Sustainability: At the core of IGEP

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About the Indo-German Environment Partnership Programme

In an emerging country like India, while the scale, speed and impact of urban and industrial development open up diverse opportunities, they also cause increase in demand leading to resource-tensions. Building on the experiences of the predecessor Advisory Services in Environment Management programme, the Indo-German Environment Partnership (IGEP) programme assists the Indian Government in managing these developments to achieve resource efficiency and sustainable development.

Objective

The overall objective of IGEP is that the decision makers at national, state and local level use innovative solutions for the improvement of urban and industrial environmental management and for the development of an environment and climate policy that targets inclusive economic growth de-coupled from resource consumption.

Approach

IGEP cooperates with public and private sectors at the national, state and local levels, including the Ministry of Environment and Forests, Ministry of Urban Development, Ministry of Housing and Urban Poverty Alleviation, Pollution Control Boards, NGOs, industry associations.

IGEP supports its partners in establishing sustainable solutions for environmental infrastructure in urban and industrial areas. It focuses on:

a) Up-scalable pilot measures for sustainable urban and industrial environmental management and climate protection.

b) Legal regulations and policy level initiatives on national, state and urban level that support the dissemination of innovative solutions for sustainable environmental management.

IGEP’s thematic areas of work comprise:

Sustainable Urban Habitat focuses on financially sustainable and improved urban services in the field of municipal solid waste management in selected cities. By mainstreaming climate change into urban planning and development, it supports the Jawaharlal Nehru National Urban Renewal Mission and the National Mission on Sustainable Habitats. It contributes to the Government of India’s endeavour to improve urban habitats by making cities slum free (Rajiv Awas Yojna). Interventions in selected cities will be scaled up with the support of State Governments. Further, it assists urban, state and/or national level stakeholders in designing frameworks which can serve as a basis for environment-friendly regulations.

Sustainable Industrial Development focuses on piloting and replicating financially sustainable environmental improvements in selected industrial areas in Andhra Pradesh, Karnataka and Gujarat, and designing new industrial parks to serve as nation-wide models. It also focuses on planning of investment zones/industrial parks, waste and waste water management, environment-friendly techniques that will be implemented in identified industry sectors. Improvements on climate change and disaster risk management complements the advisory services provided to partners from the public and private sector.

Policy for Environment and Climate focuses on development and implementation of policy level actions related to urban and industrial development, like climate change, inclusive growth and Low Carbon Economy. It also supports the development of legal frameworks which can serve as a basis for environment-friendly regulations.

The following cross-cutting activities pervade all of the mentioned initiatives:

Capacity Development activities will support training institutes in delivering effective training programmes which help improve implementation capacities of the partners.

Climate Change activities focus on Clean Development Mechanism, Nationally Appropriate Mitigation Actions, low carbon strategies, and climate change adaptation in coastal areas.

Gender Mainstreaming focuses on integrating gender into the planning and implementation of interventions in order to positively impact gender equality.

About GIZ

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is an enterprise owned by the German Government. GIZ implements sustainable development through international cooperation, on behalf of Germany and other partners. With a global footprint in over 130 countries, GIZ leverages its regional and technical expertise for local innovation.

GIZ India has a team of over 300 staff. To address India’s need for sustainable and inclusive growth, in partnership with stakeholders, GIZ’s key focal areas are:

- Energy (renewable energy and energy efficiency), Mitigation of greenhouse gas emissions
- Environment (sustainable urban and industrial development, natural resource management, climate change adaptation, biodiversity)
- Sustainable economic development (rural finance, social security systems, small and medium enterprises)
- Skill development

Change is the only constant in life, and is a key indicator of robustness. There has been fast-paced change in India in the last one year, at the political, social and economic levels, to name a few.

India is fast emerging as an industrial power. Despite the country’s rapidly growing economy, poverty and social issues remain a challenge. The burgeoning population and accelerated urbanisation in the country has resulted in an environment that is at risk, and greenhouse gas emissions that continue to spiral upwards. India aspires for sustainable and inclusive growth, and is striving to adopt a balanced approach towards achieving this.

Change has also been most in evidence at GIZ India in the last 6 months. The IGEP programme, for example, as a proactive player in the change process, has initiated several new projects that are in alignment with the Government of India’s key thrust areas. The Inclusive Cities programme will be supporting the Indian government to improve the circumstances of slum dwellers in a socially responsible, environment-friendly and participatory way that allows them to remain where they are. The Green Logistics project in Karnataka was launched, as was the Resource Efficiency project.

In the last few months, I have bid farewell to many close colleagues at GIZ. Mr. Stefan Helming, under whose stewardship, GIZ doubled its portfolio volume in the country, has now moved on to take up another challenging assignment in Germany. GIZ also bid goodbye to Mr. Jens Burgdorf, Programme Director of Indo-German Energy programme, as also the deputy programme director, Dr. Nikolaus Superberger. Others who moved on are Dr. Christine Bigdon, Head of Human Capacity Development programme and Mr. Hans Hermann Dube, Head of GIZ IS. I wish them all the very best!

GIZ India will soon have a new country director, Dr. Wolfgang Huswig, who comes in from GIZ Ethiopia. There are now many new directors at the helm of strategic projects, and I extend a warm welcome to all of them.

That environment ranks high in bilateral cooperation is evident from the recent visit to India of the German Environment Minister, Dr. Barbara Hendricks. I am certain that GIZ, and in particular, IGEP will continue to participate strategically in India’s environment journey.

IGEP itself is coming to an end in July 2015, but efforts will continue in its follow-on project which focuses on Clean Industrial Production and Development, which will usher in more changes. I thank all my colleagues at IGEP who have made this possible. In this issue, read about many of our change initiatives and much more.

Best regards,

Dieter Mutz
Environmental Journalism Competition: A Pathway to Catalysing Interest in the Environment

Environmental degradation is an area of key concern in India, and needs to be addressed with a multi-pronged approach. Public involvement and ownership are among the key factors in enabling positive change and reversing the damage.

In India, news focuses primarily on politics, cricket, and entertainment news, while there is very little and sustained, and well-researched reporting on the environment. According to the Centre for Environment and Media report, of all the stories broadcast or published in the media, only 2% account for those on environmental issues. Encouraging environmental reporting is the need of the hour to put the spotlight on the grave threat to the environment and its far reaching impact on the quality of life.

The All India Environmental Journalism Competition came into being under the IFAT platform in 2013, the year that the IFAT fair itself came into existence in India. The fair is an annual event that showcases the full range of environmental technologies and services, with a comprehensive product portfolio from basic to highly sophisticated machinery and environmental solutions, both from domestic and international exhibitors. The competition aims to catalyse media coverage on environmental issues in India, and thus spark community dialogue and participation. This was set up under the patronage of the German Embassy and with support from KfW and German Water Partnership. The competition aims to inspire journalists to take up a wide range of environmental topics as part of their work, and highlight solutions and positive stories.

The awards centred on five categories: Print, Internet, Video, Radio and Photograph. In addition, in taking up the new Indian Government’s initiative of cleaning the River Ganga, the German Embassy announced a special prize, “Clean Ganga Award” for the best journalistic entry on the rejuvenation of the Ganges. The award ceremony was organised after the inauguration of fair.

The German Ambassador to India Mr. Michael Steiner, along with IGEP Programme Director Dr. Dieter Mutz, Mr. Gerhard Gerritsen of IFAT organisers Messe München GmbH and journalist Mr. Darryl D’Monte, presented the awards to the winners. Representatives of the sponsors IFAT, ICLEI South Asia, KfW, and German Water Partnership, presented a certificate and cheque to the award winners.
Ambassador Steiner presented Mr. Nitin Sethi of the Business Standard with the Clean Ganga Award. Mr. Sethi writing focuses on issues of development, environment, rural India, tribal concerns and resource conflicts. His award winning entry “It the Ganga beyond makeover?” talks about how it is important to depollute the cities along the river Ganga in order to make Ganga a cleaner river. The Ambassador lauded the efforts of the competition organisers in recognising key concern areas, and taking a proactive and unique step in addressing this issue using the competition as a pathway.

In the print category, the first prize was awarded to Mr. Sibi Arasu for his article “India, tribal concerns and resource conflicts. His article writing focuses on issues of development, environment, rural India, tribal concerns and resource conflicts. His award winning entry “It the Ganga beyond makeover?” talks about how it is important to depollute the cities along the river Ganga in order to make Ganga a cleaner river. The Ambassador lauded the efforts of the competition organisers in recognising key concern areas, and taking a proactive and unique step in addressing this issue using the competition as a pathway.

Ms. Ghosh writes on socio-political and environmental issues. Her article focuses on the Raoghat mine in Bastar, Chattisgarh which is the latest flashpoint between the state and the people on what should be the road to development.

In the internet category, the first prize was awarded to Ms. Stella Paul for her article “And Not a Drop to Waste”, published on Inter Press Service News Agency. Ms. Paul is an independent journalist, reporting on environment and development issues in India and South Asia. Her article was on water shortage issues in Mahbubnagar district of Hyderabad, and how an initiative called “Andhra Pradesh Community Based Tank Management” has helped the villagers to conserve water by regular monitoring of groundwater level and planning their crops accordingly. The second prize was awarded to Mr. Makarand Purohit for his article “Digging them into a hole”, published on Indian Water Portal. Mr. Purohit is a Bilal-based documentary filmmaker, photographer and journalist. His article was about the fluoride contamination in water in the Amatikra village in Chhattisgarh.

Ms. Bharadwaj takes a photo essay on issues that I feel need to be written about. The second prize was awarded to Ms. Ritu Bhardwaj for her video “Computer Graveyard”, published on Thomson Reuters Foundation. Ms. Bharadwaj has worked on documentaries and television programs addressing issues like farmer deaths in India, child labour, access to justice, importance of mason training, and several features on environment sustainability. Her winning documentary was an example of low water-use, rooftop, organic farms that can provide food and access to nature even in small urban spaces. Ms. Bhardwaj take on the competition, “I could relate to the theme and it was one the very few competitions dedicated to reporting around climate change. There was no way I was not going to apply.”

In the photo category, the prize was awarded to Mr. Shadab Nazmi for his photo essay “Andhra Pradesh Community Based Tank Management”, published in The Hindustan Times. Mr. Nazmi is a young photographer and journalist. His photo essay captured the life and values training and access to justice, importance of of people handling e-waste in an informal set-up. It also indicated the health hazards involved in the same.

IFAT India also offered its visitors an extensive technical and scientific supporting programme: Indian and International experts from academic institutions and government bodies such as Pollution Control Boards presented the latest developments and practical solutions. IGEF hosted two side events during the fair. The first side event was based on EU-India collaborative project “Waters4Crops”. The side event showcased promising research results on treatment of industrial wastewater, its reuse and valorisation to support Green Economy in Europe and India was presented. At the second side event, IGEF with Centre for Science and Environment, organised a workshop on “Environment Regulation & Enforcement in India and Germany: an Overview”. Leading German and Indian experts from both, the public and private sectors, shared their experiences in wastewater and municipal waste regulation. Several moderated discussions gave the audience the opportunity to interact with speakers, ask questions, raise concerns, and comment on the content of presentations. Best-practice methods that work well in wastewater and solid waste management were discussed and current problems and challenges were addressed.

At the fair, GIZ and KfW informed visitors at a joint exhibition stall about Indo-German development cooperation in the environmental sector. The stall also saw a substantial footfall.

IFAT India organiser Messe München GmbH has announced it will continue organising this environmental fair annually. The next fair is slated to be held from October 13-15, 2015, at Bombay Exhibition Centre, Mumbai.
Making a Manual on Municipal Solid Waste Management

Understanding Key Processes

By Vaishali Nandan

Being a part of GIZ, a large part of our work includes support to the central ministries and/or state government departments in the formulation of manuals, rules, guidelines, white papers, government orders and the like. So what is special about this particular Manual and the process of preparing it?

The particular manual in question is the National Manual for Municipal Solid Waste Management (MSWM). GIZ under the Indo German Environment Partnership (IGEP) Programme is helping the Ministry of Urban Development (MoUD) and the Central Public Health Engineering and Environment Organisation (CPHEEO), technical arm of the MoUD, to revise the manual, that had been previously prepared and published by CPHEEO and the MoUD in 2000.

The process of revising the manual was initiated in 2011. GIZ, at that time, had been supporting the MoUD under the Advisory Services in Environment Management (ASEM) programme and working in seven cities in seven different states in India, in the planning and implementation of Jawaharlal Nehru National Urban Renewal Mission (JNNURM) for urban infrastructure projects, municipal solid waste management being the most prominent. This was a unique support, as all cities were funded under the JNNURM project of MoUD and GIZ helped the cities and states realise these projects through technical advice.

It is this knowledge that the MoUD found useful and GIZ received the request letter for supporting the Ministry and CPHEEO in revision of the manual in 2011. After more than a year of negotiations, a Memorandum of Understanding (MoU) was signed between MoUD, CPHEEO and GIZ under the new programme of IGEP in early 2013. The MoU defined the responsibilities and commitments of all the partners and the steering structure for process and timeline for the revision. The proposed time line of the MoU was for completion of the revision till December 2013.

An Expert Committee, headed by Dr. N.B. Mazumdar, Ex-Chairman HUDCO, was formed by MoUD for the revision process, with clear Terms of Reference. Members of the Committee included representatives from Ministry of Urban Development (MoUD), Ministry of Environment, Forests and Climate Change (MoEF&CC), Ministry of New & Renewable Energy (MNRE), Ministry of Agriculture (MoA), Town & Country Planning Organisation (TCPO), Central Pollution Control Board (CPCB), State Pollution Control Boards (SPCBs), State Urban Development, Urban Local Bodies (ULBs), IGEP, academicians and experts, accounting for a total of 22 members. To help with the revision process, IGEP appointed an international expert Mr. Alfred Eberhardt and a team of national experts from ICLEI-South Asia.

During the kick off meeting of the Expert Committee for the manual preparation in February, 2013, the contents of the manual were deliberated upon, and it was decided to organise the manual into 3 parts. Part 1 for decision makers, included an over view of the manual; Part 2 was designed as the technical manual and Part 3 as the managerial section relevant for municipal solid waste management. It was decided to include national and international case studies and relevant material for reference would be included in Parts 2 & 3 as annexures.

During the extremely interactive first expert committee meeting, the group realised two things, one that the MSW Rules were getting revised and it was important to align the process of revising the manual with the revised rules. The other that in order to include the vast amount of knowledge that now existed in the country after the notification of the MSW rules and manual in 2000, it was not possible to organise site visits to all the locations in the country. Working groups have been formed for deliberating on different issues. The experiences from different states, cities, private parties, manufacturers, companies, NGOs, informal sector, etc. were shared during these working group meetings with members of the expert committee and working groups. By the end of 2013, three expert committee meetings and three working group meetings had been organised by MoUD & IGEP. However, the content of the manual had still not been frozen. In order to facilitate the process, internal meetings were organised with a very select group of members from the Expert Committee and IGEP. Several such meetings have taken place till January 2015.

To make matters more complicated, CPHEEO, after reviewing the contents of the manual in April 2014, decided to change the structure of the manual. The Parts 2 & 3 of the manual were merged and resulted in an integrated part 2 of the manual. Part 3 now only comprised national and international cases and relevant rules for the manual. This set the IGEP team back a little, but finally managed to meet the deadlines and by May 2014, MoUD announced the national workshop for finalisation of the draft MSWM manual on 24-25 July, 2014. All states and many ULBs, experts, NGOs, manufacturers, consultants, academia and multilateral agencies were invited by MoUD for the workshop, which was held in Vigyan Bhawan, New Delhi.

This manual is used by the MoUD for country wide dissemination and serves as a guidance document for the implementation of the Municipal Solid Waste (Management & Handling) Rules in the country. The document is meant as a guidance document for all State Urban Development Departments and Urban Local Bodies (ULBs) in the country. It is also widely referred to by engineers, technical institutes, academia and consultants working in the field of municipal solid waste.
The draft document was well appreciated by all stakeholders but the document also received many comments, especially on its bulky nature – the manual is approximately 1000 pages and had been combined into a single book for the consultation workshop. Now, the manual will be split into 3 separate books with cross referencing in each part for easy use and the 3 books will be kept together in a box cover to hold them together. The easy to read design of the manual was also complemented with its elements of sticky notes, icons for ideas, rules information, boxes, case studies. A pen drive with a user friendly electronic version of the manual will also be part of each final set.

The success of the manual lies in the complete ownership of the manual by MoUD. The delay in the process from December 2013 till 2015 is also attributed to the parallel revision of the MSW Rules by MoEF&CC, which unfortunately has still not been finalised. MoUD has however decided to complete its revision process, especially in the wake of the Swachh Bharat Mission and its emphasis on municipal solid waste management.

The final launch of the manual is awaited.

The task now with MoUD and IGEP will be to ensure that this vast store of knowledge is used and understood by the relevant stakeholders in the country, especially the ULBs. As a dissemination and capacity building strategy, training based on the contents of the manual and a Training of Trainers (ToT) for training institutes, who can then disseminate the document pan India, is being developed. A scribble movie to disseminate the contents of the manual in trainings and forums has also been developed.
Facilitating Effectiveness of Training on Municipal Solid Waste Management
A case of Selected Municipal Councils from Maharashtra

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The adverse impacts of mismanagement of Municipal Solid Waste (MSW) on economy, health and environmental are well known. Population growth, coupled with economic growth, has made the task tougher for the Government. As per the Census 2011, over 31% people live in cities and it is projected that the numbers will double by 2050. Urban centres have particularly become vulnerable due to haphazard generation and poor management. The quantum of MSW in India is expected to rise significantly as the country strives to become an industrialised nation by 2020 (Sharboly et al., 2008). All the three actors are responsible for this conundrum, viz., state, market and civil society. Maharashtra has 257 Urban Local Bodies (ULBs), and is one of the largest generators of MSW. Due to sustained efforts, ULBs collect the generated MSW. But data suggests that open dumping of waste without processing and scientific disposal is prevalent in the state, which is perceptible at the sight of large mounds and heaps of waste at the periphery of each city (CPCB, 2012, AR-MPCB, 2010-11, 2011-12, 2012-13, 2013-14). The quality of life of citizens and environment is badly affected in places where such mismanagement of MSW happens continuously. Key challenges and bottlenecks that hinder effective management of solid waste include lack of capacities at all level in governance, institutional deficiencies, inadequate legislations, lack of political will (at all levels) and lack of public participation towards Municipal Solid Waste Management (MSWM).

Facilitating Effectiveness of Training - Background of the Project

Training is one of the most important elements to improve sector capacity, but unfortunately there is no mechanism to measure effectiveness and use of such trainings. After the MSW Rules came into being in 2000, a few training institutes in Maharashtra like All India Institute of Local Self Government (AIIILSG), Yashwantrao Chavan Academy of Development Administration (YASHDA) and Maharashtra Environmental Engineering Training and Research Academy (MEETRA) have separately came up with capacity building programmes for training municipal officials. However, the sectoral efficiency did not improve as expected. It was not clear, whether the training provided is used during day to day management of waste and if it is used, there was no mechanism to address the challenges the operators face. Capacity gaps needed to be addressed and the entire training and capacity building programme needed to made more effective. The need for hand holding support to the ULBs during implementation was also felt. Towards achieving this, JGEP collaborated with MEETRA and Centre for Sustainable Environment and Development Initiatives (CSEDI). An experimental project was initiated with selected ULBs in the State. Representatives from the selected ULBs had already taken training at MEETRA which was supported by JGEP and delivered by CSEDI. Prior to this experiment, a training manual, different training tools and methods on MSWM were developed and piloted in selected ULBs.

The training was conducted at MEETRA, Nashik in June 2014, facilitated by CSEDI, Navi Mumbai. Training sessions were organised for 20 participants from 12 Municipal Councils, viz. Ambarnath, Arvi, Beed, Jalna, Jamner, Kagal, Kannad, Khapa, Mid, Soumet, Tiroda & Umred. The officials ranged from the Chief Officer, City Engineers to Sanitary Inspectors. Training sessions were designed to enhance capacity of the officials and to make the training more practical.

After training, it is essential to assess the effectiveness of training provided, so the project on “Facilitating Effectiveness of Training on Municipal Solid Waste (MSW)” was conceived. Rationale of the project was to ensure that the training contents and elements are used during implementation and participants are provided with hand holding knowledge support after training. To provide this hand holding support, online tools such as google group, mobile platform such as WhatsApp and direct communication over phone, as well as personal visit to these ULBs was tried.

The objectives of the project are:

- To provide online support to effectively use the knowledge provided during the training.
- Create, moderate interactions among participants through a web based/ mobile based learning and interactions.
- To organise a face to face meeting with participants and trainers to reflect and assess training impacts to learn factors that can make training more effective.
- To document the experiences and impacts of training.

Tools Used and their Effectiveness

Online discussion tools such as google group, mobile information sharing platforms like WhatsApp and direct communication over phone as well as personal visit to these ULBs were tried to ensure that the participants get appropriate support. Preferences and usefulness of these tools is depicted in Figure.

Post training support - Learning Impacts

The trained participants from all ULBs briefed their councils regarding the training, its content and importance of MSWM. Respective councils have taken several city level initiatives to effectively manage MSW in their cities. Due to regular follow up by CSEDI team, which according to most of the participants, was happening for the first time, interest and motivation of the officials was kept intact and they were provided with guidance from time to time. Although some towns have not yet fulfilled few elements as per the MSW Rules in 2000, they have starting working towards these objectives. They have realised the importance of a planned approach, and therefore many of these towns have taken up preparation of master plans, city sanitation plans and detailed project reports. Results in some towns such as Khapa, Mul, Umred, Ambarnath are very encouraging, mainly because of the hand holding support provided and the proactive nature of the participants.

Factors contributing to better results are shown in the Figure below:
Mid term evaluation of the 12 ULBs after the training, is depicted in the figure:

Mid-term evaluation – progress that ULBs made

Key lessons, Challenges, & Opportunities

1. Majority of the participants reiterated that such handholding support was not seen before and this support has increased their efficiency.
2. All tools and support provided under this project were very useful, but the most preferred was telephone, personal visits, followed by WhatsApp and google group.
3. It was also suggested that such hand holding support should be provided regularly.
4. Many participants rated this training as the best and the most effective, but the most preferred was telephone, followed by field visit, which were most effective in providing hand holding support.
5. Sharing workshop and learning interactions organised under this project was gratefully appreciated by all the participants and other dignitaries.
6. Potential to make online platform, Whatsapp and other tools such as a training management platform mandatory, for improving training effectiveness.
7. Telephone communication was used most effectively in providing hand holding support. Follow up with participants revealed that this was the most useful, preferred, workable followed by field visit, which were most effective in providing hand holding support.
8. Regular follow up encourages ULBs in clarifying doubts and motivates them to focus more on SWM interventions.
9. It is learnt from the constant handholding support that the revival of processing facilities and dumping sites is imminent at all the 12 cities.
10. There is a potential to scale application of these tools at State and Country level.

It is imperative to state that there is a pressing need to increase the capacity building exercises at all levels to make local municipal governance effective in delivering SWM services. Post training, hand holding is essential and should be made an integral part of all training courses. The post training support must be considered as a key tool in training manuals and efforts must be made to make it more user friendly, keeping in mind the vulnerabilities of the participants.

Introduction

Industrial development is one of the major drivers of economic growth in India. India is targeting industrial growth rate of 12% to 14% in the medium run, and contribution of industrial sector to national GDP by 25%. Creation of 100 million additional jobs by 2022 is also a key aim. India seeks to create a strong economic base with a globally competitive environment and state-of-the-art infrastructure to activate local commerce, enhance investments and attain sustainable development.

Today, the industrial development in India is seen in the form of industrial estates, special economic zones, special industrial parks, investment zones, National Investment and Manufacturing Zones (NIMZs), Chemicals and Petrochemicals Investment Regions (CPPIRs) and industrial corridors. India is planning to build a pentagon of industrial corridors across the country to boost manufacturing and to project India as a global manufacturing destination of the world. The Delhi Mumbai Industrial Corridor (DMIC) is the first of its kind covering an overall length of 1,483 km and passing through the States of Uttar Pradesh, Haryana, Rajasthan, Madhya Pradesh, Gujarat and Maharashtra and the National Capital Region of Delhi, and will have 24 identified Industrial Areas and Investment Regions. Further, to facilitate investments, foster innovation, build best-in-class manufacturing infrastructure and enhance skills development, India has launched a major new national programme called “Make in India”.

Industrial development, if not properly planned, has the potential to pose tremendous risks on natural resources, environment and the people. The key issues of concern are social conflicts due to the sites chosen for industrial development, environmental conflicts and negative impacts due to pollution and resources consumption (energy, water, materials), impacts on
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biodiversity (loss of ecosystem services, loss of species, changes in biodiversity etc.), and issues of climate change. Also, an industrial area that does not have a proper site master plan is likely to face serious problems due to lack of provisions for environmental and other related infrastructure. Such problems include traffic congestions and accidental risks due to lack of parking provisions for the hundreds of trucks entering the industrial areas, lack of land provisions for waste and wastewater management, lack of buffer zones with surrounding areas and lack of social infrastructure for workers, including eco efficient transportation.

A well planned and organised industrial area, defined by set of quality parameters such as economic efficiency, environmental quality and social quality could be an answer to sustainability. Also, such areas could support sustainability of individual industries housed in them with high performance workplaces so as to enable industries strive for efficiencies and profitability, reduced environmental litigation risks and improved market image as well as public image.

Under the Indo-German Environment Partnership (IGEP) Programme, a pilot activity was taken up for developing environment friendly site master plans for industrial areas.

Standards/Rating Systems

Of relevance to industrial areas, various rating systems with very different scopes are in use around the globe. These include Green SEZ Rating System (India), Green SEZ Guidelines (India), Green Rating for Integrated Habitat Assessment (GRIHA) Rating (India); Energy Conservation Building Code (India), Chinese Eco-Industrial Park Standard (China), UN indicators for sustainable development (UNDESA 2007), OECD Green Economy Indicators, DGNB Standards (German Sustainable Building Council) (Germany), LEED (Leadership in Energy and Environmental Design) Rating System (USA) etc.

On the lines of the DGNB (Germany) standards, selected quality parameters were customised and put to testing for the pilot sites taken up under the IGEP Programme. These quality parameters are related to:

- **Economic quality**, e.g., cost effectiveness for the industrial plots, high investments in the industrial estate and high tax revenues investments, tax revenues.
- **Technical quality**, e.g., eco-efficient transportation, business infrastructure, energy efficiency and renewable energy provisions, green factory buildings, business infrastructure, combined services.
- **Environmental quality**, e.g., pollution control (wastes, wastewater, emissions, noise), climate change, resource efficiency, disaster risks, plantation & landscaping.
- **Social quality**, e.g., employment, gender aspects, social infrastructure.
- **Process quality**, e.g., management structures, service delivery, Public Private Partnership.

These Pilot Sites

The pilot work taken up under IGEP programme for preparation of environment friendly site master plans includes:

- **Green Industrial Park** (GRIP), Nandigama (Telangana)
- **Green Industrial Park**, Jadcherla (Telangana)

The Green Industrial Park at Nandigama near Hyderabad caters to women entrepreneurs of the Association of Lady Entrepreneurs of Andhra Pradesh (ALEAP). The Green Industrial Park extends to about 85 acres and has about 140 plots for catering to non-polluting industries including sectors like herbal products, food and juice, paper and packaging, textiles, engineering etc. The major highlights of the site master plan are:

- Green buildings for factory sheds
- Green energy applications – Photo Voltaic roof tops, solar street lamps
- Pollution control – waste water treatment recycle/reuse, waste treatment and reuse, rainwater harvesting.

- **Green spines, ecological landscaping, organic farms.**
- **Women friendly provisions for crèche, toilets, guest house for extended work, first aid, canteens, internal shuttle service (battery operated), external connection to public transport, ladies room etc.**
- **Safety & security measures including fencing of the industrial park, access control for vehicles, Closed Circuit Television (CCTV) cameras, fire alarms & fighting systems etc.**
- **Cost effective common infrastructure, e.g., Common Effluent Treatment Plant, Vermi–Composting Plant (for organic waste), Handmade Paper Unit (for paper waste), Incubator facilities etc.**

The Green Industrial Park at Jadcherla near Hyderabad, that extends over 954.23 acres, caters mainly to the non-polluting industries. The main highlights of the site master plan are:

- **Zoning of industries**
- **Exclusive zone for women entrepreneurs**
- **Hierarchy of roads with standardised road cross sections with provisions of infrastructure, drains, greenery etc.**
- **Decentralised storm water management system as per drainage and topography.**
- **Decentralised wastewater treatment and recycle/reuse provisions.**
- **Eco-efficient transportation and eco-friendly mobility, including bicycle tracks, pedestrian pathways along landscaped stretches.**
- ** Provision for access control for vehicles, truck parking, truck service stations, rest house for drivers.**
- **Caters to about 300 industries and provides direct employment to about 20,000 people.**

The site master plans have undergone preliminary assessment for DGNB certification and have given promising results. The learnings are being replicated into site master plans of Andhra Pradesh Special Economic Zone at Visakhapatnam and Multi Product Special Economic Zone at Naidupeta in Andhra Pradesh. Also, the learnings are planned to be integrated to the retrofitting site master plan of the existing industrial estate of the Gujarat Industrial Development Corporation at Vapi.
Retrofitting of Existing Information Technology Parks in Telangana

— Hrishikesh Mahadee

The Information Technology (IT) Parks located in Madapur and Nanakramguda of Hyderabad in the State of Telangana cater to the information technology industry. These IT Parks today boast of leading IT industries such as Microsoft, Infosys, TCS, Wipro, Tech Mahindra and employ over 5000 people. Most of these industries were set up during early 2000.

These IT Parks are known for modern office buildings and IT savvy young employees. In response to awareness raised amongst industries in a month long Environmental Improvement Drive organised in June 2013, the need was realised to retrofit these industrial parks with addition of new technology and relevant features to the older systems. This was so as to set new standards and an example to other industrial parks in the State and elsewhere.

Retrofitting is a unique approach aimed at improving economic performance, work environment, employability and environment performance of the IT Parks, which implies a win-win situation for all, including the company owners, the employees working in the companies and the environment in general. Retrofitting focuses initially on a 5-point strategy, including:

- Converting the office/industry buildings to Green Buildings and making them barrier-free to support employment of physically challenged.
- Waste management (e-waste and other wastes) including recycle/reuse.
- Promotion of bicycling to work.
- Plantation and landscaping.
- Rain water harvesting, including recycle/reuse.

The programme is coordinated by the Telangana State Industrial Infrastructure Corporation (TSIIC) and the technical support is provided by IGEP. The strategic partners with specialised expertise include the Nasscom Foundation, the social development arm of National Association of Software and Services Companies (Nasscom), CII-Sohrabji Godrej Green Business Centre, State Groundwater Department of Telangana State. The programme is coordinated by the Telangana State Industrial Infrastructure Corporation (TSIIC) and the technical support is provided by IGEP. The strategic partners with specialised expertise include the Nasscom Foundation, the social development arm of National Association of Software and Services Companies (Nasscom), CII-Sohrabji Godrej Green Business Centre, TRACO (an NGO), Trident City and the State Groundwater Department of the Telangana State.

On the day of programme launch, five companies signed an expression of interest to join the programme and have shown commitment to make the necessary investments. The Telangana Government, in appreciation of this positive move by the companies, announced a token fund of Rs 500,000 as incentive to each industry that comes up to undertake retrofitting of their premises for appointing an expert to advise them on retrofitting.

The strategic partners have initiated awareness programmes and have started pre-feasibility studies. The expected results from the first phase of retrofitting include:

- Retrofitting of about 30 office buildings into Green Buildings and making them barrier free buildings,
- bring in infrastructure in place and operation of waste management systems through appropriate business models and technical solutions,
- promotion of “Cycle to Work” targeting 25% of total employees using bicycles in the long run,
- increasing green cover with beautiful landscapes and
- improving storm water management with rain water harvesting to gainfully recycle/reuse the water.
End of Life Vehicles
International Legislative Landscape

- Manjeet Singh Sahija and Rachna Arora

End of Life Vehicles (ELVs) add to the complexity of waste streams globally associated with rising income levels, higher obsolescence rates and increased penetration of automobiles. Automobile ownership worldwide has been increasing at a higher rate than the global population and reached more than 1 billion units in 2010 (Sakai et al. 2013). It is expected to cross over 2 billion units in 2030 (Dargay, Gately and Sommer 2007). The generation of ELVs was estimated at 40 million, which accounts for 4% of total automobile ownership (Sakai et al. 2013). Internationally, ELV has been defined as a deregistered car that will undergo treatment/recycling through appropriate processes within the country. ELV account for 8.9 million tonnes of waste in the European Union (EU) with Germany, UK, France, Spain and Italy responsible for approximately 75 per cent of EU-25 vehicles de-registrations (Eurostat 2010). Japan generates about 0.7 million tonnes of Automobile Shredder Residues (ASR) every year – shredded ELV (Kiyotaka and Itaru 2002).

Various countries have initiated programmes to tackle the ELVs and each of the ELV programme is at varied level of maturity. Legislative ELV recycling systems are established in the EU, Japan, Korea, and China, while in the US, ELV recycling is managed under existing laws on environmental protection. EU has been among the early movers and had enacted the law in the year 2000 itself while Japan came with its law in 2001.

Legislative landscape across major economies

**European Union (EU)**

In the EU, the EU-Directive 2000/53/EC on ELVs was enacted in 2000. The major objectives included:

- a) to make vehicle dismantling and recycling more environmentally friendly, b) to set clear quantified targets for reuse, recycling and recovery of vehicles and their components and c) to encourage producers to manufacture new vehicles also with a view to their recyclability.

The Directive also sets recycling targets for different phases. Member states are required to meet the targets, while car manufacturers and importers shoulder the expense of recycling under the Extended Producer Responsibility (EPR) principle. Targets that member states must meet for "reuse and recovery" and "reuse and recycling" rates were: 58% and 80%, respectively, by 2006; and then 95% and 85%, respectively, by 2015. According to data published by Eurostat in 2008, twenty member states achieved the reuse/recycling target of 80% of the average ELV weight. Sixteen member states met the 85% reuse/recycle target.

**Japan**

The Automobile Recycling Law, which came into effect in January 2005, mandates an appropriate division of roles between auto manufacturers and other involved parties, to promote the recycling and appropriate processing of ELVs. The legislation specifies components/materials to be recycled and specifies responsibilities of the stakeholders for financial and physical costs, as well as the development of an information management system.

Recycling targets are separately determined for airbags, refrigerant gas and ASR, and not for the whole ELV. Furthermore, an environmentally sound treatment of the fluorocarbons is required by law. The recycling rates for airbags and ASR from 2015 are 80% and 85%, respectively. With regard to the recycling of ASR, thermal recovery is acceptable and no provision was set regarding its recovery rate.

**Korea**

In Korea, the Act for Resource Recycling of Electrical and Electronic Equipment and Vehicles was enforced in 2008 and is modeled on EU comparable initiative. The key components of the Korean ELV Legislation include:

- Research and Development (R&D) production stage,
- restriction on the use of hazardous material and
- new vehicles must be compliant with the annual recyclable rate, currently set at 85 per cent through the improvement of materials and structure.

This act further enhanced the onus on Extended Producer Responsibility (EPR) which evolved into the Integrated Product Policy through the introduction of the Eco-assurance System. The Eco-assurance System requires both preventive and follow-up management: the former is to ensure environmentally friendly design and manufacture of products, while the latter is to conduct environmentally sound management of wastes. Under this act, the responsibility for ELV recycling is placed on all the stakeholders involved, including manufacturers, importers, dismantlers, shredders, ASR recyclers and refrigerant gas processors, and the recycling rate is mandated. When the ELV recycling cost exceeds the price of the ELV, the excess cost is shouldered by the manufacturers and importers. The act also requires submission of recycling performance data to Korea Environment Corporation (KECO).

**China**

In China, the Automotive Products Recycling Technology Policy was promulgated, under which the responsibilities of manufacturers and importers to promote ELV recycling were clarified. Manufacturers who use recycled materials in car manufacturing that will be controlled and prohibited were stipulated in consideration of environmental protection. This technical policy also sets the following recycling targets for ELV: about 85% (or at least 80% material recycling) by the year 2010; about 90% (or at least 80% material recycling) by the year 2012; and about 95% (or at least 85% material recycling) by the year 2017. In 2008, the Regulations of Re-manufacturing Piler of Automotive Parts was issued with the aim of carrying out a trial program on the production of secondary products from used components including the five major assemblies. This effort contributed to improvement of the recycling rate during the dismantling stage.

**United States of America (USA)**

In the US, ELV recycling operates autonomously based on the market mechanism. ELV recycling has been promoted by the Automotive Recyclers Association (ARA). Although there is no mandatory recycling target, the rate of material recycling was reported to reach 80%. More emphasis is placed on the promotion of environmentally sound management at the dismantling or recycling facilities under this system than in an integrated management system. In particular, dioxins, furans, polycyclic aromatic hydrocarbons (PAHs) and greenhouse gases require monitoring.

The ELV recycling program is, therefore, the subject of strict monitoring under environmental laws. Among the relevant regulations are the Resource Conservation and Recovery Act (RCRA), the Clean Air Act (CAA), and the Clean Water Act (CWA). In addition to federal laws, state governments also impose their own regulations.

**India**

- Journey towards development of Legislative framework on ELVs

Governments around the globe have started to provide positive stimulus and rewards for the adoption of circular business models. The global economic crisis, soaring commodity prices and growing awareness of the human impact on the environment have pushed the circular economy agenda into mainstream policy debate. The key drivers towards ‘Green Initiatives’ in the automobile industry are environmental viz. reduction in resource consumption, emission, waste generation and disposal, social viz. improve living conditions of community, brand identity and economic viz. reduce costs, environmental liabilities and enhance access to markets.

In India, the automobile industry has been one of the fastest growing industries, therefore the End of Life vehicles will be an opportunity for the country to utilise secondary resources for adoption of circular economy approaches. However, the country currently has no regulation that covers recycling of end of life vehicles. Despite having no regulatory framework, initial steps have been taken that include setting up of a demonstration centre near Chennai by the Ministry of Heavy Industry, with active support of the automobile industry, which donated know-how, lay out, and an initial supply of 25 cars and 60 two-wheelers free of cost. The centre aims to develop methods suited to India, using manual labor, systems for two wheelers dismantling, and enhance capacities of the informal sector towards safe dismantling practices.

IGEEP in partnership with Central Pollution Control Board (CPCB) has conducted an assessment study in the five automobile hubs of India. The assessment will inform on the ongoing scenario of ELVs, quantitative estimates of the ELVs generated in the country and mapping of the trade chain. IGEEP and CPCB are also working on developing national guidelines for Environmentally Sound Management of ELVs in India. These guidelines will focus on addressing concerns in India for setting up mechanisms for collection, channelization, dismantling and recycling infrastructure. The international ELV policies lay the responsibilities on the producers towards its take back and disposal mechanisms but in India, producer responsibility will need a systemic orientation to create institutional, fiscal, infrastructural, social and legislative standards towards environmentally sound management of ELVs.
Create to Inspire
Transforming the consumption patterns in select Indian cities

Create to Inspire is a joint initiative by Nokia India Sales Private Limited, a subsidiary of Microsoft Mobile Oy and GIZ under the developePPP.de programme. The developePPP.de is a programme initiated by the Federal Ministry for Economic Cooperation and Development (BMZ) aimed at promoting cooperation between the development and the private sectors. Under the development partnership programme (DPP) with Nokia, GIZ is working towards a more intense engagement with youth on sustainable consumption, primarily focusing on e-waste, but also broadly covering other topics such as energy, water and transportation. The target groups are e-waste collectors from the informal sector and teachers, children & youth from schools and colleges in Ahmedabad and Kolkata.

The collection of e-waste is primarily managed by the informal sector, while recycling is undertaken by the formalised recycling company. Existing collection channels are used and new ones are being established with informal sector workers and NGOs, for establishing e-waste collection (mainly mobile phone and accessories) from individual consumers and repair shops in the two cities. Capacity building is done for e-waste collectors and their associations, to inform them about the potential risks of improper handling of e-waste. The capacity building efforts are primarily targeted at those informal sector representatives who have expressed their interest to formalise, or who have just formalised their businesses.

To create awareness on sustainable consumption among school children and youth, various creative media are used. This helps in understanding issues related to consumption practices and importance of e-waste recycling on the environment. A networked group of competent teachers are being trained to build the capacity of students on sustainable consumption. In addition, e-waste collection channels are facilitated through schools and youth groups.

Informal Sector
- Informal sector associations channelize e-waste to recyclers
- Development of Door to Door collection networks
- Creation of new income opportunities

Schools
- Build capacity of teachers on education for sustainable living
- Provide a toolkit to engage with students on the themes of Energy, E-waste, Transportation, Water and Bio-diversity
- Mainstream the subject of sustainable consumption in curriculum

Youth
- Bring the topic of sustainable lifestyle into everyday conversations amongst the youth
- Create interactive, innovative and long-lasting model interventions to replicate and upscale the approach further
- Build future environmental leaders who can express sustainable consumption through creative mediums

Sectoral Focus
- Critical thinking on consumption practices
- Resource utilization
- Implementation of Rules
- Improved collection of e-waste
- Enhanced capacities
- Improved E-waste collection and awareness on sustainable consumption leading to ‘Change’
An interview with Mr. Pranshu Singhal, Head, Sustainability, Microsoft Mobile Oy

Partners Speaks

1. What difference did the partnership with GIZ make to the “Create to Inspire” programme?

GIZ has facilitated interface with partner organisations representing the public sector, NGOs and informal sectors. GIZ has also made a valuable contribution towards institutionalising this initiative. In addition, this partnership has contributed towards developing systematic and robust capacity development inputs.

2. How are you planning to take this forward?

Different iterations are being tried using different formats in different cities. We are planning to try different art forms and tweak the duration, the number of art forms, as well as the number of fellows. After a couple of iterations, post a year, we should be able to arrive at a good mix of art forms, number of fellows and gain a comprehensive understanding from all perspectives, including the resource perspective.

3. Do you see any change in behaviour of youth towards sustainable consumption through your programme?

Not yet. This is too small a time frame to measure any outcome. However, the significant thing is that a mindset change has started with the thought process having started from multi-stakeholder perspectives.

4. How was “Create to Inspire” Programme conceptualised?

We had brainstormed a lot to understand how to engage with the people. Mass media campaigns generally have short spikes of interest. We had to go beyond merely creating awareness and inspire people to think. We wanted to give people something to think about and also spark a conversation and keep this going. How do we start an informal conversation at the coffee table – this was the premise on which the programme was conceptualised. Conversations are critical to sparking ideas.

Based on intensive consumer research, we identified our target groups – the youth between the age group 18 and 23. To keep the conversation flowing, we felt it was best to focus on the senses and working with the senses. What is the ONE thing that binds people? ART! That is how the “Create to Inspire” programme was created!

This is an experimental space, and we are not certain of a definite outcome. Sustainability may or may not be an outcome. It is a difficult programme to run and sustain. Neither can it be handed over because it is a unique topic which makes it difficult to comprehend and grasp.

5. What was the overall response from India?

We received a very good response from fellows and mentors. Subsequently, of course, people struggled with the concept.

The audience response has been fabulous and very encouraging. The response at the UNESCO forum at Japan was in particular great.

We are striving to reach a space where we are able to scale the fellowship. It is an evolving concept which naturally will continue to evolve.

6. Tell us more about the “Create to Inspire” fellowship programme in Kolkata.

“Create to Inspire” is an out-of-the-box challenge for youngsters to create campaigns to promote judicious consumption and management of water, energy, transport and e-waste. This was a first-of-its-kind programme in the city that brought together the creativity of the youth and engaged them in art forms they are passionate about to create campaigns to encourage sustainable living and judicious consumption and management of natural resources and e-waste. Launched in association with GIZ in December 2013, the programme saw 200 young applicants, from whom 60 fellows were selected through a series of rigorous interviews. The selected fellows were guided by a team of mentors with unique art credentials – Mir Afsar Ali (Vocal project), Neel Adhikari (Music), Sujoy Prasad Chatterjee (Theatre), Swarup Datta (Photography), Iftekar Ehsaan (Public art installation) and Sudarshan Chakravarthy (Dance). The resultant projects, including a short film on waste management, a street play on water conservation, a stand-up comedy, and several dance performances have been showcased throughout the city to inspire the society to adopt ‘green’ behaviour as consumers. A music album “WIRES” was released during the felicitation ceremony in association with GIZ and Hungama, India’s leading digital entertainment company.
Understanding & Debating Environmental Regulation from Civil Society Perspectives

Geetonjoy Sahu, Tata Institute of Social Sciences

A two-day national consultation on ‘Understanding & Debating Environmental Regulation from Civil Society Perspectives’ on 1-2 December 2014, organised jointly by the GIZ-IGEP, New Delhi and the Tata Institute of Social Sciences (TISS), Mumbai attempted to understand the emerging trends and challenges in environmental regulation from various concerned and informed individuals and environmental groups working in the field of environmental regulation. The participants ranging from legal experts to environmental organisations to environmental scientists and media representatives engaged in a comprehensive exercise to debate the current form of environmental regulation in the country and challenges ahead. No doubt, a number of groups and collectives have also been working and debating on the trends and challenges for environmental regulation in India. But, the IGEP-TISS effort was to complement these other groups in many ways. The workshop started with the inaugural address by Mr. E A S Sarma (Former Secretary, Government of India) focusing on the role of civil society groups in the protection and management of environmental protection in India. He was of the opinion that we need to strengthen the existing rules and regulations and make our implementation process more effective than creating new structures.

In the session on Revisiting Environmental Regulation in India chaired by Dr. Dieter Mutz from GIZ, there were three panelists – eminent journalist Mr. Darryl D’Monte, academic lawyer Prof. M K Ramesh and environmental lawyer Mr. Videh Upadhyay. Dr. Mutz commenced the session by questioning why considerable success has not been achieved with regard to environmental regulation in India. Even after ‘more than 200 environmental laws’ why does India still struggle to achieve effective regulation? The panelists were of the view that environmental regulation in India should be seen as a ‘political issue – not in terms of party politics but as who is controlling what resources for whom. The speakers argued that one of the objectives of the state was to exploit the natural resources of the country for welfare and progress of the nation. However, in the last few decades, industrialists and policy-makers have repackaged these ideas to bring them in line with the neo-liberal idea of achieving development.
Industrialisation through private investment is thought to bring growth which is supposed to trickle down to the bottom levels and increase welfare of the people of the country. However, over the years environmental regulation failed and resources were appropriated by a select group of people and the trickle down theory failed. This has resulted in the rise of environmental movements in 1970s and subsequently, the Indian Judiciary had to intervene in the affairs of other organs to implement environmental rules and regulations.

The second session on emerging trends and challenges for environmental governance at the state level was moderated by Dr. Shailendra Dwivedi and the speakers include: Mr. Rohit Prajapati, Mr. Sunak Pani, Mr. Marianne Manuel and Mr. Sanjeev Purushot. The speakers broadly argued that in a federal state the management of resources becomes a complex issue as there are diverse socio-economic and political goals that are advocated at the state level. One of the major challenges pointed out during the discussion was lack of human and financial resources with the implementing agencies. Another important challenge has been the constant pressure from corporate sectors to change the land use pattern.

The third session on Bringing Regulators and Scientists together was chaired by Mr. Darryl D’Monte and the speakers include Dr. D Raghunandan, Prof. T Jayaraman and Mr. Arvind Sussal. The panelists are of the opinion that scientists do not constitute a homogenous entity that will bring clarity to the issue of environmental governance. There has been an explosion of public debate on nuclear energy and safety being known to only a small privileged group. There has been an accusation of the same privilege having been given in the field of environmental regulation. The lack of homogeneity can be seen wherein decisions taken by scientists differ according to whether they are working with a regulatory agency academics or the civil society (NGOs). The assumption therefore that they would take common positions on issues stands incorrect. Before we talk about bringing scientists and regulators together, we should focus on getting scientists together to address common concerns.

The fourth session on Regulation, Litigation and Implementation addressed how over the years environmental litigations in India increased and the reasons behind this. The session was chaired by Dr. D Raghunandan and the speakers include: Mr. Ritwick Dutta, Prof. Geetanjali Sahu, Mr. Om Shankar Srivastav and Mr. Harish Vasudevan. The speakers argued that the Court’s approach to entertain Public Interest Litigation (PIL) for environmental protection is significant in many ways. Over the years, the Court was very supportive to environmental litigation and has given a number of landmark environmental judgments which contributed significantly to the evolution of environmental principles like polluters pay principle, precautionary principle, public trust doctrine, etc. However, most of the time the judgements given by the Court have not been implemented effectively. In this regard, the speakers felt that the responsibility of all the stakeholders involved in the litigation is crucial to ensure the implementation of Court orders. Also, it was felt that there is an urgent need to mobilise scientists to support environmental activists and NGOs to strengthen environmental litigation.

In the concluding session, the participants strongly felt the need to mobilise various stakeholders under one platform and engage consistently in not only highlighting the major concerns around environmental regulation in India but also in identifying ways to orient and help the citizens, especially the most vulnerable groups who are victims of environmental injustice. One major consensus among the participants was to demand to strengthen the existing rules and regulations and environmental governance structures with resource support. Another, suggestion was made to use the capacity and knowledge of diverse groups working in the field of environment so that civil society can be more effective in drawing the attention of the state and also more productive in addressing the unequal distribution of environmental goods and distributions. Finally, the participants agreed to adopt multi-pronged strategies to engage with the state ranging from capacity building to mobilisation of citizens to filing litigation and developing a large database so that it can be useful for policy change.

The assumption therefore that they would take common positions on issues stands incorrect. Before we talk about bringing scientists and regulators together, we should focus on getting scientists together to address common concerns.

In the presentation, Dr. Rajanwahi defined SEA as “systematic process for evaluating the environmental consequences of proposed policy, plan or programme initiatives in order to ensure they are fully included and appropriately addressed at the earliest appropriate stage of decision making on par with economic and social considerations.” She then provided more information on the strategic planning tool and stressed its importance in investigating the environmental impact of newly proposed mines. Dr. Rajanwahi concluded by mentioning both opportunities of SEA, e.g. to help realise good governance, and challenges for SEA, such as inadequate policy framework, limited appreciation of SEA benefits, and the impression many people have that SEA is a barrier to economic growth.

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A fruitful discussion about India’s readiness for Strategic Environmental Assessment (SEA) emerged at the eighth edition of the Indo-German Environment Partnership Dialogue at GIZ, Jor Bagh office on October 16, 2014. Dr. Asha Rajvanshi from Wildlife Institute of India, Dehradun and German landscape planner and developer Prof. Dr. Stefan Heiland of Technical University of Berlin were the key speakers of the dialogue. They provided indepth background knowledge on SEA and examples of its implementation in India and Germany.

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According to Prof. Dr. Heiland, SEA is an important and effective tool to identify and minimise potential negative impacts of a plan on the environment, but does not proactively improve the state of the environment. For this, one would need landscape planning. The German expert stressed the importance of an integrative overarching spatial planning instrument to coordinate sectoral plans and avoid or minimise negative side effects.

A lively interaction with the audience followed. Participants of the dialogue asked questions, raised concerns, and gave comments, especially on the role of public participation in environmental planning and the question on whether it makes sense to start using SEA in India in a situation where Environmental Impact Assessments (EIA), a mandatory procedure is not being properly followed.

Shri Jairam Ramesh, former Minister of Environment and Forests greeted the occasion with his presence.

Eighth IGEP Dialogue: Is India ready for Strategic Environmental Assessment?

– Lukas Kemkes
Agents of Change
Strengthening Youth Voices in the Climate Dialogue

“Close your eyes and breathe in deeply. Use your imagination and follow me on a journey. Imagine you are walking in a beautiful, green forest. You inhale the clear, fresh air while small branches are cracking under your feet. What do you feel? … And now imagine that your children won’t be able to share these experiences and feelings, because this forest will not exist anymore when they reach your current age!”

There is total silence in the chilly assembly hall of the North-Eastern Hill University in Shillong. It is the second and also the last day of the “Agents of Change” workshop organised by the Indian Youth Climate Network (IYCN). Over 100 young people, most of them students from across the seven north-eastern states, follow Mark Lairflang Stone, one of the speakers, on his imaginary journey. By leading through a deeply moving meditation, he connects the audience to the topic of climate change in his own special way. He wants the young participants not just to reflect upon the impacts of climate change, but also to internalise them.

The Shillong workshop was one of seven “Agents of Change” events which have been held in India’s major cities, e.g. Pune, Delhi and Hyderabad, in the second half of the year. By organising these 2-day workshops, IYCN pursues its goal of enabling the Indian youth to contribute to the climate dialogue at the national and international level. Against the background of a significantly young population and India’s vulnerability to the impacts of climate change, IYCN aims to raise awareness with regard to climate change science and policy. Simultaneously, they create a platform for dialogue and interaction and the local chapters of the youth network, which are currently spread over 19 states, which enables these to be strengthened and extended. These activities fall under the first out of two components the project.

In total, more than 600 participants benefited from the workshops which demystified complex climate vocabulary and ensured that the youth is updated on the latest developments in the international climate scenario. During several panel discussions, professionals shared their experiences on climate change and translated internationally debated topics into local issues to which the participants can directly link - for instance deforestation in the north-eastern region. Other topics discussed include public transport, drinking water and waste management, and their impacts on people’s lives and the environment.

Under the second component of the “Agents of Change” programme, IYCN conducted a climate perception survey which feeds into a youth position paper. The survey, which focuses on the youth’s understanding of the climate dialogue and expectations from the policy makers, was mainly undertaken amongst the workshop participants and shared via the IYCN website. A delegation of the IYCN team presented the outcomes, processed in the position paper, at UNFCCC COP 20 in Lima during a side event which IYCN co-hosted with Development Alternatives.

During its entire duration, the programme was accompanied by Project Survival Media – “a global youth journalism network reporting from the front-lines of climate change” – as they describe themselves. They were responsible for the video documentation of the workshops, resulting in two to three minute videos which are uploaded on Youtube and other media channels. In addition, experiences and reports of the events were published on various blogs, IYCN’s website and their Facebook group.

The Agents of Change project, funded by the Embassy of the Federal Republic of Germany, shows that the Indian Youth is highly concerned about climate change and its impact on the environment, the Indian population and people’s livelihood. There is still great potential for development, and the youth is willing and highly motivated to engage in climate change talks in order to bring in fresh impetus into the discussions and be part of a transformational and sustainable change.

More about IYCN and Agents of Change:
www.iycn.in
www.facebook.com/iycngroup
www.youtube.com/user/ProjectSurvivalMedia/
Integrating Gender in Indo-German Environment Partnership:
Reflection on some Core Processes

Snehadeep Sengupta

laying out inclusive parameters and a critical frame of reference for the exploration of gender-related questions and programmatic approaches which integrate gender as a technical area, for any new or ongoing programme is never easy. The challenges associated with it are not just technical but also programmatic. “Gender” is more often than not, a very difficult topic to engage with in any programmatic sector. Discussing and talking about it is often not considered “technical” and is also sometimes approached with much caution and resistance. However, with strong political will, leadership drives commitment and a sound understanding that gender equality is key to sustainable development, some of these challenges can be overcome.

Evidence based data which highlights existing social norms, cultural differences and gender inequality practises, are often the entry points for any programme to analyse its sector from a “gender lens”. Gender Equality is not just a goal in itself, but is also key to ensuring sustainability. As someone once said, “we should be committed to leaving behind a green planet for our future generations”, which should also make us think, “we also need to think about the “type of generation” that we leave this planet to.

For sound environmental management, it is almost impossible to not tackle growing urbanization, industrial growth, climate change, waste management and other important “technical” aspects. Similarly, for sustainable environmental management it is almost impossible to not look at existing gender gaps, differential social and cultural practices and also specifically decision making, around ownership and utilisation of resources. Inclusivity and diversity are both important factors to consider while planning, implementing and monitoring a programme.

For many years now, the promotion of gender equality through gender mainstreaming has been a key strategy in international cooperation. Many of GIZ’s commissioning parties are committed to promoting gender equality, and gender aspects play an important role in designing and planning measures. Gender analysis is also a key priority within the framework of GIZ’s gender strategy. Gender analyses provide recommendations for the methodological approach and for the objectives system. They provide a basis for awarding the gender marker for new programme.

IGEP is currently moving on to redefine itself. As this evolution process takes place, the thinking within the programme has also evolved to not just environmentally conscious but also to ensure inclusivity, sustainability and equality.

As IGEP moves towards a new form of cooperation and partnership, it understands from its long term experiences, that exclusion of looking at any of the key success factors which redefine cooperation strategies would be a recipe for programmatic failure. It is understood by the current programme that a variety of technologies, innovative approaches and partnership strategies and models are required for effective urban and industrial environmental management. Gender Mainstreaming was identified as one such important technical parameter. The programme has set up within its structure, an internal IGEP Gender Core team, which comprises individuals and experts from across the programmatic structure and also from the Programme Support Team of the GIZ Office. The constitution of the gender core team was an important step towards initiating the process of “Gender Mainstreaming” within IGEP planning and implementation process. However, it was, not recognised as an organic component of the overall planning mechanism of IGEP.

The ‘add on’ tag remained with the core group during the entire period of IGEP. This led to the concerted efforts by the gender core group to ensure that the follow on project of IGEP provides adequate space for gender issues from the project design phase. The IGEP gender core team has over the past few months engaged in various activities which support the current components in their existing form. For instance, with respect to Sustainable Urban Habitat component, one of the key tasks successfully conducted was the inclusion of gender based thought and action in the National Municipal Solid Waste Management Manual of the Ministry of Urban Development. The gender core team of the current phase of IGEP, embarks regularly on gender mainstreaming approaches and technicalities, and in the process has defined its own mainstreaming approach which resembles the following:

- Knowledge and understanding of the issue and validation of both men and women’s contributions to environmental sustainable development.
- At the programmatic level, generating adequate political will combined with concrete actions and enabling components to monitor programmatic progress related to Gender.
- Assurance of women’s rights in the programmatic approach, and that they actively participate, contribute and benefit from environmental goods and services.
- Improvement of the socio-economic position of women and yet to ensure that the focus and objective of women’s empowerment at every level of programmatic intervention is looked through a gender lens.
- Identifying the impact of the macro context on women and their environment and taking on tasks to support the existing structure of the programme.
- Learning and sharing of experiences across sectors, hierarchies and boundaries.

It is no surprise that the new phase of IGEP which recently underwent an appraisal process, looked at possible integration and gender sensitive approaches which the new design of the programme could offer. This included a project which engaged with the Programme Appraisal Mission team members on a periodic basis. The IGEP gender core team members were convinced about the need for a regular and systematic engagement in the Project Appraisal process. They requested for one of the team members of the appraisal mission to take on the responsibility of watching the “Gender Hat” in all relevant stakeholder discussions /meetings which were being planned for. One of the review team members stepped up to this task and was not just cooperative and interested but also made it her mandate to ensure that she would seek out opportunities for gender mainstreaming during the mission. The Gender core team ensured the team member that she would receive a steady supply of technical inputs includes technical reviews, statistical data, analysis of this data etc to ensure that the case for not just gender inclusivity but also sustainability is laid out concretely in the new offer design. The process was heightened with excitement as every
though there are perceptible changes in terms of education and participation in the labour workforce, the society continues to have a deeply patriarchal culture, caste divisions, female illiteracy, domestic violence, son preference, child labour, child marriages, women’s limited access to resources and property, and dowry demands. The team therefore had to also look into the deep-rooted gender biases which lead to discrimination against women such as confinement of women to the private domestic realm, restrictions on their mobility, poor access to health services, nutrition, education and employment, and exclusion from the public and political sphere. However, it was apparent that women are by no means a homogenous category – status would vary with factors such as region, rural or urban areas, caste, religion, levels of education, income, political participation, access to health services, adequate nutrition etc., as specific regional or local histories do shape the status of women in different parts of the country.

The core team and the appraisal mission team member engaged in active discussions which led to understanding more of the differentiated issues concerning urbanisation, industrial growth in the context of gender equality. Understanding the differential requirements and hindering factors for women’s participation in the industrial work force, impacts of industrial pollution on communities (men, women, young girls and boys, children and elderly), lack of skill development for women as entrepreneurs and recognition that although initiatives such as the existing outstanding work of the programme such as ALEAP are encouraged, however for true inclusive development to happen, the analysis revealed that interventions must not only be restricted to special women’s working zones, but infact must encompass enabling environment for men and women at all categories of industrial clusters. Such analysis and discussions not just reflected the commitment of the programme to engage in analysing gender based concerns for the new programme but was also a process which reflected in true style: a gendered way of programmatic planning. This news item is being shared with you at a time when the team had gone through in the past weeks. I had the picture of people, clandestinely working on heaps and heaps of e-waste, hazardous smoke belolling out of every 100X10 room houses, sounds of hammering metal, burning of wires on the narrow streets, children lifting computers and broken glass etc., I reached Mr. Afroz’s shop and before I could even explain, I got a warm welcome and was ushered into his shop. Language was not a hitch since he knew Hindi (I didn’t know Kannada, and I thought it would be difficult to converse). Sipping the hot tea (initially hesitant to drink), I started chatting with Mr. Afroz Khan, who had formed a company called ‘Introtek’, which was in the process of formalisation. I was amazed at how the conversation unfolded. During the forty five minutes of the interview, each and every ‘Premise’ that I had acquired went out of the window! There was a ‘sea change’ in my perceptions. The days that followed after meeting Mr. Afroz, were eventful and an eye opening experience for me. I met twenty five e-waste recyclers in a period of two months. I got an opportunity to visit their homes, their shops, their industries. They chatted freely with me about their business, their problems, their struggles and most importantly their success story! They shared with me their journey of how some of them became ‘Industry Owners’.

Formalisation has had manifold impacts

One immediate impact which I felt was, formalisation has ‘abolished child labour’ which otherwise is rampant in other informal sectors in India. Earlier, they practised recycling in their homes, where the entire family was engaged in this activity. However, today, the business has moved into an industrial hub and in a separate factory premise. The result: Instead of their wives and children, now they have employees working full time as per the regulations of ‘Factory Act’ and under the licence from the state pollution control board. All thanks to GIZ HAWA project, whose interventions brought this change!

‘Burnings’ of wires for extraction of copper, aluminium which was rampant in Ghoripalya, has now been completely replaced by the ‘process of stripping off’ of the wires. Even the informal workers (who are still not formalised and who are operating without the state pollution control consent), now don’t inhale hazardous dust and other toxic fumes as they use Personal Protection Equipments (PPEs) on the job. This was again the result of GIZ HAWA’s massive campaign in this region to stop such hazardous practices.

My experience during the ‘Socio-Economic Impact Study of Formalised Informal e-waste Recyclers Sector’

On a Monday afternoon, I went to Ghoripalya (known as the hub of e-waste recyclers since decades) in Bangalore, to conduct a survey and identify the Impacts of formalisation of the informal e-waste recyclers. As I was walking into the ‘Mohalla’ of Ghoripalya, I recollected all the literature I had gone through in the past weeks. I had the picture of people, clandestinely working on heaps and heaps of e-waste, hazardous smoke belolling out of every 100X10 room houses, sounds of hammering metal, burning of wires on the narrow streets, children lifting computers and broken glass etc., I reached Mr. Afroz’s shop and before I could even explain, I got a warm welcome and was ushered into his shop. Language was not a hitch since he knew Hindi (I didn’t know Kannada, and I thought it would be difficult to converse). Sipping the hot tea (initially hesitant to drink), I started chatting with Mr. Afroz Khan, who had formed a company called ‘Introtek’, which was in the process of formalisation. I was amazed at how the conversation unfolded. During the forty five minutes of the interview, each and every ‘Premise’ that I had acquired went out of the window! There was a ‘sea change’ in my perceptions. The days that followed after meeting Mr. Afroz, were eventful and an eye opening experience for me. I met twenty five e-waste recyclers in a period of two months. I got an opportunity to visit their homes, their shops, their industries. They chatted freely with me about their business, their problems, their struggles and most importantly their success story! They shared with me their journey of how some of them became ‘Industry Owners’.

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Entrepreneurship has been another major impact of formalisation, which is a matter of social status, pride and honour. The scaling up of their business has also increased the return on their investment. The changes in the consumption pattern and increased expenditure on luxury goods and services like expensive mobile phones, branded LCDs/LEDs, wrist watches are indicators of the economic upliftment. All recyclers have agreed to the fact that the expenditure on the education of their kids has been directly proportional to their increase in income.

"It was our household activity and we never thought we would ever scale up to a level of owning a formal e-waste recycling business" says Mr. Rizwan Khan, Owner and Managing Director of EWARDDD & Co., India’s first formalised informal E-waste recycler. GIZ handled these informal sector recyclers in getting the first three of them formalised.

**A Success Story**

The success or failure of any intervention depends upon how sustainable the community has been in continuing on the same path post the intervention phase. Here, I observed that the intervention streamlined three informal sector recyclers and all three have been doing it successfully and have scaled their business. Further, the footsteps of these three were followed by seven more informal recyclers who were formalised later. This intervention had a ripple effect on other informal players and now sixteen informal recyclers are in the process of formalisation. This speaks volumes about the success of this intervention.

This intervention, which was the need of the hour, has not just resulted in skill development of the recyclers, but also ensured ecological sustainability and reduced environmental damage. There has been a stark difference between the fragile informal sector and the dynamic formalised sector which is pushing its limits up constantly.

**Thinking Big**

The story does not end here. I was pleasantly surprised again, during the ‘focussed group discussion’ organised by GIZ, where each of them talked about diversifying, improving the quality and corporatisation of their facotries, which is clear from the statements they made:

“We want to take our company to the same level and even better than the big e-waste formal recyclers. So give us the guidelines and best practices which we need to follow”. (This was when they saw presentation by Ms. Binesha Payattari, GIZ on benchmarks of a technical excellence in an e-waste recycling sector). “We also refurbish computers/laptops and donate it to the schools in rural areas. But, we do not wish any media to cover this because we solely do it for the education of the children in the rural schools and not for the fame”

Mr. Salmr from Eco-e-waste said. This was in response to GIZ’s presentation on one of the criteria for excellence is “Corporate Social Responsibility”.

Prashant Kumar has done an internship with GIZ-IGEP Bangalore office.