Resource Initiative -
Leveraging efficiency to meet India's needs

Thursday, May 23, 2013, 9.30 AM - 5.45 PM

Jacaranda Hall, India Habitat Centre, Lodhi Road, New Delhi

Session Outcome

Inaugural session

The inaugural session began with the video-address by **Janez Potočnik, EU Commissioner for the Environment.** He talked about how the future of the planet and the people is determined by the way we respond to the increasing global pressure on natural resources. He highlighted how resource-intensive growth models followed by Europe are becoming increasingly uncompetitive. He brought forth the need to structurally transform the European economy given the global resource constraints and the systemic risks it entails. He emphasized on the importance of promoting circular economy in addition to improving resource efficiency, and also underscored the need to bring businesses on board and mobilize their creativity. He talked about the strategy document-'Roadmap to Resource Efficient Europe', which defines the framework conditions and aims to decouple growth with resource use. He emphasized that this agenda of safeguarding natural capital is not only concerned with European Union (EU), but is also strongly linked to international efforts to promote inclusive sustainable growth. He sees a coalition developing between on one hand resource rich countries with lower population densities and on the other hand more intensely populated areas like Europe with fewer resources. He stressed that India, which is rich in resources and has a large and increasing population, needs to have a right balance for growth that is economically, socially, and environmentally sustainable. He believes that the resource efficient growth is likely to have the greatest impact as well as the greatest benefits for countries like India.

RK Pachauri, Director General, TERI, highlighted that resource efficiency is important not only to halt increasing CO_2 concentration in the Earth's atmosphere and related exploitation of Earth's global commons, but also to bring about reversal of these trends. He expressed concerns about the growing population and the existing development paths which are extremely resource intensive, and emphasized on ensuring resource use efficiency. He also brought in focus the issue of resource security. India is highly dependent on imports of various inputs, and in that sense is no different from Europe. He also talked about how the use of resources has local impacts which are harmful to environment in a variety of ways. He emphasized on the need to also focus on ethical and equity aspects of natural resources. He mentioned about the

need to initiate a major program of action in India, and to focus on ecological policy issues in addition to economic policies.

João Cravinho, Ambassador and Head of Delegation of the European Union to India talked about raising knowledge and creating awareness as the first step towards sustainable development. He said that India and Europe face different but interconnected realities. The ongoing international race for resources has different connotations but it has also opened door to new possibilities for cooperation between India and EU. He mentioned that India and EU have cooperated since 2000 to bring about greater resource efficiency through policy dialogues, exchange of knowledge and technical expertise. He talked in detail about the various programs of cooperation between India and EU. The key areas of cooperation include water; forestry; climate change; waste; air pollution; energy security, safety and sustainability. He emphasized on the movement away from development assistance towards partnership-based range of activities.

Cord Meier-Klodt, Deputy Chief of Mission, German Embassy, talked about how the evolution of resource efficiency in Germany is linked to the history of environmental policy for a long time. He mentioned that resource efficiency constitutes an important pillar of German environmental policy and highlighted its importance for national economy as a whole, for federal states and cities, for entire industries and also for individual companies. He talked about how companies pursuing resource efficiency not only improve competitiveness but also open windows of innovation which then again in the long run contribute to long term success of the company. He highlighted the various efforts initiated by the German government in assisting companies through advisory services, awareness raising and best practice examples. He stressed that in Germany the focus has shifted from mere resource savings in production towards the entire life-cycle. This has led to a substitution of significant amounts of raw material imports. However, the challenges still remain.

With regard to India, he said that the challenges are of different order than what is witnessed in Germany. He emphasized that India will need more resources to address the various challenges that include improving infrastructure, rekindling the momentum in manufacturing sector, meeting middle class consumption needs, and to pull even more people out of poverty. India's relative resource abundance will certainly have positive effects; however, the impact of finite resources will be felt in many ways through limited global supply of some extremely rare materials, limited availability of domestic materials due to technical constraints, pollution, social sensitivity, and local scarcity of resources such as water and land. Given this, he underscored the need to protect resources and improving utilization rates. He also emphasized on the need to break away with traditional interpretation patterns or argumentation patterns with regard to green economy and green growth.

Session I: Resource Efficiency as a Key for Sustainable Development: European and Indian Perspectives

Moderator: *Dieter Mutz, Director, Indo-German Environment Partnership (IGEP) programme, GIZ.*

The session started with the video address of **Tanja Gönner, Chair of the Management Board, GIZ** who emphasized that resource efficiency is key for India, which needs growth in coming years to alleviate poverty. According to her, resource efficiency is a fundamental principle that enables growth without risking the tremendous impacts resulting from the excessive resource consumption. She stressed on the closed loop economy that reduces, reuses and recycles and substitutes scarce resources. She mentioned that the concept of resource efficiency requires integration of resource vulnerabilities into vital policy areas. She also highlighted the need for collaborative efforts among private sector, policy makers, regulators, and researchers.

The **speakers** in the session were *Nicholas Hanley, Head of Unit, International Relations and Enlargement, DG Environment, European Commission; Leena Srivastava, Vice Chancellor, TERI University and Executive Director (Operations), TERI; Harry Lehmann, Head of Division, Environmental Planning and Sustainability Strategies, Federal Environment Agency (UBA), Germany; Ayumi Fujino, Representative for India and Regional Director for South Asia, UNIDO.*

The main points that emerged from this session are:

- The use of minerals has increased exponentially in the last 30 years and the current resource use exceeds planetary boundaries. Thus, business as usual is not an option anymore.
- India would be a major consumer of resources in coming years and Europe would become less and less important in the world's demand for resources.
- India is currently constrained on all resources combined with inequitable distribution of wealth leading to conflicts.
- Use of resources without paying for its services or maintenance, clean up, and re-use is currently the practice. There is a need to explore ways to evaluate land, raw materials, ecosystem services, and water.
- Lack of awareness and lack of norms to drive resource efficiency are the main challenges.
- Quantity, quality, and access to resources in context to sustainability are important. Sustainability refers to both social sustainability (i.e. gender equality, conflict resolution etc.) and institutional sustainability (i.e. skilled manpower)
- There is a need to increase resource activity and reduce resource quantity. In this context, it is important to increase the price of resources and reduce the price of labor.
- Making optimal choices through amalgamation of technology and resources and focusing on the whole cycle of production are critical.

- There is a difference between well-having and well-being. Well-having, which involves consumption and use of more resources than required, is a trend in many countries including Germany. There is a need to reduce metabolic rates of resources to tackle climate change.
- Social consensus and dialogues with business are critical to achieve resource efficiency.
- There is a need to increase knowledge sharing and have a sound policy environment which is inclusive of green growth and green economy,
- Greening the industry i.e. supporting resource productivity and environmental performance is important.

Session II: Material Efficiency - Macro Perspective: the Indian and European Context

Moderator: *Nitya Nanda, Fellow, TERI*

Speaker: *Ligia Noronha, Executive Director (Research Coordination), TERI*

Panel discussants: *S Majumdar, Principal Counsellor, Climate Change & Sustainability, CII-ITC Centre of Excellence for Sustainable Development; Hubert Schmitz, Professor, Institute of Development Studies, University of Sussex and German Development Institute (DIE)*; *Rakesh Kacker, Former Secretary, Ministry of Food Processing Industries; Ritu Mathur, Associate Director, Modeling and Scenario Building, TERI*

The main points that emerged from the session are:

- Per capita consumption of materials in India is not very high as compared to other communities but it is going to increase manifold in the coming years.
- 97% of materials consumption in India is through domestic resources and 3% is imported. India is rich in mineral resources; however, exploration and realization has not been sufficient. There are also problems for mining companies in obtaining social license to operate. Import dependence results in high economic burdern and exposes the economy to geopolitical risks resulting from rising conflicts and deteriorating political and social situation in the exporting nations.
- India needs an integrated and holistic approach to promote resource use efficiency which entails using existing resources in a more efficient manner and seeking new alternative resources.
- It is important to use natural ‘capital’ instead of natural ‘resource’. Resources have a connotation that it can be depleted, whereas capital grows, is shared, and made available.
- There is a need to look at innovation (i.e. disruptive innovation) and focus on the base of pyramid.

- The discussion on resource efficiency remains a niche discussion and we need to see how it could be made more comprehensive and inclusive.
- Alignment of interests of different actors that include business, government, and political actors is required to promote resource efficiency. However, there is an issue of identification of players who have the convening power to bring these different interests and actors together.
- There is a need to learn from informal economy which has been a champion of resource efficiency, and more discussions need to be made on innovation and efficient practices adopted in the small entities.
- There is a conflict between GDP and resource efficiency as GDP does not factor in the problem of depletion. It is important to break this conflict between the two.
- It is imperative to focus on policy initiatives and policy changes. Technological changes alone are not enough.

Session III: Good Practices in Material Efficiency: Case Studies from Business Sector

Moderator: *Ashish Chaturvedi, Senior Advisor, GIZ India*

Speaker: Jürgen Giegrich, Managing Director, Institute for Energy and Environmental Research (IFEU)

Panel discussants: *Vinnie Mehta, Executive Director, Automotive Component Manufacturers Association (ACMA); Christoph Müller, Managing Director VDZgGmbH, Research Institute of the Cement Industry; S S Khandelwal, Company Secretary, Shree Cement Limited; and Mukesh Gulati, Executive Director, Foundation for MSME Clusters*

The main points that emerged from the session are:

- It is important to use the concept of life cycle assessment (LCA) to quantify the use of resources and the potential for resource efficiency.
- Resource efficiency measures such as using light weight car, recycling, and greater use of public transport can bring about positive changes in the case of automotive sector. Economic instruments like taxation of cars or fuels, recycling regulations, and structural and financial support to public transport can help support such resource efficient measures.
- Use of new technologies in production of construction materials, increase use of abundantly available, traditional, and/or renewable materials could decrease environmental impacts and minimize social pressure in the case of housing sector. Possible resource efficiency options in the housing sector include introduction of recycling policies for building materials like cement, promoting the use of resource saving technologies etc.

- 5S x 6M system, as used by ACMA, could be used for improving resource efficiency. It is based on 5s system of Japan, which is a tool for shop-floor improvement and focuses on Five "S"-Sort out/Sort through, Systematic Arrangement, Shine everything, Standardization, and Self Discipline.
- The strategy with regard to resource efficiency in the production of cement and concrete has to be adapted to local conditions with regard to availability of raw materials, concrete technology, ambient conditions, and building tradition including quality of the execution.
- A lot of value creation could be done in the cement industry by introducing resource efficiency measures such as installing waste heat recovery plants for generating green power, using petroleum coke as an alternative to fossil fuel, installing flue gas desulphurization plant for manufacturing synthetic gypsum as alternative to natural gypsum, utilizing fly-ash to reduce clinker consumption, maximizing use of slag etc.
- Some of the ways by which resource efficiency could be achieved in the SME sectors are through strengthening local industry associations and spreading awareness; recognizing and rewarding enterprises, associations, institutions, and banks; creating nation-wide cadre of specialized consultants and equipment providers; and studying industrial symbiosis at cluster level for exploring options for recycling waste.

Session IV: Moving the Agenda Forward: Policy Framework for Leveraging Resource Efficiency

Moderator: *Michael Funcke-Bartz, Senior Advisor, GIZ*

Panel discussants: *S Vijay Kumar, Former Secretary, Ministry of Mines and Secretary, Ministry of Rural Development; Harry Lehmann, Head of Division, Environmental Planning and Sustainability Strategies, Federal Environment Agency (UBA), Germany; Mukesh Gulati, Executive Director, Foundation for MSME Clusters; Dieter Mutz, Director, Indo-German Environment Partnership (IGEP) programme, GIZ; and Ligia Noronha, Executive Director (Research Coordination), TERI*

The main points that emerged from the session are:

- An effective policy framework that promotes resource efficiency needs to outline guidelines that would help in achieving allocative efficiency (e.g. access to resource, adequate investments), extractive efficiency (e.g. efficient extraction of the resource), utilization efficiency (e.g. energy conservation, material conservation, continuous R&D process, businesses processes linked to recycling), information efficiency, and policy efficiency. (e.g. promotion of transparency, openness, incentive based techno-economic decision making, etc.).
- Given the economic importance of India's SME sector, it is important to understand the current linkages of these small players with the larger companies. Learning their alliance

with the bigger players will help developing an integrated approach that will minimize resource use inefficiencies along the production and supply chain.

- The SME sector in India is highly fragmented. Grouping these smaller companies at the local and regional level will strengthen integration of the supply chain, promote formalization of the sector and create better resource recycling opportunities.
- Better training and capacity building of the small players can also be undertaken efficiently not only by the ministries concerned, but also by the bigger companies who largely depend on these small industries for critical inputs. At the same time, it is important to raise consumer awareness, who can also participate thus making such integration more efficient and economically viable.
- It is important to have a distributed ownership rather than leaving it to the government. Given the fact that government decision making process at times is time consuming, the players across the value chain can drive the resource use efficiency agenda forward.
- The policy framework for having resource efficiency should finely balance competitiveness and sustainability. While government and industries can ensure that competitiveness is achieved, the civil society groups on the other hand should drive the sustainability agenda and ensure that it is taken on board and effectively incorporated in the final decisions of the government and resource based companies.