

**Second National Conference on  
Free and Open Source Software for Geospatial  
(FOSS4G-India 2015)**

**On**

**“Open Source Geospatial Tools in Climate Change  
Research and Natural Resource Management”**

**June 9-10, 2015  
at Indian Institute of Remote Sensing, Dehradun**

*Organized by*



**Open Source Geospatial Foundation of India**

*In collaboration with*



# Program Outline

**June 9, 2015**

08:30 – 09:30 hrs	Registration (IIRS Auditorium Foyer)	
09:30 – 10:15 hrs	Inauguration (IIRS Auditorium)	
10:15 – 10:30 hrs	Opening of Exhibition	
10:30 – 11:00 hrs	Tea Break	
11:00 – 11:30 hrs	Plenary Session – I (Aryabhata Lecture Theatre)	
	Parallel Sessions	
	Aryabhata Lecture Theatre	CSSTEAP Conference Hall
11:30 – 13:00 hrs	Session 1A Water Resource Management and Climatic Studies (1)	Session 1B Development of WebGIS Applications (1)
13:00 – 14:00 hrs	Lunch	
14:00 – 14:45 hrs	Popular Talk “Crisis Response: OpenStreet Map on the Frontline” by Mapbox Team	
14:45 – 15:45 hrs	Session 2A LULC Research and Village GIS	Session 2B Open Standards and Open Source Database
15:45 – 16:00 hrs	Tea Break	
16:00 – 17:30 hrs	Session 3A Water Resource Management and Climatic Studies (2)	Session 3B Development of WebGIS Applications (2)

**June 10, 2015**

08:30 – 09:15 hrs	Registration (Aryabhata Lecture Theatre)	
09:15 – 09:45 hrs	Plenary Session – II (Aryabhata Lecture Theatre)	
	Parallel Sessions	
	Aryabhata Lecture Theatre	CSSTEAP Conference Hall
09:45 – 11:15 hrs	Session 4A Forestry and Social Mapping	Session 4B Smart City and Urban Mapping
11:15 – 11:45 hrs	Tea Break	
11:45 – 13:15 hrs	Session 5A Capacity Building and Strategic Applications	Session 5B Open Source Technology Development
13:15 – 14:00 hrs	Lunch	
14:00 – 15:00 hrs	Session 6A Food Security and Agriculture Applications	Session 6B Disaster Mapping and Solutions
15:00 – 16:00 hrs	Panel Discussion - FOSS4G in India: Potential and Challenges for Adoption and Valedictory (Aryabhata Lecture Theatre)	
16:00 – 17:00 hrs	Tea & Interaction among participants	

## Technical Program Details

Tuesday, June 9, 2015		
Plenary Session - I		
	National and State SDIs: role of open standards and adoption of open source tools	P S Acharya Department of Science and Technology, Govt. of India, New Delhi
<b>Session 1A: Water Resource Management and Climatic Studies - 1</b>		
1A-1	Development of hydrological modeling system for flood peak estimation using open source geospatial tools	Saikat Maiti, Praveen K Thakur, Prasun Kumar Gupta (IIRS, Dehradun)
1A-2	Climate grid point retrieval by integrating R with QGIS	S Thiyaku, Sri Lakshmi Sessa Vani Jayanthi, K Venkata Reddy, Modugu Sudhakar(NIT, Warangal)
1A-3	Hydrological modeling in hilly watershed with free and open source software (FOSS)	Suruchi Aggarwal (University of Delhi), Praveen Kumar Thakur, Virivinti Vimal Chandra Sharma, Shiv Prasad Aggarwal (IIRS, Dehradun)
1A-4	Geographical weighted regression model for improved bathymetric estimation from multispectral imageries	Vinayaraj Poliyapram (Osaka City University, Tokyo, Japan)
1A-5	Open source geospatial tools for hydrological modeling	Ankur Dixit, Praveen Kumar Thakur, Shiv Prasad Aggarwal, Sukant Jain (IIRS, Dehradun)
<b>Session 1B: Development of WebGIS Applications - 1</b>		
1B-1	Future trends and technologies: big data analytics for web processing service	Deepti Joshi, Harish Chandra Karnatak, Arijit Roy (IIRS, Dehradun)
1B-2	Development of OGC WPS for species niche modelling using environmental variables	Girija Kalyani (IIRS Dehradun)
1B-3	Creation of a Web GIS of rural drinking water sources in Punjab using FOSS tools	P K Litoria, Harpinder Singh, Pardeep Kumar, Brijendra Pateriya (Punjab Remote Sensing Centre, Ludhiana)
1B-4	A Web GIS template for societal-GIS: namma-mysuru.org	D V S Sarma (Central Research Institute for Dryland Agriculture Hyderabad), M Ajay Kumar (National Institute of Rural Development and Pannchayati Raj, Hyderabad), V Ravi Kumar (OSGeo-India)

1B-5	Geo-Tourism portal – a web application with geo-spatially enabled Drupal	V Shenbaga Rajan, Aparna Kulkarni, N Kavitha, Gautam Solanki, Anuradha Sharma (IIRS, Dehradun)
<b>Session 2A: LULC Research and Village GIS</b>		
2A-1	Development of a land change modeling platform using open source tools and technologies	Ashutosh K Jha, S K Srivastav (IIRS, Dehradun), Y V N Krishna Murthy (ISRO HQ, Bangalore), P S Roy (University of Hyderabad)
2A-2	Mapping efforts in an unsurveyed land - an open street map experiment in Koorachundu village panchayat	Jaisen Nedumpala (Koorachundu Village Panchayat, Kerala)
2A-3	Geostatistical computing for spatial landscape modelling using open source technology	Hariom Singh (IIT, Roorkee), Harish Karnatak (IIRS, Dehradun), R D Garg (IIT, Roorkee), Arijit Roy, A K Jha (IIRS)
<b>Session 2B: Open Standards and Open Source Database</b>		
2B-1	The quality assessment of open street map	Maninder Pal Singh, Sukhjit Singh Sehra, Hardeep Singh Rai (GNDEC, Ludhiana), Jaiteg Singh Khaira (CIET, Punjab)
2B-2	A comparative study of performance analysis of MongoDB and PostGIS-PostgreSQL databases for line intersection spatial queries	Sarthak Agrawal, K S Rajan (IIIT, Hyderabad)
2B-3	Semantic interoperability model for transforming IFC & City GML building models	Kavisha, Sameer Saran (IIRS, Dehradun)
<b>Session 3A: Water Resource Management and Climatic Studies – 2</b>		
3A-1	SedYield: An open source geospatial tool for soil erosion and sediment yield assessment at watershed scale	Bhaskar R Nikam, Prasun K Gupta (IIRS, Dehradun), Balaji Kannan (Tamilnadu Agricultural University), Vaibhav Garg, S P Aggarwal (IIRS, Dehradun)
3A-2	Evaluation of vertical accuracy of ICESat spaceborne Lidar data (V34) over Dehradun district using open source tools and DGPS data	Ashutosh Bhardwaj (IIRS, Dehradun), Vikas Thapa (ICFAI University)
3A-3	Using FOSS4G to study flood inundation around Danang city, Vietnam	Venkatesh Raghavan, Thi An Tran (Osaka City University, Tokyo, Japan)
3A-4	Hydrometeorological data assimilation in weather forecasting model using open source tools	Sangita, S P Aggarwal, Praveen K Thakur (IIRS, Dehradun)

<b>Session 3B: Development of WebGIS Applications – 2</b>		
3B-1	Urban Water Information System (UWIS): a web based spatial decision support system for management and monitoring water utility assets	V V Saikrishna, Kamal Pandey, B D Bharath (IIRS, Dehradun)
3B-2	Time series geodata visualization in Web 2.0	Mobina Shaik, Sonal Aggarwal, M Arulraj, N Naresh, Kalyan Deep, Vinod M Bothale, B Gopala Krishna (NRSC, Hyderabad)
3B-3	Development of web based rural utility system using open source geospatial Tools	Praveen Kalura, S Thiyaku, K Venkata Reddy (NIT, Warangal)
3B-4	Handling millions of files: towards Cloud for crowd geodata	Sonal Aggarwal, Mobina Shaik, M Arulraj, A Lesslie, M V Ravikumar, P G Diwakar, Vinod M Bothale, B Gopala Krishna (NRSC, Hyderabad)
<b>Wednesday, June 10, 2015</b>		
<b>Plenary Session - II</b>		
	Geo for All: an international network towards open geospatial research and education	K S Rajan IIIT, Hyderabad
<b>Session 4A: Forestry and Social Mapping</b>		
4A-1	Social Forestry Information System (SOFIS): standalone software for holistic planning of social forestry activities	Arun Suryavanshi, A O Varghese (RRSC, Nagpur), A K Jha (Social Forestry Department, Maharashtra), J R Sharma (NRSC, Hyderabad)
4A-2	PolInSAR based scattering information retrieval for forest aboveground biomass estimation	Neeraj Agrawal, Shashi Kumar (IIRS, Dehradun)
4A-3	Forest fire weather based danger rating for the state Madhya Pradesh	K V Suresh Babu, (IIIT, Hyderabad & IIRS, Dehradun), P Ramachandra Prasad (IIIT, Hyderabad), Arjit Roy (IIRS, Dehradun)
4A-4	Crowd sourcing application in bio-resource information retrieval	Priyanka, Sameer Saran (IIRS, Dehradun)
4A-5	FOSS4G: Prediction of forest cover transitions in Uttara Kannada Central Western Ghats	Bharath Setturu, K S Rajan (IIIT, Hyderabad), T V Ramachandra (CES, IISC, Bangalore)

4A-6	Forest fire detection in Andhra Pradesh using MODIS TERRA land surface temperature products	Satwik Bhimavarapu, Venkatesh Earlapati, K V Suresh Babu (IIIT, Hyderabad)
<b>Session 4B: Smart City and Urban Mapping</b>		
4B-1	An open source application to compute urban morphometric parameters to understand urban winds	Alok Jhaldiyal, Kshama Gupta, Prasun Kumar Gupta, Pramod Kumar (IIRS, Dehradun)
4B-2	aeGIS	Anand Kumar (Marian Engineering College, Thiruvananthapuram)
4B-3	Spatio-temporal analysis for finding migration patterns in Andhra Pradesh using RWeka	Neha Pande, K S Rajan (IIIT, Hyderabad)
4B-4	Wind simulation in urban area using open source software	Gaurav Sharma, Kshama Gupta, Praveen K Thakur, Pratiman Patel, Pramod Kumar, S P Aggarwal (IIRS, Dehradun)
4B-5	Open Source approach for 3D Street view generation	S Raghavendra, K Shiva Reddy, Poonam S Tiwari, Hina Pande, Mayank Sharma, Shefali Agrawal, P L N Raju (IIRS, Dehradun), Y V N Krishnamurthy (ISRO HQ, Bangalore)
<b>Session 5A: Capacity building and Strategic Applications</b>		
5A-1	Application of ordinary kriging on educational data using FOSS4G	Jaishree Tailor (Shrimad Rajchandra Institute of Management and Computer Application-UTU, Bardoli), Ravi Gulati (Veer Narmad South Gujarat University, Surat), Rashvin Tailor (Shrimad Rajchandra Institute of Management and Computer Application-UTU, Bardoli)
5A-2	Experiences from training midlevel professionals in open Source geospatial technologies	Nishith Maheshwari (IIIT, Hyderabad), Gowtham G (KAIINOS, Hyderabad), Mohit Kumar, K S Rajan (IIIT, Hyderabad)
5A-3	FOSS Web GIS based infrastructure and environmental planning for universities	V L Lajish, K G Abhilash (University of Calicut)
5A-4	QGIS customization for defence needs	Vivek Saxena, Suchitra Chaudhary (DRDO, Delhi)

5A-5	gvSIG case studies	Mario Carrera (gvSIG Association), Mahendra Pullata (KAIINOS, Hyderabad)
<b>Session 5B: Open Source Technology Development</b>		
5B-1	Satellite image enhancement toolbox (SIET) – an open source image enhancement implementation	Rigved Ranade, Akshat Garg, Sukant Jain, Kamal Pandey (IIRS, Dehradun)
5B-2	Language localisation of QGIS in Hindi	H K Solanki (National Institute of Rural Development & Panchayati Raj, Hyderabad)
5B-3	Simulation of the hyperspectral data from multispectral data using open source programming environment	Varun Tiwari, Vinay Kumar, Kamal Pandey, Rigved Ranade (IIRS, Dehradun)
5B-4	Development of GIS based disease outbreak detection system utilizing open source technologies	Vineet Kumar, K Shiva Reddy (IIRS, Dehradun)
<b>Session 6A: Food Security and Agriculture Applications</b>		
6A-1	Geospatial inputs for precision farming in grape gardens	U N Gowri, P P Nageswara Rao B P Lakshmikantha (KRSAC, Bengaluru)
6A-2	Spatial crop monitoring system for India using direct broadcast remote sensing data and open source Web-GIS technologies	Malti Rani Singh, Vinay K Sehgal, Ashish Tiwari, Priyanka Nigotia, Rakeshwar Verma, Himanshu Pathak (IARI, New Delhi)
<b>Session 6B: Disaster Mapping and Solutions</b>		
6B-1	Location based Services for emergency management using open source tools	Kapil Oberai (IIRS, Dehradun), Nikhil Kejriwal (Sikkim Manipal Institute of Technology)
6B-2	Android based crime mapping using python	Arnab Dutta, Nikita Agarwal (IIRS, Dehradun)
6B-3	Building damage assessment by integrating terrestrial laser scanning and open source close range photogrammetry application	Md Hilal (Gulbarga University), Poonam S Tiwari, S Raghavendra , Hina Pande K Shiva Reddy, Shefali Agrawal, P L N Raju (IIRS, Dehradun)