

Plenary 5: Science Technology and Innovation for Sustainable Cities

Summary

Speakers shared examples of technical support for SMEs, support for local communities, and discussed ways to connect different sectors and make the most of emerging big data technologies. Innovative business models that address the challenge of rapid urbanization and consequent environmental problems were discussed. The crucial role of science and technology and ways to utilize innovative measures were illustrated with specific examples.

Chair Mr. Pranab Baruah, Senior Knowledge Manager, Global Green Growth Institute

- Struggle for global sustainability comes down to cities.
- Introduction of topics and speakers. The session will look at the case of SMEs and how technological cooperation could be implemented.

Mr. Song Jae-ryoung, Team Leader, Research and Development Strategy and Policy Division, National Research Council of Science and Technology

- KIST is Korea's first S&T institute. S&T is one of the key areas for Korean development.
- NST in the center of S&T innovation and has 25 parts.
- Science and technology is one of the key reasons for Korea's development.
- NST Sustainable Energy Technology Training Programme 2015 in Viet Nam – 1 week training programme. Out of 15 possible areas for climate technology cooperation, inorganic waste recycling using CO₂ and mineral filler for closed mines (using low-carbon green cement for example) were chosen as the main focus.
- Important to connect the developing countries with the capacity of developed countries.

Mr. Lee Tae-sung, Senior Manager, Small and Medium Business Corporation

Enhancing SMEs' capacity through ASEIC eco-innovation practices

- Background to ASEIC's establishment.
- ASEIC ASEM SMEs Eco Innovation Center was developed in 2010, realizing SMEs have important roles to play in achieving green industry.
- SMEs, efficient resource use and energy use are important, when striving for green industry.
- We have an eco-innovation center within ASEIC, with the main objective of assisting SMEs to better respond to specific technological requirements through PPPs.
- Companies select candidate companies, come up with initial diagnosis with existing index, consult the companies with precise diagnosis and provide certification of final assessment.

Mr. Irene Hofmeijer, Founder and Executive Director, Life Out Of Plastic

- Life Out Of Plastic – women-led social enterprise that raises awareness of plastic use and its impacts on the environment.
- 3 approaches: self-financing business model, large-scale awareness campaigns, and working groups with NGOs to influence policies.
- With increasing plastic consumption, negative externalities related to plastics will multiply and by 2050, we will never have a marine composition that existed before. There is a need to tackle plastic pollution.
- Start-up companies that attempt to re-use plastics to produce new products need to be promoted, we need to raise awareness and come up with new ways to design the issues.

Mr. Sanjay Banka, Executive Director, Banka BioLoo Pvt. Ltd.

- Waste treatment process.
- Banka BioLoo in schools– green toilets.
- Modular design (easy to install), added with biotechnology that enable one to use the treated water for other purposes.
- Green toilets are installed in schools, construction sites, homes and we work a lot with the Indian railway system.

Mr. Charles G. Kwesiga, Executive Director, Uganda Industrial Research Institute

- Presented science, technology and innovation for sustainable cities: Uiri's experience
- Urban centre in Uganda faces problems with garbage.
- Uganda Industrial Research Institute has been working to turn problems into opportunities.
- UIRI has created plastic bags out of waste resource.
- WAITRO – positive initiatives to efficiently allocate resources.

Mr. Serguei Golovanov, Chief Executive Officer, GOLEM IMS GMBH, Austria

- Addressing urban dynamics; accelerating change in technologies, value chains, urban knowledge, demand, supply, etc.
- Digital transformation needs to be enabled for quantifiable sustainability management.
- Smart city model structure to cope with complexity divides city into energy and transportation and moves down to specific sectors. The Internet of Things can be easily connected to these models.
- Integrated approach and holistic approach needed for sustainability – combination of multiple criteria.
- Urban dynamics: accelerating change in technologies, value chains, knowledge, etc., growing complexity, “smart” concepts, interlinkage of smart systems, increased uncertainty by complexity, and need for sustainability.
- Smart city monitor, smart enterprise monitor, and smart learning needed.
- Global issues bring us to unknown future, with uncertainty. By observing the current status, keeping results, trends and scenarios transparent, a growing collaborative global model can be developed.