	Title of Entry	
1.1	Title of Sponsored Work	ICUG - International conference on urban geoinformatics (Annexure 14)
1.2	Name of TERI SAS Department/ Centre (s)	DNR
	involved	
1.3	Туре	Conference
2.1	Sponsoring Agencies	Key Sponers: Map my India, DST, and HUDCO total 2,55,000 INR
2.2	Location of work/activity	India
3.1		International society for Photogrammetry and Remote sensing
	List of partnering	Indian Remote sensing Society
	Institutions involved	Indian Geographical Society
3.2	Lead Partner	
4.1	Begin Date	22 nd February 2017
4.2	Completed or Ongoing	Completed
4.3	End Date	23 rd February 2017
5.1	Principal Investigator(s) Internal	Dr Nithyanandam
5.2.	Principal Investigator(s)	
3.2.	External	
5.3	Co-Principal	
	Investigator(s)Internal	
5.4.	Co-Principal	
	Investigator(s)External	
5.3	Associated Researcher(s) internal	NA
6.1	Amount Sanctioned	In kind
6.2	Amount received	NA
6.3	In Kind support	
7.1	Description of work and	Rationale:
	activities	Objectives:
7.2	Project Reach,	A large student and research community were benefitted by joining this
	engagements and	scientific event.
	beneficiaries, if applicable	

8.1	List of Publications including dissemination through social media	
8.2	Links to Events page, if any	International Conference on Urban GeoInformatics (teriuniversity.ac.in)
9.	Executive Summary and other documents	International Conference on Urban Geoinformatics (ICUG-2017) Introduction The International conference on Urban Geoinformatics held on 22nd and 23rd February 2017 served as a platform to share and discuss the advancements in Geospatial technologies in urban and related disciplines. It turned out to be a source of impeccable knowledge and experience for researchers, professionals and students from around the world.
		Participants from more than 70 institutions in India and abroad joined the conference. This involves students, researchers and professors among others. Participation from institutions like JNU, Delhi University, Ambedkar University, CEPT University, IIT's, NRSC, Symbiosis University, School of Planning architecture, Aligarh Muslim University etc. was witnessed. In addition to this, more than 30 delegates from distinct departments and institutes also graced their presence. It was partnered by the Indian Society of Remote Sensing (ISRS), The Indian Geographical Society (IGS) and Survey And Mapping Association (SAMA). Along with these, the International Society for Photogrammetry and Remote Sensing (ISPRS) was also an international partner. The conference was sponsored by Science and Engineering Research Board (SERB) and map my India (Gold Sponsor). In addition, Asim- a communication and navigation venture, ML Information, consortium and Chaitanya Instruments Private Limited were the exhibitors. The conference aimed at discussing urban- related knowledge of Geoinformatics and entertained a variety of viewpoints and approaches.
		It began with a short inaugural session. TERI University vice-chancellor Dr Leena Srivastava delivered the welcome address. Indian scientist and former secretary of Ministry of Earth Sciences, Indian Government, Dr Shailesh Nayak was the keynote speaker. Besides this, several other delegates from the National Remote Sensing Centre, Ministry of Earth Sciences, Map My India also joined the conference. Dr Nithiyanandam the director of ICUG 2017 had delivered the vote of thanks for the inaugural session.

This was followed by sessions scheduled for paper presentations. All paper presentations took place in six sessions (which in turn took place simultaneously at two venues) spanning two days. In each session, presentations were marked by their respective session-chairs and co-chairs.

The session chairs included distinguished persons like: Dr vishnu Chandra, NIC; Mr Vijay Kumar, ESRI; Prof. Anjana Vyas- Adjunct professor, Faculty of Technology and Executive Director, Centre for advanced Geoinformatics at CEPT University; Prof. Heroyuki, University of Tokyo; Prof. Jianfa Shen-Director of Research Centre for Urban and Regional Development, Hong-Kong institute of Asia-Pacific studies.; Mr Paddy SOI (retd); Dr Rita Pongrazy-; Dr Dutta- currently with National Resources Data Management system (NRDMS); Prof. Judit Bartholy; Dr Manosi Lahiri- founder and CEO of ML Mapinfo.

These sessions were co-chaired by faculty members of TERI University including- Dr Sudipta Chatterjee; Dr Bhawna Bali; Dr Suresh Jain; Dr Neeti; Dr Vinay Shankar Prasad Sinha; Dr Deepty Jain; Dr kana Sachdeva; Dr Anu Rani Sharma; Dr Shaleen Singhal; Dr Chander Kumar Singh.

On the basis of the marks given by session chairs and co-chairs, awards for best paper/ Oral presentation were given away. Paper presentation was followed by poster presentation. The award for best Poster presentation was given based on the presentation quality and the richness in the research content presented.

The conference was concluded at the valedictory function in presence of Pro-Vice-Chancellor, TERI University, Dr Rajiv Seth. Awards were given under a variety go themes to students and professionals.

Thematic areas

The conference in-spite of its highly specialized nature is fundamentally quite broad as it welcomes a wide range of thought and practices involved in the use of geoinformatics to address urban issues. The ICUG encompassed a multitude of themes hyphened between urban spaces and their sustainability. It is essential to adapt towards a holistic approach in addressing issues in the urban

context. To amalgamate knowledge and practices from a multitude of human activities with practices of geoinformatics forms the principal objective of this conference. Broad thematic areas with several sub-themes were organized as different sessions during the two-day conference.

• Theme I: Urban Disaster Mitigation and Management

Urban Disasters can inflict troublesome effects on the economy and population as well as its sustainable development. Often the dichotomy between humanitarian action and development agenda fades. Geoinformatics, in this regard tries to find effective solutions to mitigate such issues in many ways. At the ICUG, a bundle of interesting domains such as Early Warning, Risk Assessment and Management, Mapping Disasters, Disaster Resilience Hazard Mapping, other related areas that reflect on disasters that take place in urban areas.

• Theme II: Urban Utility Management

Urban population by the virtue of its consumption patterns and lifestyle, demands various utilities that help maintain the equilibrium. However, the rising stress population in the urban economies have called for an increase in the efficiency level of the services and utilities. At the ICUG various GIS based approaches and methods like Location based Services (LBS), Emergency Response, Transportation Management, Asset Management, Infrastructure Management and Facility Management were discoursed.

• Theme III: Smart and Sustainable Urbanization

After the launch of the "100 Smart Cities Mission" by the Prime Minister, rapid development in the field of urban planning and resource management has been observed which is why at the ICUG researchers from various domains like Smart Cities, Urban Land use/Land Cover, Urban Resource Management, Master Plan Preparation, Urban Forestry, Green Energy were also invited to participate and present their innovations and findings.

• Theme IV: Urban Issues and Challenges

Along with urbanisation comes a plethora of problems and challenges that critically hamper the process of urbanisation itself. Geoinformatics offers a structural rubric to study and solve urban issues such as Health and Sanitation, Livelihood, Air pollution, Water pollution, Noise pollution, Light pollution, Heat pollution, Light pollution, City Expansion, Population Growth, Access to

Basic Needs (food, water and shelter), Waste Water Management, Solid Waste Management, Crime Mapping and Trend Analysis, Security and Surveillance. Papers from the above mentioned or related areas were invited.

• Theme V: Urban Climate Physics:

The trend of urbanisation vindicates the growing interest among physicists in the study of the modification of the urban climate due to the heat island effect and global warming, and its impact on energy use of buildings. Papers related to Urban Heat Island, Urban Microclimate, Energy Balance, Anthropogenic Heat flux, Thermal Comfort, Man altered climate were invited for participation.

• Theme VI: Built Environment

Sustainable Architecture has already been accepted worldwide as a premier approach to achieve environmental stability over urban spaces in the long run. Recent developments in 3D Modelling, Building Architecture, HVAC and Material Sciences have opened new doors for building sustainable habitats. Under the theme of Built environment, papers related to such fields as well as Energy Efficiency, Building Efficiency were also called for participation.

• Theme VII: Advancement in Sensors and Techniques

Technological, mathematical and gadgetry advancements in the domain were discussed under a separate theme. New Satellites and Sensors and their innovative usage to overcome urban challenges, New/ Modified algorithms, Data fusion – Multi sensor/ Methods, Drones, Optical and Non Optical Sensors, Airborne Systems etc. were discussed at the ICUG so as to understand the nature and scope of these technological advancements.

• Theme VIII: Big Data Analytics

Urban Planning, implementing sustainable solutions to mitigate urban issues, Monitoring and Evaluation of various aspects of urban environment requires data analysis of voluminous sizes that are mostly spatiotemporal in nature. Under this theme papers from topics such as Variability of Spatial Data, Complexity of Spatial Data, Spatial Data Quality, Spatial Data Mining, Spatiotemporal Data Analysis and Modelling etc. were invited.

• Theme IX: Other Related Topics

Other topic related to Urban Geoinformatics were presented under this category.

Awards

At the ICUG, a number of awards were also distributed for the outshining contributions during the two-day event. The Best Student Paper Award was earned by Ishan Saraswat for "Object oriented image analysis for extraction of urban built-up land from Formosat-2 satellite imagery of Ahmedabad city, India" and the best paper award went to Dr. Hiroyuki Miyazaki for "Development of an on-demand service of settlement mapping using landsat archive".

The Best Poster Award was received by Dr. Rita Pongracz for "Analysis of the Urban Heat Island Effect Using In-situ Measurements" whereas the Best Student Poster award was won by Bakul Budhiraja for "Urban Heat Island Dynamics In Local Climate Zones Of Delhi". Earlier, the official logo of the conference was selected through a competition (ICUG 2017 logo contest) 26 logos were received from various institutions across India, and the first prize of logo competition was given to Ms Momisha Das a Masters student of Teri University.

Conclusion

The ICUG-2017 has provided the platform for youngh researchers and scholoars, the majority of presenters were Doctoral and master's students. Since the nature of the conference major theme is interdeciplinary in nature, the participants are from diverse subjects(Geoinformatics, Geography, Geology, Architecture, Planning, Social science, Climatology, Computer science, Mathematics, etc). It has entrusted the role of Geoinformatics in the areas like urban development when the time country is heading towards building smart cities and amruth cities. The conference has also bridged the gap between the industry and academia, the participants from both academic and industry has got another oppoutunity to understand the latest trends in each other's field. The participants were quiet happy this scientific meeting and wish to participate similar meetings in the field in future.

Acknowledgement:

Sincere thanks to organizing committee, student volunteers, partners and sponsors without their support it would have not been possible to conduct ICUG-2017 in a grand manner.