

ANNOUNCEMENT
International Workshop
On
The Sustainable City - Technologies and
Systems for Sustainable Development

December
10 - 12th, 2008

At
School of Environmental Studies
CUSAT-Cochin University of Science and Technology,
Kochi-22, Kerala State, INDIA

Organized by

INTEC
Network for Indian-Swedish Cooperation on
Technical Research and Education, SWEDEN



In collaboration with



CUSAT- Cochin University
of Science and Technology
Kochi-22, INDIA



Kerala State Council for Science
Technology and Environment
INDIA

Introduction

Our future is, for many of us, an urban future. This is a future where urban areas, however, will rely heavily on their rural surroundings for survival. With more than half of the world's population living in urban areas, this is where the use of energy, land and other resources is increasingly being concentrated. Thus, sustainable urban development is a prerequisite for global sustainability. Indeed, urbanization and globalization implies problems, but the processes also hold the potential for economic growth, human development and climate change mitigation. Globalization and urbanization also imply an increased need for mobility and transportation of people, goods and information. By ways of new, innovative transport technologies and ICT the carbon footprint from conveyances can be decreased. Sustainable urban development is a challenge for researchers, practitioners and policymakers alike, and the complexity of urban systems calls for a holistic approach. Our urban future is a sustainable future, starting today.

On its path of rapid economic growth, India has a unique opportunity to become a leading nation in environmental technology and system solutions for sustainable development. Several facts make India potentially a strong force in implementing innovative approaches for sustainable development, taking into account its great technological development and huge human capital. Sweden and India can be viewed as natural partners in the global effort towards sustainable development. Sweden has a unique tradition among the industrialised nations regarding development and implementation of environmental technology. The particular strength of the Swedish model, which maintains a balance between state, industry and basic research is striking. India can expand its know-how by collaboration with Swedish experts and in turn offer them the benefit of Indian knowledge and experience. An active collaboration can lead to breaking new ground in developing and implementing technology for sustainable development on a large scale.

The Workshop

The objective of the workshop is to bring together interested parties from universities, research organizations, industry and governmental organisations, with the purpose of initiating broad and diverse collaboration on development and implementation of environment technology and system solutions for sustainable urban development. The workshop will, apart from knowledge sharing, promote all forms of cooperation, from relatively small and short-term to long-term strategic cooperation and joint-ventures.

The workshop will focus on new technologies and systems for sustainable urban development that mitigate the threat of climate change. Areas of interest are urban transportation and fuels, urban planning and management of water and waste, energy and ICT for sustainable development. Existing knowledge should be applied and further developed in order to solve current and future problems paving the way to a more sustainable development.

The workshop aims to:

Present the current status of knowledge and research in the field of sustainable urban development in Sweden and India.

Map and explore opportunities for joint research and/or development projects/joint ventures of mutual interest that can be funded by Indian and Swedish agencies/actors with a main focus on system and technology aspects of sustainable urban development. Sustainable urban development comprises areas of energy, transportation, water, sewage, waste and ecosystem services.

■ **Patrons**

Dr. E P. Yesodharan, Executive Vice President, Kerala State Council of Science Technology and Environment, INDIA

Dr. Gangan Pratap, Vice Chancellor, CUSAT-Cochin University of Science and Technology, INDIA

■ **President**

Dr. Ramon Wyss, Professor, Dept of Nuclear Physics, Royal Institute of Technology, Stockholm, SWEDEN.

■ **Organizing Secretary**

Dr. I. S. Bright Singh, Professor, Director, School of Environmental Studies, CUSAT, Kochi-22 INDIA

■ **Adl. Org Secretary**

Dr. R. Prakashkumar, Principal Scientist, Kerala State Council of Science Technology and Environment, INDIA

■ **Adl. Org Secretary**

Dr Göran Baurne, Dept. of Land & Water Resources Engineering, Royal Institute of Technology (KTH), SWEDEN

Organizing committee

Members from CUSAT

Dr. I. S. Bright Singh, Director, School of Environmental Studies, CUSAT, Kochi, Kerala, INDIA

Dr. G. Madhu, Professor, School of Engineering, CUSAT, Kochi, Kerala, INDIA.

Dr. Achuthsankar S. Nair, Member of the Syndicate, CUSAT, Kochi, Kerala, INDIA.

Dr. A. Mohandas, Professor emeritus, School of Environmental Studies, CUSAT, Kochi, Kerala, INDIA

Members from KSCSTE

Dr. V. Prakashkumar, Principal Scientist, Kerala State Council for Science Technology and Environment, Kerala, INDIA.

Prof. K. V. Jayakumar, Executive Director, Centre for Water Resources Management, Kozhikode, Kerala, INDIA

Dr. M. Bava, Director, Centre for Earth Sciences Studies, Trivandrum, INDIA

Dr. Tango Elangovan, Scientist-G, National Transportation Planning and Research Centre, Trivandrum, INDIA

Members from INSTEC

Dr. Göran Baurne, KTH-Royal Institute of Technology, Stockholm

Dr. Peter Hagström, KTH-Royal Institute of Technology, Stockholm

Dr. Baboo M. Nair, Lund University

Dr. Gia Destouni, Stockholm University

Dr. Lars-Christer Lundin, Uppsala University

Dr Philip Chiverton, Swedish University of Agricultural Sciences

Dr. Lars Öberg, Umeå University

Dr. Sara Eriksén, Blekinge Institute of Technology

Dr. Leif Thuresson, Linköping University

Dr. Anders Lagerkvist, Luleå University of Technology

Dr. Sasikumar Punnekkat, Mälardalen University

Dr. Devdatt Dubhashi, Chalmers University of Technology

Dr. Hans Lundberg, IVL Swedish Environmental Research Institute

INSTEK

Network for Indian-Swedish Cooperation on Technical Research and Education

In December 2005 Sweden and India signed a Memorandum of Understanding (MoU) on cooperation in Science and Technology. An additional MoU on sustainable development and environment was signed in February 2008. These agreements form a basis for the Indo-Swedish cooperation through the Swedish network INSTEK (Network for Indian-Swedish Cooperation on Technical Research and Education).

The mission of INSTEK is:

To provide a long-term basis for expanding exchanges of human resources between India and Sweden on technical/engineering research as a platform for joint ventures and expanding industrial collaboration.

Joint ventures and collaboration that develop from the exchange platform provided by INSTEK should ultimately benefit both countries by strengthening their respective technical/economic competitiveness in the global market.

The three specific objectives of INSTEK are to:

Promote and support collaboration between Indian and Swedish academic/research institutions and industry in research (development of joint research projects, and exchange of researchers/post-graduates).

Promote and support exchange between Indian and Swedish academic/research institutions and industry in education (MSc, continuing and distant education programmes, and exchange of students, teachers and teaching materials)

Stimulate and help establish industrial contacts and promote joint ventures between interested Swedish and Indian enterprises and research institutes in all areas of technological and natural resource development.

Members of INSTEK are:

Blekinge Institute of Technology (BTH), www.bth.se
Chalmers University of Technology (Chalmers), www.chalmers.se
Linköping University (LIU), www.liu.se
Luleå University of Technology (LTU), www.ltu.se
Lund University (LU), www.lu.se
Mälardalen University (MDH), www.mdh.se
University of Gothenburg (GU), www.gu.se
Royal Institute of Technology (KTH), www.kth.se
Stockholm University (SU), www.su.se
Swedish University of Agricultural Sciences (SLU), www.slu.se
Uppsala University (UU), www.uu.se
Umeå University (UMU), www.umu.se
And
IVL Swedish Environmental Research Institute, www.ivl.se



KSCSTE
Kerala State Council of Science Technology and Environment
www.kscste.org

KSCSTE is an autonomous body of the Government of the Kerala State dealing with policy matters related to Science and Technology of the state. The KSCSTE - Kerala State Council for Science, Technology and Environment was constituted in November 2002, as an autonomous body, to encourage and promote Science and Technology related activities in the Kerala State. The main functions of the State Council are to plan, formulate and implement Science and Technology Promotion and other related research and development programme, to provide overall guidance to the programmes and the developments of R&D centres of the Council and to withdraw and disburse the grant-in-aid funds from the Government and sponsoring agencies to R&D Centres and other grant-in-aid institutions. The decisions of the State Council and Executive Committee are implemented by the Council Headquarters (CHQ) based in Thiruvananthapuram. The functions of CHQ are carried out under the overall guidance of Executive Vice President who is also the ex-officio Principal Secretary of Science & Technology Department (S&TD). KSCSTE also have initiatives in popularising education in science in the schools and institutions of higher learning in the state.

CUSAT
Cochin University of Science and Technology
www.cusat.org

The erstwhile University of Cochin was later reorganized as Cochin University of Science and Technology (CUSAT) in February 1986. Starting from 1996-97, CUSAT became international in student admissions and faculty exchanges, which strengthened contacts and collaborative tie-ups with international universities and institutions and is in the path of growth as a global centre for generation of new knowledge in frontier areas of learning. CUSAT has entered into academic collaborations and exchange programmes with many notable institutions across the USA, Europe, Russia, Japan, France and Korea. The academic structure comprises of nine Faculties viz. Engineering, Environmental Studies, Humanities, Law, Marine Sciences, Medical Sciences and Technology, Science, Social Sciences and Technology. A Sophisticated Test and Instrumentation Centre (STIC) was established in 1996 in collaboration with the Government of Kerala. Centres also exist for Interdisciplinary Studies, Microprocessor Research, National Manpower Information, Rural Development & Appropriate Technology, Ocean Electronics, Science in Society, Information Resource Management, Neuro Science, Creative Writing, Comparative Literature, Population Studies, Aquatic Animal Health, Monsoon Studies, Economic Policy and Analysis & Adult and Extension education. The UGC has selected CUSAT as a centre of excellence in the field of lasers and opto-electronic sciences for which a new Centre, CELOS has been established. The Union Ministry of HRD has acknowledged School of Legal Studies as a Depository of Intellectual Property Rights and an IPR chair has been introduced. The National Centre for Aquatic Animal Health of CUSAT has been recognised as the Regional Resource Centre of Network of Aquaculture countries in Asia-Pacific (NACA). Another prestigious chair instituted by the Ministry of HRD is Rajiv Gandhi Chair on Sustainable Development. By giving recognition to several well-established premier research institutions in the country and the Southern Naval Command of Indian Navy, the University has brought within its reach the resources available in these institutions for the use of the academic community. Specialisations are available in almost all Faculties/Departments for higher studies and research. The Ministry of Human Resources Development, Govt. of India has adjudged CUSAT as an institution to be upgraded to the level of Indian Institute of Technology. The University has a 180 acre campus at Thrikkakara and a Lakeside campus at Kochi besides an Engineering College campus at Pulinkunnu, Alappuzha (the rice bowl of Kerala). The Lakeside campus located in Ernakulam houses the Schools of Marine Sciences, Industrial Fisheries and a Men's hostel. Located 15 km. north of Ernakulam city, the main campus at Thrikkakara houses Teaching and Research Departments, Auxiliary Institutions, Hostels, Guest houses, Visiting Faculty Complex, Coffee house, Centre for Information Resource Management, University library, Post office, Bank, Health centre, Playgrounds, Courts and a Gymnasium besides the main Administrative Building that reminds of the traditional Kerala architecture.

Programme

10 December 2008 Wednesday, After noon

Inaugural session

- **Welcome:** Organizing Secretary
- INSTEC - a platform for Indo Swedish Cooperation: Prof. R Wyss, KTH, SWEDEN
- Presidential Address: Dr. Gangan Prathap, VC, CUSAT, INDIA
- Inaugural Address: Prof. Mercy Williams, Mayor, Corporation of Cochin, INDIA

Felicitations:

- Dr. E P Yesodharan, Executive Vice President, KSCSTE, INDIA
One Syndicate Member of CUSAT, INDIA
- One Dean of CUSAT, INDIA
- Water resource informatics, management and adaptation under a warming climate, Dr. Amelie Darracq, SU, SWEDEN
- Sustainable ocean/coastal management, Prof. R Ramesh, Anna University, Chennai, INDIA
- Sustainable development in higher education, Dr. C Norström, Vice President, MDH, SWEDEN
- Techniques for Transformation, Dr. V Rangan, Vice chancellor, Amrita University, Coimbatore, INDIA
- Sustainable cities - contextual knowledge, Prof. C Bengs, SLU, SWEDEN

11 December 2008 Thursday: Morning

Theme: Sustainable Urban Development

- Research cooperation around ICT for sustainable rural development, Prof. S Eriksén, BTH, SWEDEN
- The Potential and demonstrable role ICTs have played in the areas of livelihood generation, health, education and training, Dr. Aarti Kawlra, IIT Madras, INDIA
- Increasing sustainability through virtual cities, Prof. S Punnekkat, MDH, SWEDEN
- Symbio City, Prof. H Lundberg, IVL, SWEDEN
- Planning Metropolitan Regions: Institutional Perspectives and the Case for Space, Dr. Amy Olsson, KTH, SWEDEN
- Aspects of Sustainable development, Prof. P Raval, College of Engineering, Pune, INDIA
- Systems approaches for sustainable urban development, Ms. J Wangel and P Godonou, KTH, SWEDEN
- Sustainable city planning, Dr. B Behsh, UU, SWEDEN
- Green buildings, Dr. S Raghupathy, CII - Sohrabji Godrej Green Business Centre, Hyderabad, INDIA
- Sustainable cities in ocean environments, Dr. P Godonou, UU, INDIA

11 December 2008 Thursday: After noon

Theme: Sustainable energy-waste-water solutions

- Deployment of renewable energy in cities, Mr. G M Pillai, World Institute of Sustainable Energy, Pune, INDIA
- Electrical generation, district cooling and heating from waste- energy system studies of cities and regions, Prof. M Söderström, LIU, SWEDEN
- Energy Management, Dr. A Prabhu, KSCSTE, INDIA
- Energy security and distributed generation - The wind options, Dr. K K Sasi, Amrita University, INDIA
- Strategic Planning of Urban Water and Waste Water Systems, Prof. Per-Arne Malmqvist, Chalmers, SWEDEN
- Urban storm water management for sustainable development, Dr. K V Jayakumar, Centre for Water Resources Development & Management, KSCSTE, Kozhikode, INDIA

12 December 2008, Friday: Morning

Theme: Biofuels - Swedish and Indian experiences

- Environmental perspectives on the utilization of biogas and municipal waste in cities, Prof. L Thuresson, LIU, SWEDEN
- Jetropha and the production of biodiesel, Dr. D C Joshi, Anand Agricultural University, Anand, INDIA
- Swedish experiences on development of processes for converting biomass to vehicle fuels, Prof. M Söderström, LIU, SWEDEN

12 December 2008, Friday: After noon

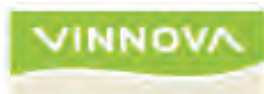
Theme: Sustainable Transport Systems

- Aspects of sustainable transport systems, Dr. Geetam Tiwari, TRIPP, IIT Delhi, INDIA
- Some aspects of sustainable transport systems, Dr. Kavi Arya, IIT Bombay, INDIA
- Intelligent Transportation systems in urban transportation, Dr. F. Chen, Chalmers, SWEDEN
- Development of sustainable transport systems, Dr. T Elangovan, KSCSTE, INDIA
- Policies for sustainable transportation systems, Dr S Algers, KTH, SWEDEN
- Towards sustainable and CO₂ neutral transport systems, Prof. Jan Eric Sundgren, Volvo Group, SWEDEN

Closing of the workshop 16:00

With support from

The Swedish Governmental Agency for Innovation Systems



The Swedish Research Council Formas

VOLVO

**Centre for Sustainable Development, CHU (KTH-IVL)
To**

INTEC



**Network for Indian-Swedish Cooperation on
Technical Research and Education**

Venue



School of Environmental Studies,
Cochin University of Science and Technology,
Kochi-22, Kerala State INDIA.

Themes

10 Dec Afternoon	Welcome address and introduction to the problem complex
11 Dec Morning	Sustainable Urban development
Afternoon	Sustainable Energy - Water - Waste Management
12 Dec Morning	Bio Fuels - Swedish and Indian Experiences
Afternoon	Sustainable Transport Systems Closing Session

Documentation of the seminar

1. A booklet containing all the abstracts of the papers will be printed.
2. A report with recommendations based on the results of the meeting will be produced.

Registration

Registration Fee : Rs. 2000/-
Registration can be done in advance by contacting
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