

32<sup>nd</sup> IIRS outreach programme on 'Geospatial Modeling for Watershed Management'  
sponsored by NNRMS and organized by IIRS/ ISRO, Dept. of Space, Govt. of India,  
Dehradun 01/05/2018 to 07/05/2018

RAJA SHRIPATRAO BHAGAWANTRAO MAHAVIDYALAYA, AUNDH, SATARA

Indian Institute of Remote Sensing, ISRO, Dehradun  
Department of Space, Government of India  
SUMMARY REPORT OF PROGRAM

Date: 17/05/2018

To,  
The Principal,  
R.S.B. Mahavidyalaya, Aundh  
Tal. Khatav, Dist. Satara

I am submitting summary report of Outreach Programme. Please accept it.

1. Name of Programme: "Geospatial Modeling for Watershed Management"

2. Duration: 01-05-2018 to 07-05-2018

Total Days: 07

3. Number of enrolled participants: 01

4. Name of Coordinator: Dr. Telore Namdev Vasant

5. Name of Resource Persons: i) Dr. S. P. Aggarwal      ii) Dr. Bhaskar R. Nikam,  
iii) Dr. Praveen Thakur,


6. Objectives of the Programme:

- i. To study geospatial modeling
- ii. To study watershed management

7. Outcome of the Programme:

- i. Participants were aware about geospatial modelling.
- ii. Participants were aware various watershed management techniques of modelling.

Centre Coordinator  
Dr. Namdev V. Telore

  
Dr. Namdev V. Telore  
Co-ordinator  
IIRS Outreach Programme, Dehradun  
Centre: R.S.B. Mahavidyalaya, Aundh, Dist.: Satara

Principal

  
17C PRINCIPAL  
Raja Shripatrao Bhagwantrao  
Mahavidyalaya, Aundh (Satara)

भारत सरकार  
अंतरिक्ष विभाग  
**भारतीय सुदूर संवेदन संस्थान**  
4, कालिदास मार्ग, पो. बाक्स सं. 135  
देहरादून-248 001, भारत  
दूरभाष : +91-135-2524399  
फैक्स : +91-135-2741987, 2748041



सत्यमेव जयते

Government of India  
Department of Space  
**Indian Institute of Remote Sensing**  
4, Kalidasa Road, P.B. No. 135,  
Dehradun - 248 001, India  
Telephone : +91-135-2524399  
Fax : +91-135-2741987, 2748041

Dr. Prakash Chauhan  
Director

No.: IIRS/GIT&DL/EDUSAT/2018/32  
Date: April 09, 2018

**Sub: Announcement of 32<sup>nd</sup> IIRS Outreach Program on "Geospatial Modelling for Watershed Management" commencing from May 01-07, 2018.**

Dear Sir/ Madam,

पूर्वी अवलोकन (ई ओ) भारतीय अंतरिक्ष अनुसंधान संस्थान का एक महत्वपूर्ण कार्यक्रम है, जिसके अंतर्गत पिछले पचास वर्षों में कई उपग्रहों को अंतरिक्ष में प्रक्षेपण किया गया है। इन उपग्रहों से प्राप्त आंकड़ों का उपयोग प्राकृतिक संसाधन व आपदा प्रबंधन में किया जाता है। भारतीय सुदूर संवेदन संस्थान (भा.सु.सं.सं.) भू-स्थानिक प्रौद्योगिकी के अंतर्गत शिक्षण, प्रशिक्षण तथा क्षमता संवर्धन को समर्पित एक महत्वपूर्ण संस्थान है। इस संस्थान द्वारा अब तक 30 उपग्रह एवं इंटरनेट आधारित आउटरीच पाठ्यक्रम संचालित किए जा चुके हैं। इन पाठ्यक्रमों से लगभग 730 भारतीय विश्वविद्यालयों/संस्थानों के करीब 62,000 से अधिक प्रतिभागी लाभान्वित हुए हैं। इस कार्यक्रम को आगे बढ़ाते हुए हम सहर्ष 32<sup>nd</sup> आई<sup>o</sup>आई<sup>o</sup>आर<sup>o</sup>एस<sup>o</sup> आउटरीच कार्यक्रम को प्रारंभ करने की घोषणा करते हैं। 01 मई 2018 से प्रारंभ होने वाला यह कार्यक्रम 'भू-स्थानिक मॉडलिंग द्वारा जलागम प्रबंधन' पर आधारित है। यह कार्यक्रम कार्यरत सरकारी एवं गैर - सरकारी तथा छात्रों हेतु लक्षित है। यह कार्यक्रम प्रतिभागियों को अपने कार्यस्थल पर रहते हुये ज्ञान को समृद्ध करने का एक अनूठा अवसर प्रदान करता है।

The Indian Space Research Organisation (ISRO) has a vibrant Earth Observation (EO) programme since last 50 years with launch of several satellite missions. The Indian Remote Sensing Satellite (IRS) series of satellites provide space based information for monitoring and management of natural resources and Disaster Management Support. The Indian Institute of Remote Sensing (IIRS) is a premier Institute under ISRO engaged in training, education and capacity building on use of geospatial technology for natural resources monitoring and disaster management since last five decades. The Institute has so far conducted 30 Satellite and Internet based Outreach Programmes, benefitting more than 62000 participants from 730 Indian universities/ institutions/user Departments/user ministries in India. To promote the use of Geospatial technology, IIRS announces the 32<sup>nd</sup> IIRS Outreach programme on "Geospatial Modelling for Watershed Management" commencing on May 01, 2018. The course is targeted to working professionals and students and will provide a unique opportunity to the learners to enhance their knowledge by attending the course at their respective working places.

प्रकृतिक संसाधनों के आंकलन और निगरानी के लिए हाल के वर्षों में सुदूर संवेदन जी.आई.एस. और जी.पी.एस. सहित भू-स्थानिक प्रौद्योगिकीयों एक शक्तिशाली साधन के रूप में उभरी हैं। एकीकृत जलागम प्रबंधन प्रोग्राम (आई.डब्ल्यू.एम.पी.) (वर्तमान में डब्ल्यू.डी.सी. - पी.एम.के.एस.वाई.), भारत सरकार के एक प्रमुख कार्यक्रम के अंतर्गत मृदा एवं जल संसाधनों का समुचित उपयोग और सं रक्षण के द्वारा पारिस्थितिक संतुलन को पुनर्स्थापित करने की परिकल्पना की गयी है। आई.डब्ल्यू.एम.पी. प्रोग्राम प्रकृतिक संसाधनों का मूल्यांकन योजना एवं निगरानी में भू-स्थानिक प्रौद्योगिकी के अधिकाधिक उपयोग पर जोर देता है। वर्तमान में देश के 10 राज्यों में लगभग 50,000 माइक्रो जलागम का उच्च स्थानिक रि-जोल्यूशन सुदूर संवेदी आंकड़ों के उपयोग द्वारा BHUVAN के माध्यम से निगरानी के जा रही है। यह पाठ्यक्रम जलागम प्रबंधन के सिद्धांतों पर एक सिंघवालोक्तन, जलागम प्रबंधन के लिए भू-स्थानिक प्रौद्योगिकियों के उपयोग के साथ-साथ जलागम के विश्लेषण के लिए डिजिटल-इलेवेशन मॉडल (डी.ई.एम.) का उपयोग, मृदा का क्षरण और मृदा और जल संरक्षण योजना के स्थानिक मॉडलिंग एवं निगरानी के विषयों पर विवेचना करेगा। यह पाठ्यक्रम उन सरकारी कर्मचारी, शोधकर्ताओं और विद्यार्थियों का मृदा एवं जल के संदर्भ में भू-स्थानिक प्रौद्योगिकियों की उपयोगिता को सीखने में अत्यंत उपयोगी होगा।

Geospatial technologies including remote sensing, GIS and GPS has emerged as a powerful tool in recent years for assessment and monitoring of natural resources. Integrated Watershed Management Programme (IWMP) (presently as WDC-PMKSY), a flagship programme of Govt of India was envisaged to restore the ecological balance by harnessing and conserving soil and water resources. IWMP emphasizes use of geospatial technology in natural resource assessment, planning and monitoring of the watershed. Nearly 50,000 micro watersheds in 10 states are being monitored using high spatial resolution remote sensing data through BHUVAN. This course will provide an overview on the principles of watershed management, use of geospatial technologies for watershed management including the use of digital elevation models (DEMs) for terrain analysis of watershed, spatial modelling of soil erosion and soil and water conservation

भारतीय अंतरिक्ष अनुसंधान संगठन, इसरो/इसरो Indian Space Research Organisation

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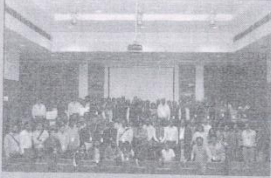
## IIRS Outreach Programme

The IIRS outreach programme, which started in 2007 with 12 universities/ institutions has now grown substantially. Currently, about 730 universities/ institutions spread across India are networked with IIRS. The beneficiaries of the programme may include:

- Soil and Water Conservation Officers
- State Land Resources / Departments / Training Academies
- State Watershed Directorates
- Central/State/Private Universities & Academic Institutions
- Central & State Government Departments
- Research Institutes
- Geospatial Industries
- NGOs

## Feedback Mechanism

IIRS has conducted workshops and sessions during IIRS User Interaction Meet to take feedback from participating institutions to improve the quality of future courses.



Feedback session during IIRS User Interaction Meet (IUM)-2018

## Awards

IIRS has received national awards for excellence in training for outreach and e-learning programme during 1<sup>st</sup> National Symposium on Excellence in Training conducted during April 11-12, 2015 in New Delhi by Department of Personnel & Training (DoPT), Govt. of India in collaboration with United Nations Development Programme (UNDP).



## About IIRS

Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organisation (ISRO), Department of Space, Govt. of India is a premier Training and Educational Institute set up for developing trained professionals in the field of Remote Sensing, Geoinformatics and GNSS Technology for Natural Resources, Environmental and Disaster Management. Formerly known as Indian Photo-interpretation Institute (IPI), founded in 1966, the Institute boasts to be the first of its kind in entire South-East Asia. While nurturing its primary endeavour to build capacity among the user community by training mid-career professionals, the Institute has enhanced its capability and evolved many training and education programmes that are tuned to meet the requirements of various target groups, ranging from fresh graduates to policy makers including academia.

IIRS also conducts e-learning programme on Remote Sensing and Geo-Information Science (<http://elearning.iirs.gov.in>).

## Contact Details

**Dr. Suresh Kumar**  
Course Director  
Tel: 0135-2524140

Email: [suresh\\_kumar@iirs.gov.in](mailto:suresh_kumar@iirs.gov.in)

**Mr. Justin George K**  
Course Coordinator  
Tel: 0135-2524141  
Email: [justin@iirs.gov.in](mailto:justin@iirs.gov.in)

### IIRS DLP Team

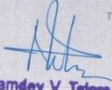
**Dr. Harish Karnatak**  
Head, GIT & DL Dept.  
Tel: 0135-2524332  
Email: [harish@iirs.gov.in](mailto:harish@iirs.gov.in)

**Dr. Poonam S Tiwari**  
Tel: 0135-2524334; email: [poonam@iirs.gov.in](mailto:poonam@iirs.gov.in)

**Mr. Janardan Vishwakarma**  
Tel: 0135-2524130; email: [janardan@iirs.gov.in](mailto:janardan@iirs.gov.in)

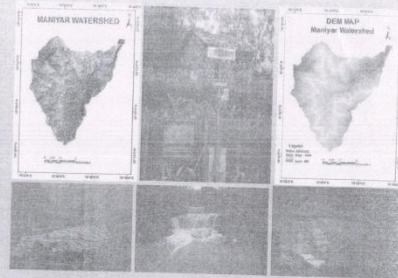
**Mr. Ashok Ghildiyal**  
Tel: 0135-2524130; email: [ashokg@iirs.gov.in](mailto:ashokg@iirs.gov.in)

Indian Institute of Remote Sensing,  
Indian Space Research Organisation  
Department of Space, Govt. of India,  
4-Kalidas Road, Dehradun  
Email: [dlp@iirs.gov.in](mailto:dlp@iirs.gov.in)

  
**Dr. Namdev V. Telore**  
Co-ordinator

IIRS Outreach Programme, Dehradun  
Centre: R.S. Manviyayalaya, Aundh, Dist. Satara

## Thirty Second IIRS Outreach Programme



## Geospatial Modelling for Watershed Management

May 01 – May 07, 2018



Organised by  
Indian Institute of Remote Sensing  
Indian Space Research Organisation  
Department of Space, Govt. of India  
Dehradun  
[www.iirs.gov.in](http://www.iirs.gov.in)

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32- IIRS Outreach Programme on Geospatial Modeling for Watershed Management

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Downloads Certificates of successful participants for Course on Geospatial Modeling for Watershed Management

S.No.	Registration Number	Name	Name in Hindi	email	Certificate
1	20183244040	Dr. Namdev Vasant Telore	डॉ. नामदेव वसंत तेलोरे	nvtelore@gmail.com	

All Certificates Coordinator Certificate Institute Certificate

**Dr. Namdev V. Telore**  
Co-ordinator  
IIRS Outreach Programme, Dehradun  
Centre: R.S.B. Mahavidyalaya, Aundh, Dist. Satara

**Chaudan**  
I/C PRINCIPAL  
Raja Shripatrao Bhagwantrao  
Mahavidyalaya, Aundh (Satara)

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S.No.	RegNo.	Name	DOB	Mobile No.	Email	ID_Proof	Status
1	20183242626	pratima kamble	6-26-1994	9921929879	pratimakamble306@gmail.com	View	Approved
2	20183242808	ASHWINI JAGADALE	6-10-1991	9552960410	ashwinijagdale33@gmail.com	View	Approved
3	20183242811	JAGANNATH BARKADE	6-1-1969	9822636527	barkadejd@gmail.com	View	Approved
4	20183244040	Namdev Telore	7-4-1978	9423863623	nvtelore@gmail.com	View	Approved

**Dr. Namdev V. Telore**  
Co-ordinator  
IIRS Outreach Programme, Dehradun  
Centre: R.S.B. Mahavidyalaya, Aundh, Dist. Satara

**Chaudan**  
I/C PRINCIPAL  
Raja Shripatrao Bhagwantrao  
Mahavidyalaya, Aundh (Satara)





भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING  
भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION  
अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA



बहिः परिसर संपर्क/ विस्तार कार्यक्रम प्रमाण पत्र  
OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME

COR323232018

संस्थान की सहभागिता का प्रमाण पत्र  
CERTIFICATE OF PARTICIPATION OF INSTITUTE

यह प्रमाणित किया जाता है कि राजा श्रीपतराव भगवंतराव महाविद्यालय, औंध, महाराष्ट्र ने भारतीय सुदूर संवेदन संस्थान, इसरो देहरादून द्वारा संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम "भू-स्थानिक मॉडलिंग द्वारा जलागम प्रबंधन" में भाग लिया। इस ऑनलाइन पाठ्यक्रम का संचालन दिनांक 01-05-2018 से 07-05-2018 तक किया गया।

This is to certify that **Raja Shripatrao Bhagawantrao Mahavidyalaya, Aundh, Maharashtra**, has participated in online training programme conducted by Indian Institute of Remote Sensing, ISRO Dehradun on "**Geospatial Modeling for Watershed Management**". This online programme was conducted during May 01, 2018 to May 07, 2018.

दिनांक/ Date: 20-06-2018  
देहरादून/ Dehradun

प्रमुख,  
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग  
Head, Geoweb Services, IT & Distance Learning Department, IIRS

**Dr. Namdev V. Telore**  
Co-ordinator  
IIRS Outreach Programme, Bihradun  
Centre: N.S.B. Mahavidyalaya, Aundh, Dist. Satara

समूह प्रमुख,  
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह  
Group Head, Geospatial Technologies & Outreach Programme Group, IIRS

**Raja Shripatrao Bhagwantrao Mahavidyalaya, Aundh (Satara)**



भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING  
भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION  
अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA



बहिः परिसर संपर्क/ विस्तार कार्यक्रम प्रमाण पत्र  
OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME

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समन्वय का प्रमाणपत्र  
CERTIFICATE OF COORDINATION

यह प्रमाणित किया जाता है कि राजा श्रीपतराव भगवंतराव महाविद्यालय, औंध, महाराष्ट्र में कार्यरत डॉ. नामदेव वसंत तेलोरे, ने "भू-स्थानिक मॉडलिंग द्वारा जलागम प्रबंधन" विषय पर इस संस्थान द्वारा दिनांक 01-05-2018 से 07-05-2018 तक संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम को समन्वित किया।

This is to certify that **DR. NAMDEV VASANT TELORE**, working with **Raja Shripatrao Bhagawantrao Mahavidyalaya, Aundh, Maharashtra**, has coordinated the online training course on "**Geospatial Modeling for Watershed Management**" conducted by this institute during May 01, 2018 to May 07, 2018.

दिनांक/ Date: 20-06-2018  
देहरादून/ Dehradun

प्रमुख,  
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग  
Head, Geoweb Services, IT & Distance Learning Department, IIRS

समूह प्रमुख,  
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह  
Group Head, Geospatial Technologies & Outreach Programme Group, IIRS

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