

Curriculum Vitae

Mr. H. Hemanth Kumar

Executive Secretary

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Date of Birth : 1st Jan 1964

Educational Qualifications: B.E., M.E. – Bangalore University

Details of service:

Joined as Project Engineer in October, 1985 and presently serving as Executive Secretary I/c. and Chief Scientific Officer.

Presently investigating Karnataka NRDMS program, Karnataka State Spatial Data Infrastructure, Village Information System (VIS) and few other projects.

Areas of interest:

Geospatial technologies, Spatial Data Infrastructure, Watersheds and Minor irrigation tanks, Alternate Building Technologies.

Project/Programs Investigated since 2008

Sl. No	Program/Projects	Status
1.	Natural Resources Data Management System (NRDMS) – Karnataka Project (Annual outlay – over 2 crores)	Ongoing
2.	Development of geospatial web applications on Karnataka Geoportal for G-governance – KSSDI Phase II project (April, 2013 to March, 2016)	Completed
3.	Indo-Tunisia Workshop on Geospatial Science and Technology (19 th to 23 rd January, 2015) under bilateral program of DST - GOI	Completed
4.	Village Information System (April 2016 to March, 2019)	Ongoing
5.	Mapping of IISc Campus (2017)	Completed
6.	Utilisation of Kudremukh Iron ore tailings for fine aggregate in concrete & mortars (2008 - 2012)	Completed
7.	Training program on "Geospatial Technologies and its Application" (21st September, 2015 to 09th October, 2015)	Completed
8.	Crowd sourcing of geographic information on public assets and amenities by authoritative source – Karnataka Jnana Ayoga	Completed
9.	Karnataka State Spatial Data Infrastructure (KSSDI)	Completed
10.	Resource mapping for e-governance in Panchayaths - Suvarna Gramodaya program	Completed

11.	Resource mapping for e-governance in Panchayaths – Udupi district	Completed
12.	Planning Atlas of Karnataka	Completed
13.	Geo-Spatial database on China (Consultancy project) – Funded by NIAS	Completed
14.	Geospatial databases for Urban planning – Mysuru Town.	Completed
15.	Deployment of Oracle 12c as a central facility for use by all the state SDI's (2016)	Completed
16.	Construction waste – potential source for building products, CiSTUP, IISc.	Completed
17.	Surveying and mapping of Gram Panchayaths under BRGF program – Chitradurga district (pilot project for 10 Gram Panchayaths), Chitradurga Zilla Panchayath	Completed
18.	Development of web-based Biogas Information system (Consultancy project)- RDPR, GOK	Completed
19.	National Workshop on "State SDIs and their Applications" (June, 2017)	Completed
20.	National Data Registry Technical Meet - December, 2107	Completed
21.	Preparation of RFP for Animal Husbandry and Veterinary Services and providing consultancy for developing portal for the department. (Consultancy project) – Veterinary department, GOK	Completed
22.	Deployment of FME/ XML Spy/ EA software as a central facility for use by all the state SDI's" (2018)	Completed
23.	Construction waste – potential resource for building products: A case study of Bangalore city (2010 to 2012)	Completed
24.	Preparation of Brochure, Pamphlet/ leaflet/ quarterly newsletters and NSDI reports	Ongoing
25.	NSDI Expert Committee meet on “Technologies for NSDI Applications”	Completed
26.	Organisation of NSDI – 19 annual event at INSA, New Delhi	Ongoing
27.	Monitoring, Evaluation, Learning and Documentation Agency for Karnataka Watershed Development Department, GoK under Pradhan Mantri Krishi Sinchayee Yojane (formerly IWMP) – (from 2010 to 2016)	Completed
28.	Suvarna Bhoomi Yojane (2012)	Completed
	National Data Registry – Karnataka Node (MOU is under way)	2018
	Geospatial Applications for Urban/Rural Local Bodies (ULB/RLB)	2018
	Mobile Applications for uploading assets and infrastructure datasets for query, analysis and for visualisation.	2018

Award: Received Geospatial Excellence Award for the year 2014 by India Geospatial Forum for Karnataka State Spatial Data Infrastructure (KSSDI).

Important Research Papers:

1. Research article in Current Science on **“Non-organic solid wastes – potential resource for construction materials”** by B V V Reddy, H Hemanth Kumar, S N Ullas and K Gourav - December, 2016
2. **“Web Based Geospatial Technologies to Support Decision Making”** - by H Hemanth Kumar – Published by Springer nature Singapore Pte Ltd. 2018 N. Sarada et.al. (eds), Geospatial Infrastructure, Applications and Technologies: India Case Studies, https://doi.org/10.1007/978-981-13-2330-0_5 Pg. 45-60
3. **“Crowd Sourcing (Authoritative) of Geographic Information on Public Assets and Amenities”** by H Hemanth Kumar, Dr M Prithviraj, M J Rathan Raj, Umesh Ghatage and Mohan Kumar S – Published in IJESIT November, 2013
4. **“Spatial Data Technologies for Decentralised Planning”** National Conference on Geo-Spatial Technology & Applications (ICGTA-12) held at IIT-Bombay on 12-13 April 2012.
5. **“Restoration and rejuvenation of minor irrigation tanks in Karnataka using geospatial technologies”** by Hemanth Kumar H, M J Rathan Raj, Umesh V Ghatage, Mohan Kumar S – March, 2016.

Select Conference publications:

International:

1. **“Status of Spatial Data Infrastructure in India and specially in Karnataka”** - at Indo-Canada Innovation summit 2011 held at Carleton University, Ottawa, Canada on 20-22 June, 2011.
2. **“Geospatial Technologies for Local Level Planning - Karnataka Experience”** conference held at University of Amsterdam, the Netherlands on October 8-9, 2012.
3. **“Geospatial Technologies for Governance (Informed decision-making)”** – at Hexagon annual international conference planned to be held in Hong Kong during November 18-20, 2015.
4. **“Utilisation of geospatial technologies in Karnataka under NRDMS program– an overview”** – Presented in the meeting of the Expert Group on ‘Urban and Rural Planning and Management’ during the Asia Pacific Ministerial Conference on Housing and Urban Development (APMCHUD), (16th – 17th August, 2012).
5. **“Geospatial Technologies for Governance”** at Indo-Tunisia S&T workshop on ‘Geospatial Science and Technology’ during 19 – 23rd January, 2015 at Bengaluru.

National:

6. **“Experiences of Karnataka State Spatial Data Infrastructure (KSSDI)”** - National Workshop on APSSDI 9th January, 2014 organized by APSRAC at Hyderabad

7. **“Development of Karnataka Geoportal”** – Organised by Kerala IT Mission at Trivandrum on 3rd March, 2015.
8. **“Evolution of Geo-spatial Technologies in Decision making - Karnataka Experience” National** workshop held at NBSSLUP, Nagpur on Data Content Standards on soils on 13th January, 2017.
9. **“State Spatial Data Infrastructure for Karnataka and their Applications”** - NSDI session on 25 Jan 2017 held at GWF-2017 in Hyderabad.
10. **“SDI for Watershed management”** – Symposium on “Geospatial for Water Management” at India Geospatial Forum 2014, February 4-7, Hyderabad
11. **“Development of spatial data infrastructure - Karnataka experience”** – at India Geospatial Forum held during 22-24 January, 2013 at Hyderabad.
12. **“Karnataka Geoportal for Natural Resource Management”** – at National workshop held at Ludhiana during 22nd and 23rd of February, 2018.
13. **“Spatial Data Technologies for Decentralised Planning”** National Conference on Geo-Spatial Technology & Applications (ICGTA-12) held at IIT-Bombay on 12-13 April 2012.

Presented papers in various forum including ASCI – Hyderabad, ISEC – Bangalore, RRSSC – Bangalore, IIM – Bangalore, IIT – Kharagpur, IIT – Bombay, IIRM-Ahmedabad, GIS Development, Map India, NSDI, NIAS – Bangalore etc.

Acted as Resource Person/keynote speaker:

1. Invited as Keynote speaker during Two-day International Conference on “Smart City in India – issues and Challenges” organised by Sri Venkateshwara College of Engineering, Bangalore 57 on 22nd and 23rd May, 2018.
2. Participated as an Expert on the brain storming meeting held at INSA, New Delhi on 23rd April, 2018 to conceptualise and develop proposals on “Transformation of Aspirational Districts” program.
3. Three-day Review cum Training workshop organised by DST – GoI on "Geospatial Cloud: Enabling Data and Application Services" at IIT Kharagpur, May on 16-18, 2018
4. Acted as resource person on “Orientation Workshop-cum-Hands-on Training” held on 8th & 9th January, 2018 organised by West Bengal State Council for Science and Technology, Bikash Bhavan, Kolkata on SDI Technologies.
5. Two-day Workshop sponsored by Department of Science and Technology (DST), Ministry of Science and Technology, Govt. of India, New Delhi on “Improving Spatial Data Management for Decentralised Governance in Odisha”, during January 18-19, 2012 held at Ravenshaw University, Cuttack.
6. Resource person for National Institute of Rural Development, Hyderabad since 2014. The participants are drawn from Asia and African Countries. The delegates are from Middle level and Senior Government Officials, engaged in development

administration, formulating policies and programmes of development, in their respective country.

7. Two-day training-workshop at Kavarati, Lakshadweep UT for S&T officials on geospatial technologies, RWH, school education and remote sensing.
 8. Three-week training program “Geospatial Technology and Application” organised by JSS University during August, 2014.
 9. Conducted course on GIS for the e-Governance Program participants at T. A. Pai Management Institute, Manipal during June 6-11, 2011.
 10. Organised one-week faculty program in VTU – Belagavi, during Sept, 14.
 11. Organised Divisional and District level training programs on the utilisation of geospatial services to district line departments. (2007, 2009, 2013) – More than 3000 Officers benefitted.
 12. Trained 30 Oman government officials in 2008 in GIS and Remote Sensing for one week.
- ✓ **Guide** – As external guide, guided to 40 graduate/post graduate engineering students in geospatial data technologies since 2010.
 - ✓ **Review of DST funded projects** - Reviewed 15 DST-GOI funded projects
 - ✓ **Review of SPP projects** – Around 300.
 - ✓ **Chairman** – KSCST maintenance committee
 - ✓ **Coordinator & Member Secretary** – Kalaburagi Regional centre.

Select Technical Reports:

1. Customization of GIS Applications using USE-CASES - December, 2017
2. Use of Geospatial Technologies in Panchayath Raj Institutions – August, 2017 and November, 2107
3. Taluk Panchayath ATLAS – 2017
4. Zilla Panchayath ATLAS – 2017
5. Gram Panchayath ATLAS, 2016
6. Published guideline for “Preparation of Digital Base Maps from Cadastral Maps and RS data products” under VIS program. – December, 2016.
7. Technical report - "Geospatial Technologies for Informed decision-making" in 2015.
8. Planning ATLAS of Karnataka.
9. Technical Report – “Construction waste – potential resource for building products: A case study of Bangalore city” – Submitted to CISTUP, IISc. 2012.
10. KSSDI – Phase I and Phase II Completion Reports
11. Trained in Germany for three months in 1996 on “Environmental planning” using GIS and geo-spatial technologies.
12. Technical report on “Status of tanks in Chitradurga district” and “Rejuvenation of minor irrigation tank – a case study”.

**Reports published under IWMP Program of
Karnataka Watershed Development Department: (2010 – 16)**

Sl. No	Deliverables	No of reports	
		PHASE-I	PHASE-II
1.	Process Monitoring Report	60	60
2.	Case studies	264	288
3.	Thematic Studies	35	2
4.	Baseline survey report	1	1
5.	Documentaries	2	2
6.	Preliminary/final report on satellite imageries	2	35
7.	Mid-term evaluation report	1	1
8.	Final evaluation report	1	1

International Workshop:

Under the Indo-Tunisia S&T Cooperation Agreement between India and Tunisia, with the funding support of International Bilateral Cooperation Division (IBCD), DST- GOI organised a workshop on 'Geospatial Science and Technology' during 19 – 23rd January, 2015 at Bengaluru.

Member – Expert/Technical Committee:

- a. Expert Committee Member – National Biodiversity Authority (2009-10).
- b. Expert Committee Member - Department Biotechnology, GOI. (2010, 2012 and 2017).
- c. Technical Committee Member –State Department of Ecology, Environment & Remote Sensing, Jammu and Kashmir Government (2012-19).
- d. Technical Committee Member – Kerala Spatial Data Infrastructure, Government of Kerala (2010-14).
- e. Technical Committee Member – Ministry for Human Resource Development, Government of India (2010-11).
- f. Coordinator – Energy Efficient Building workshop series (2010-19).
- g. Organising Secretary – NSDI 11 event at Bangalore (2011-12).
- h. Technical Committee Member – Haryana State Remote Sensing Application Centre, Haryana (2012).
- i. Technical Committee Member – UAS, Bangalore (2012).
- j. Technical Committee Member – Uttarakhand State Council for Science and Technology (2013).
- k. Technical Committee Member - Evaluation of BBMP data, Government of Karnataka.
- l. Technical Committee Member– ATREE, Bangalore. (2014)
- m. Technical Committee – Karnataka Watershed Development Department, Government of Karnataka (2014).

- n. Technical Committee member – Advanced Centre for Integrated Water Resources Management (ACIWRM), GoK. (2017-18)
- o. Technical Working Group – Spatial data content and National Data Registry (2017-19)
- p. Technical Committee Member – Bureau of Indian Standards (2017-19)
- q. Technical Committee Member – OGC India Forum (since 2016).
- r. Nodal Officer – National Data registry, Karnataka Node (2018 to 2021)

Important National/State Workshop/Training

- Organised National Workshop on "State SDIs and their Applications" during 8th and 9th June, 2017 at JN Tata Auditorium for Central/State Mapping agencies.
- Conducted course on GIS for the e-Governance Program participants at T. A. Pai Management Institute, Manipal during June 6-11, 2011. (40 students)
- Conducted one-week faculty program in VTU – Belagavi, during Sept, 14. (60 faculty members)
- Conducted Divisional (Bangalore, Mysuru, Kalaburagi and Belagavi) and District level training programs on the utilisation of Geospatial services to district line departments. (2007, 2009, 2013) – More than 3000 Officers benefitted.
- Conducted three-week training program on "Geospatial Technologies and its Application" for the faculty, students and Government Officers during October, 2015.
- Conducted one-week training program on "Preparation of digital base maps using cadastral and RS data" during 20th – 24th June, 2016 at KSCST, Bangalore.
- Organised two-day training-workshop for NRDMS project staff on "Karnataka Geoportal and applications of geospatial technologies" on 2nd and 3rd of February, 2107.
- Organised 13 training programs under Energy Efficient Buildings workshop series on "Low carbon materials and building systems" since 2010. (trained more than 400 engineers and architects).
- Organised NSDI 11 meet at Bangalore. The event was attended by all the national mapping organizations, GIS industry and academia.
- Organised workshop on "UML and Data modelling" at KSCST during 16/07/2014 to 18/07/2014 for all the National/State mapping agencies and academicians/faculty involved Data modeling.
- Workshop on 'Service-Oriented Architecture for Spatial Data Integration and Reasoning'
Organized by NRDMS-NSDI and Ahmedabad University during November 15-17, 2017.
- DST Workshop on "Geo-Spatial Data Modelling and Geo-Spatial Cloud for SDI" organised by IIT-Kharagpur on 22-24 August 2017.
- Workshop on "Geospatial Data Modelling and GeoSMS" held during 21/05/2014 to 23/05/2014 in the School of Information Technology, IIT Kharagpur.
- Workshop on "Coordinated Preparation of High-Resolution National Foundation Spatial Data (NFSD) for Gram-Panchayat and Ward Level Mapping" organized during December 18-22, 2018 at Bhubaneshwar.