tributaries of the Siang river in Arunachal Pradesh. The rejection has temporarily saved nearly 2,000 hectares of forestland in West Siang district. **The FAC has rejected these projects as they are located close to several biodiversity hotspots and thus, will affect the regions ecology, if implemented.**



Kolkata, Kanpur, Allahabad Among Top Ganga Polluters: Centre

The article is available at: http://www.ndtv.com/india-news/kolkata-kanpur-allahabad-among-top-ganga-polluters-centre-758611

Kolkata, Howrah, Kanpur and Allahabad are amongst the 118 towns that discharge maximum sewage into the River Ganga, Rajya Sabha was informed today.

"The Government has identified 118 towns along the river Ganga which discharge sewage into the river," Water Resources Minister Uma Bharti said in a written reply.

She said that as per the estimated sewage generated in 2011, 534.21 MLD sewage was discharged in river Ganga in Kolkata while 426 MLD was discharged in Kanpur.

Similarly in Varanasi, 295 MLD of sewage was discharged while 232 MLD was discharged in Allahabad. In Muradabad in Uttar Pradesh, 2011 figures show that 117.20 MLD sewage was discharged while 252 MLD was discharged in Bihar's capital Patna. In Howrah, 116.32 MLD was discharged at the same time period.

"The Central Pollution Control Board is monitoring the water quality at 56 locations along the main stream of Ganga. In addition to the monitoring by CPCB, National Mission for Clean Ganga is getting **water quality monitored through identified academic institutions**," Ms Bharti said.

She said the National Mission for Clean Ganga has received expression of interest from a number of foreign governments to support Ganga rejuvenation.

The countries include the UK, Germany, Australia, Canada, Singapore, the Netherlands and a host of others.

These countries intend to support Ganga rejuvenation through knowledge and technology sharing, providing financial and technical assistance for cleaning up of Ganga, capacity building, research and development, sharing experiences, expertise and best practices, the Minister said.

Clean Energy Access Network (CLEAN) launched in India

The article is available at: http://www.energyaccess.org/blog/481-clean-energy-access-network-clean-launched-in-india .

Building on pioneering efforts by clean energy practitioners to expand access to affordable and reliable energy solutions in India, a broad alliance formed by 12 key stakeholders in the decentralized energy access sector announced the launch of the **Clean Energy Access Network (CLEAN) in New Delhi, India on April 8, 2015.**

Of the 1.2 billion people without access to electricity globally, one third are located in India. Another 800 million people in India do not have access to modern cooking solutions.

Through the collective experience and innovation of its members, CLEAN will work to support access to affordable and reliable energy services by addressing the barriers that the decentralized clean energy sector in India currently faces, supporting the vision of the United Nations-led Sustainable Energy For All initiative to achieve universal access to modern energy services by 2030.

As an influential body for the decentralized clean energy sector in India, CLEAN will represent and advocate on behalf of the sector to important public and private stakeholders, particularly the government at the central and state levels.

Among the highlights of its launch activities on April 8 was a dialogue with the Ministry of New and Renewable Energy (MNRE) in New Delhi, including the Secretary of MNRE, Mr. Upendra Tripathy, on finance and policy issues surrounding renewable energy for off-grid household and community electrification.

It's also worth noting that the CLEAN website is up and running and will become a valuable resource over time: www.thecleannetwork.org .

The Sendai Framework for Action

While negotiations proved challenging at times, with numerous issues of contention (e.g. means of implementation, conflict and fragility, linkages to other post-2015 processes, etc.) the international community was able to finalize and agree on a final framework. UNDP welcomed the

new framework and congratulated Member States and UNISDR on managing this process. The Administrator, who led UNDP's delegation, also expressed UNDP's appreciation to Japan and to Prime Minister Abe in particular for hosting the Conference and for remaining such an important global leader on DRR.

Whilst not a perfect framework, UNDP is particularly pleased with the explicit language linking disaster risk reduction with sustainable development in the agreement itself. A big part of our advocacy campaign over the last year has been to emphasize that disasters are the result of poor, risk-blind development choices, and to encourage partners to adopt a risk-informed approach to sustainable development. We were pleased therefore that UNDP's key message: 'if it isn't risk-informed, it isn't sustainable development', gained enormous traction at the Conference and was featured in the many media interviews that followed.

Substantially, the Framework consists of four priority areas relevant to the business of disaster risk reduction at the country level: (1) understanding disaster risk; (2) strengthening disaster risk governance to manage disaster risk; (3) investing in disaster risk reduction for resilience; and (4) enhancing disaster preparedness for an effective response and with a view to "Build Back Better" in recovery, rehabilitation and reconstruction. I am pleased to say that UNDP was instrumental in ensuring the inclusion of priority areas 2 and 4 (governance and recovery) and would like to expressly thank UNDP resident representatives, staff and colleagues around the world whose invaluable contributions helped emphasize these critical areas to delegates and government partners throughout the negotiation process.

UNDP and the World Conference on DRR

UNDP's role in the lead-up to the WCDRR consisted of supporting Member States with technical advice while at the same time advocating for particular elements. This began with a joint advocacy piece early in 2014, followed soon after by a vision for the future framework, then by analysis and recommendations on the various drafts circulated. UNDP was also well represented at all the Geneva-based prep-coms and other related negotiation meetings.

Our communications campaign, which began in earnest in January and gradually built up as we grew closer to the WCDRR, highlighted experiences from across geographical and technical areas, and included inputs from dozens of country offices and partners. All told, we published at least 15 blogs, issued 12 country case studies and several videos (including an animated one here), and undertook an intensive social media campaign. Twitter support (thanks in large part to country and regional colleagues) resulted in thousands of tweets relating to UNDP and #WCDRR (the vast majority of which occurred during the 4 days of the conference) and demonstrated a fantastic show of support from across our global organization.

Highlights from the WCDRR

UNDP was heavily engaged at the WCDRR and used the occasion to launch or co-launch a number of important publications, as well as to announce the development of our new 10-year global programme.

First, UNDP launched our most recent flagship publication: 'Strengthening Disaster Risk Governance: UNDP Support during the HFA Implementation Period 2005 - 2015' during a special breakfast session entitled 'the Power of Partnerships'. The report is a review of UNDP support in 125 disaster-prone countries since 2005, and draws on detailed findings from a selection of 17 countries. Read the Administrator's speech here.

In addition, UNDP jointly launched a new infographic report highlighting 10-years of support to disaster risk reduction, and a publication titled '10 things to know about financing for DRR', which was developed with our colleagues at the Overseas Development Institute (ODI) and launched during a breakfast session co-hosted with the Government of Switzerland.

We were also pleased to have the Administrator join the President of Tohoku University to announce the establishment of a new Global Centre for Disaster Statistics, which will be based in Sendai and used to collect, analyze and share much-needed disaster damage and loss data (speech here). In addition, UNDP co-hosted, along with Sendai city, a special public forum event on the 'Institutionalization of Women's Leadership in DRR'. The Administrator's speech can be found here.

Finally, UNDP announced at Sendai the development of a new 10-year global programme called '5-10-50'. This programme, which is still under development and targeting an early 2016 release, will see UNDP support 50 countries with comprehensive risk-informed development. Further information on this programme will be made available in the months ahead as we continue the development phase.

Official Statement of Local and Regional Authorities Major Group at UN World Conference on Disaster Risk Reduction

Given below is the official statement:

As we witnessed four years ago, this very month here in Japan, and as we repeatedly see all over the world, local authorities are the first line of defence and the first responders when disasters occur. When populations are impacted, they reach out for assistance from their local authorities. In turn, local authorities are increasingly taking the initiative at enhancing their preparedness and capacities to be able to prevent losses and provide an effective and immediate response.

The world is rapidly changing since the last Hyogo Framework for Action. The urban population now accounts for over half of the global population making urban centres the dominant habitat for humankind. Further, as drivers of economic growth and asset creation urban areas are increasingly in need of risk management strategies.

Even though progress has been made since the adoption of the first Hyogo Framework for Action, and despite proactive initiatives undertaken by several local authorities, they are still significantly lacking in technical, financial and institutional capacities to be able to fully respond to this challenge, especially in highly vulnerable regions of Asia-Pacific, Africa and Latin-America.

Cities are the first level of governance dealing with disaster risk reduction. National governments must develop strategies together with local authorities in order to build their capacities. This can only be done if there are improved local-national dialogues and decentralisation processes are undertaken to give the necessary powers and resources to local authorities. This would also help local authorities to better evaluate, monitor and ensure reporting on disaster risks.

United Cities and Local Governments, as World Organisation for Local Governments, has made since 2008 resilience a priority of its political and policy agenda. Over 1,000 cities have joined the "Making Cities Resilient Campaign" with the support of ICLEI and UCLG to raise awareness and take concrete actions on disaster risk reduction. Since 2010, cities are meeting annually to monitor their progress and have already been adopting charters that aim to synergize mitigation, adaptation, disaster risk reduction and sustainable development strategies.

Local authorities from around the world call for a true localisation of the new framework for action. In the implementation of the new framework, we call for localizing actions in preventing risks, responding to disasters, and for post-disaster recovery. These should be essential parts of the new framework for action. We appreciate the references to the 'local level' that have been

included in the new framework, but strongly continue to urge national governments to recognize local and subnational authorities as their governmental stakeholders. In turn, we commit to the set of 11 actions that have been documented in the Sendai Declaration, and which will support and complement the DRR efforts and commitments of our respective national governments.

Dear Ministers, dear Colleagues, left unchanged, current development patterns and behaviours could contribute to social, environmental and economic degradation and injustice. We, local authorities, remain highly engaged and committed, individually and at the international level through our networks to make our cities more resilient. But we will not make it alone and we urge national governments, agencies and all relevant bodies to continue empowering local authorities and supporting local actions, cooperation and mutual learning for disaster risk reduction and the implementation of the new framework.

Risk award to support slum dwellers in Pune

Activities for risk reduction must integrate the people at risk and make use of their traditional coping techniques and knowledge. All the key drivers of risk are present in the Indian city of Pune where 25,000 people living in ten slums will benefit from a project by the All India Institute of Local Self-Government (AIILSG) which has won the 2015 Risk Award and a grant of €100,000 at the Third UN World Conference on Disaster Risk Reduction. The project reduces disaster risks faced especially by women and children in a slum population.

Ms. Shweta Gupta, Senior Project Coordinator of the winning All India Institute of Local Self-Government (AIILSG), said, "We are honored to accept this year's Risk Award which will help develop a cadre of community volunteers as master trainers in disaster risk management. We will place particular emphasis on mobilizing women and developing child-friendly information, education and communication tools."

Pune city in Maharastra State of India is among the most multi-hazard-prone districts in the country. For the poorest of the poor the risks increase multi-folds as they have hardly any means and resources for disaster risk reduction or disaster preparedness. Approximately 21% of Pune's population (690,000 people) resides in the city's 477 slums in uninhabitable conditions. Many of those slums are densely populated, lack basic services and infrastructure and, moreover, are located on hills as well as in high flood zones. Consequently, people are highly vulnerable to natural disasters (landslides, floods, heavy rains, earthquakes or cyclones) and man-made disasters (like fires and collapsing buildings). Women and children are the weakest and most heavily affected.

With its project "Community self assessment and planning with women's participation for disaster risk" the AIILSG from India aims to reduce the disaster risk of the urban vulnerable communities in slums with a special focus on children and women. Read more.

The head of the UN Office for Disaster Risk Reduction (UNISDR), Ms. Margareta Wahlström, said, "The All India Institute of Local Self-Government is a worthy winner of this Award and is tackling one of the most pressing issues of our times, rapid urbanization and its consequences for impoverished people living in informal settlements. I am happy to see such a strong focus on women and children whose needs are often overlooked in disaster risk management."

The RISK Award has been set up in 2012 to help improve risk reduction and disaster management by providing financial support to projects dedicated to these topics. This year, 145 applications from 60 countries were submitted. They included 19 applications from science and academia, 19 from governmental representatives and public authorities and 99 from non-profit

organizations and/or NGOs.

Studies done for National Tiger Conservation Authority (NTCA), 14th Finance Commission and the Ministry of Environment, Forests and Climate Change:

Economic Valuation of Tiger Reserves in India: A VALUE+ Approach Commissioned by the National Tiger Conservation Authority, the study is an attempt to inform all concerned stakeholders about the benefits of tiger reserves that accrue beyond a tiger reserve boundary apart from in situ conservation gains. The study has derived economic value of 25 ecosystem services from six representative tiger reserves to highlight their contribution to the economy and society. It also found that large proportions of benefits from tiger reserves are intangible, and hence often unaccounted for in national income accounting and policy debates.

High Conservation Value Forests: an instrument for effective forest fiscal federalism. Commissioned by the XIV Finance Commission of India, the study made the case for higher incentives/ compensation for forest-rich states in India. It may be noted that for the first time, the XIV Finance Commission of India has included the parameter for forest cover in the devolution formula itself. This will provide unprecedented incentives for states to maintain and enhance their forest cover.

Recalculation of NPV rates for different class/category of forests : Commissioned by the Ministry of Environment, Forests & Climate Change, (MOEFCC) the study has provided a more detailed matrix of NPV rates which now includes value of economic losses from 12 ecosystem services due to forest diversion.

The above studies were done recently at the Centre for Ecological Services Management at the India Institute of Forest Management (IIFM), an MoEFCC organization.

Brainstorming towards an integrated transport system in Cochin

A two day workshop on sustainable transport solutions was held in Cochin, India to resolve transport issues of the city and to identify prospective solutions. The workshop, organized as a part of the SOLUTIONS project, was attended by representatives of various organizations from the city, who discussed various solutions that could be implemented as short, medium and long term measures and reiterated the advantages of current density patterns as an add on for providing better public transport. Cochin has been selected as one of the take up cities under the Sharing Opportunities for Low carbon Urban transportation (SOLUTIONS) project funded by European union and implemented by Wuppertal Institute with its partners.

The first day witnessed Mr. K. J. Sohan, Chairperson, Town Planning Committee of Cochin Corporation stressing on integrating all transport modes with immediate steps to be taken to improve water transport system and last time mile connectivity. Experts from Wuppertal Institute, Austria Tech, BAST, FEHRL, Embarq and Clean air Asia were also present and supported participants to identify different measures to improve city transport system.

The second day of the workshop consisted primarily of a training session which was inaugurated by the Deputy Mayor of Cochin Corporation Ms. Bhadra, followed by opening remarks by Mr. Sohan.

Some key points of discussion were as follows:

- Dr. Thierry Goger, Secretary General, FEHRL briefly discussed on upcoming technologies on building transport infrastructure which can save time and resources at the local level.
- Dr. Kressler Florian from Austria Tech stressed on the need for intelligent transport systems for better management of public transport services.
- Mr. Benjamin Shreck from Federal Highway Research Institute, Germany, broadly covered the importance of cycle infrastructure to encourage cycling and also to retain existing riders.
- Mr. Oliver Lah of Wuppertal Institute discussed the importance of adopting clean vehicle technology in sidelines with better public transport to combat air pollution.
- Public bike sharing system and better movement of goods was also shed light on by Embarq and Clean Air Asia.

All present participants were keen on understanding the possibilities of implementing various successful measures that have already been implemented in Europe. In her closing remarks, Deputy Mayor Bhadra stressed on the emerging need to integrate all modes of transport present in the city and also discussed on the probability of a bike sharing scheme in the Fort Cochin area which could be further scaled up. The workshop concluded with remarks from the project team to include all discussions made, in the feasibility report prepared as part of the project.

The SOLUTIONS project aims to support the exchange on innovative and green urban mobility solutions between cities from Europe, Asia, Latin America and the Mediterranean region by facilitating dialogue and exchange, promoting successful policy, providing guidance and tailored advice to city officials, and fostering future cooperation on research, development and innovation. The project brings together a wealth of experience and technical knowledge from international organizations, consultants, cities, and experts involved in transport issues and solutions.

South Asian cities collaborate towards creating a zero waste region

Mayors, Municipal leaders and myriad esteemed experts from South Asian countries – India, Bhutan, Sri Lanka, Nepal and Bangladesh, were present at the International Conference on Solid Waste Management for South Asia, hosted by ICLEI South Asia, endorsed by the Ministry of Urban Development, Government of India and the National Institute of Urban Affairs and financially supported by the European Commission on the 9-10 March 2015. The event also served as a final and disseminating conference for the European Commission funded SUNYA – Towards zero waste in South Asia project.

Around 150 people from 20 odd cities from across the South Asian region came together to discuss, engage and share thoughts, stories and prospective and on-going initiatives for Solid Waste Management.

Solid waste management is a major concern for almost all urban areas in the south Asian region, with rapid urbanization and changing lifestyles that encourage people to consume more and more resources generating more and more waste. A lot of this waste ends up in open dump sites and landfills, which leads to pollution of soil and water and release of greenhouse gases. To avoid this situation, it is imperative for local governments dealing with waste management to adopt the 3R principle of waste management – reduce, reuse and recycle.

Keeping this in mind, the European Commission supported the project – SUNYA – Towards Zero Waste in South Asia. The project was led by the Municipal Association of Nepal, along with ICLEI South Asia in 7 cities of the 5 South Asian countries. The 7 SUNYA cities – Heatuda and Tansen (Nepal), Shimla and Coimbatore (India), North Dhaka (Bangladesh), Matale (Sri Lanka) and Pheuntsholing (Bhutan) have been taking commendable measures to move towards a state of zero waste, through sustained awareness campaigns for segregation of waste and reduction,

reuse and recycling, construction of facilities for composting, or providing assistance and training to waste workers for better management of waste. The cities have conducted detailed assessment of the existing situation of waste management and have formulated an action plan to move towards zero waste that will be implemented in the cities in the coming years. The project focused on introduction of principles of 3R for municipal solid waste management, promoting reduction, reuse and recycling of waste through community mobilization and involvement, and scalable pilot demonstrations of reduction of waste generation and sustainable management.

"We see the Solid Waste Management problem all around us, this is a problem we need to tackle and we know it! In the future, we will have more and more people living in urban areas, thus increasing the need to look into and internalise this problem", said Dr. Usha Raghupathi, Professor, National Institute of Urban Affairs (NIUA).

Dr. Raghupathi said further, "We need to remember the link between waste and people's health and solid waste management and climate change, only then the awareness can be caused."

This is indeed true. People need to realise that this (Solid Waste Management) will affect them adversely and they will have to take actions to overcome it. City officials needs to spread awareness about this problem, what causes it, how it affects the life of so many and preventive measures that can be taken to fight this problem.

"It is primarily also about the livability of the people of the cities….Take the spirit back to the citizens, make them realise that the city is theirs, it is the responsibility of each one of the citizens to help in creating zero waste", said Tikender Singh Panwar, Deputy Mayor, Shimla.

Dr. Tariq Bin Yousuf, Dhaka North City Corporation, put it perfectly, "Waste is actually a resource. Don't think of it as a disposal system, think of it as resource management."

This was further seconded by Doramani Paudel, President, Municipal Association of Nepal (MuAN), "Do not dump, process!"

Mr. P.U. Asnani, Urban Management Consultants, also stressed on the need to treat more waste and make efforts to reduce the generation of waste itself, "What goes to the landfill has to be minimal. Reduce and treat as much as waste as possible… Get in touch with the manufacturers straightaway, stress on the manufacturing of bio degradable products in the first place which can create a huge impact on the amount of solid waste generated."

The conference identified the need for making waste management everyone's business. It not only discussed the role of local governments in solid waste management in a sustainable manner, but also stressed on the roles of producers and consumers in waste management. This is especially important in the context of the Swachh Bharat Mission developed by the Government of India which is focusing on cleaning up Indian cities. The pilot projects undertaken in this project can be replicated in other cities under the Swachh Bharat Mission as well. State government representatives from Punjab, Rajasthan and Tamil Nadu expressed their interest in working on solid waste in a programmatic manner after learning about the success in the project cities.

There were myriad takeaways for all who were a part of this highly informative and interesting conference. The project might have concluded but the spirit of the people to make their cities a better place to live in, remains untouched. There is hope that many more cities will walk on the path of these 7 SUNYA cities and aim at becoming zero waste cities.

ISGF is pleased to share the April 2015 issue of its 'SMART GRID Bulletin'.

This bulletin aims to keep its audience updated on the various aspects of Smart Grid such as technology developments; policies, regulations and standards; updates on existing and upcoming projects; events and capacity building initiatives undertaken in India and overseas.

The SMART GRID Bulletin is available online at: http://indiasmartgrid.org/en/Pages/newsletter.aspx .

South Asian Cities Summit 2015 - Smart and Sustainable Cities on 22nd -23rd May 2015 at IHC, New Delhi.

In line with vision of creating '100 Smart Cities' All India Institute of Local Self Government, and Cities Network Campaign along with Climate Development Knowledge Network (CDKN) and other National & International organizations announces the 2nd South Asian Cities (SAC) Summit 2015.

The objective of the Summit is to convene a high-profile gathering of Senior Local Governments Officials from South Asian cities (India, Nepal, Bangladesh, Bhutan, Sri Lanka and Maldives) and from cities across the globe, international subject experts, policy makers, national/international organizations, technology providers in Solid Waste Management, Water & Sanitation, Renewable Energy and Energy Efficiency Sector, Financial Institutions, Funding Organizations to discuss and identify basics of infrastructure improvement, assuring higher quality of life, and citizen-centric services that are essential to cities of the 21st century. The Summit would focus also on making cities hubs of economic activity with improved quality of urban governance, thereby lending greater strength to the overall governance processes of the country.

The grand success of the 1st South Asian Cities Summit , 2013 (SACS 2013) in New Delhi, in April 2013, with participation of more than 200 delegates across the South Asian countries and the formation of the South Asian Mayors' Forum (SAMF) is the testimony to the enthusiasm of the cities in moving towards becoming Sustainable, Smart and Energy Efficient.

The 2nd South Asian Cities (SAC) Summit 2015 will also discuss, debate and develop model solutions for cities in South Asia and explore potential growth opportunities. The Summit is expected to witness a participation of about 300 delegates from across the world.

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