



भारत सरकार
GOVERNMENT OF INDIA
भारतीय भूवैज्ञानिक सर्वेक्षण प्रशिक्षण संस्थान
GEOLOGICAL SURVEY OF INDIA TRAINING INSTITUTE
हैदराबाद / HYDERABAD



ई-प्रशिक्षण " खनिज अन्वेषण में सुदूर संवेदन एवं जीआईएस के अनुप्रयोग पर 18वां पाठ्यक्रम"

इसरो के राष्ट्रीय प्राकृतिक संसाधन प्रबंधन प्रणाली (एनएनआरएमएस) कार्यक्रम के तहत

**e- Training on 18th Course on Application of Remote Sensing and GIS in Mineral Exploration
Under the National Natural Resource Management System (NNRMS) program of ISRO**

(25.06.2020 to 10.07.2020)

पाठ्यक्रम प्रतिवेदन / COURSE REPORT

भारतीय भूवैज्ञानिक सर्वेक्षण और भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) के बीच समझौता ज्ञापन के भाग के रूप में भाभूस प्रशिक्षण संस्थान द्वारा सुदूर संवेदन एवं जीआईएस तकनीक का उपयोग करके खनिज अन्वेषण और आपदा प्रबंधन के क्षेत्र में राष्ट्रीय प्राकृतिक संसाधन प्रबंधन प्रणाली (एनएनआरएमएस) के तहत प्रशिक्षण कार्यक्रम आयोजित कर रहा है। इस पाठ्यक्रम का उद्देश्य खनिज अन्वेषण में सुदूर संवेदन और जीआईएस के क्षेत्र में विभिन्न केंद्रीय / राज्य सरकार संगठनों / शैक्षिक और अनुसंधान संस्थानों से भूवैज्ञानिकों के कौशल और विशेषज्ञता को विकसित करना था। अब तक जीएसआईटीआई ने "खनिज अन्वेषण में सुदूर संवेदन और जीआईएस के अनुप्रयोग" पर सत्रह पाठ्यक्रमों का सफलतापूर्वक संचालन किया है और इस प्रशिक्षण कार्यक्रम से भूवैज्ञानिक समुदाय के 285 प्रतिभागियों को लाभ हुआ है।

कोविड 19 की महामारी जैसी स्थिति में पीजीआरएस प्रभाग, जीएसआईटीआई ने "ई-प्लेटफॉर्म के माध्यम से खनिज अन्वेषण में रिमोट सेंसिंग और जीआईएस के अनुप्रयोग पर 18वें प्रशिक्षण कार्यक्रम" का संचालन करने का प्रस्ताव दिया था, जिसे 30 प्रतिभागियों के लिए इसरो प्राधिकार द्वारा विधिवत स्वीकृत किया गया।

श्री सीएच. वेंकटेश्वर राव, उप महानिदेशक एवं प्रमुख, मिशन V, जीएसआईटीआई के मार्गदर्शन में इस पाठ्यक्रम का संचालन पीजीआरएस प्रभाग, जीएसआईटीआई, हैदराबाद में ई-प्लेटफॉर्म के माध्यम से किया गया। इस पाठ्यक्रम का उद्घाटन 25 जून 2020 को श्री बिश्वजित गंगोपाध्याय, उप महानिदेशक, आरटीडी एवं एफटीसी, जीएसआईटीआई द्वारा किया गया। इस अवसर पर; डॉ. तारकनाथ पाल, निदेशक, तकनीकी समन्वय, जीएसआईटीआई, डॉ. निशा रानी, अधीक्षण भूवैज्ञानिक एवं पाठ्यक्रम समन्वयक, पीजीआरएस डिवीजन और श्री अनूप वी. एम., सीनियर जियोलॉजिस्ट, पीजीआरएस डिवीजन, जीएसआईटीआई भी उद्घाटन सत्र के दौरान उपस्थित रहे। पूरे भारत में प्राप्त 91 आवेदनों में से प्रशिक्षण कार्यक्रम में भाग लेने के लिए 30 उम्मीदवारों का चयन किया गया। इस कार्यक्रम में 19 नए प्रतिनिधि और 9 पहले के संगठनों / विश्वविद्यालयों और संस्थानों ने इस प्रशिक्षण कार्यक्रम में भाग लिया। प्रतिभागियों में से 12 रिसर्च स्कॉलर हैं और 18 प्रोफेशनल्स हैं, जिनमें शिक्षाविद और वैज्ञानिक अधिकारी शामिल हैं।

As part of the MoU between Geological Survey of India and Indian Space Research Organisation (ISRO), GSI Training Institute has been conducting training programs under National Natural Resources Management System (NNRMS) in the fields of mineral exploration and disaster management using Remote Sensing and GIS techniques. The objective of this course was to develop the skill and expertise of Earth Scientists from different Central / State Government Organizations / Educational and Research Institutes in the field of Remote Sensing & GIS in Mineral Exploration. So far, GSITI has successfully conducted seventeen courses on “Application of Remote Sensing and GIS in Mineral Exploration” and 285 participants from Geoscientific community have been benefited from this training programme.

In the prevailing situation of pandemic COVID19, PGRS Division, GSITI had proposed to conduct the “18th training program on Application of Remote Sensing and GIS in Mineral Exploration” through e-platform which was duly accepted and approved by the authority of ISRO for 30 participants. The course was conducted through e-platform at PGRS Division, GSITI, Hyderabad under the guidance of Shri. Ch. Venkateswara Rao Dy. D.G & Head, Mission-V, GSITI. The course was inaugurated on 25th June 2020 by Shri. Biswajit Gangopadhyay Dy. D.G., RTD & FTC, GSITI, in the noble presence of Dr. Taraknath Pal, Director, Technical Co-ordination, GSITI, Dr. Nisha Rani, Superintending Geologist & Course coordinator, PGRS Division and Shri Anoop V M, Sr. Geologist, PGRS Division, GSITI. Thirty candidates were selected for attending the training programme out of 91 applications received from all over India. Nineteen newly represented and nine earlier participated Organizations / Universities and Institutes participated in this training program. Among the participants, 12 are Research Scholars and 18 are working professionals, including Academicians & Scientific Officers.

कार्यक्रम की पाठ्यक्रम सामग्री इस प्रकार है/The course content of the programme as follows

पाठ्यक्रम विषयसूची /**Course content:**

- Fundamentals of Metallogeny in space and time & Mineral Deposits.
- Remote sensing and digital image processing involving fundamentals, data rectification techniques, Image Enhancement viz. Radiometric, Spatial and Spectral, Image classification, Image mosaicking, Feature extraction, Image Interpretation techniques for Geology, Geomorphology, Alteration Mapping through remote sensing, etc.

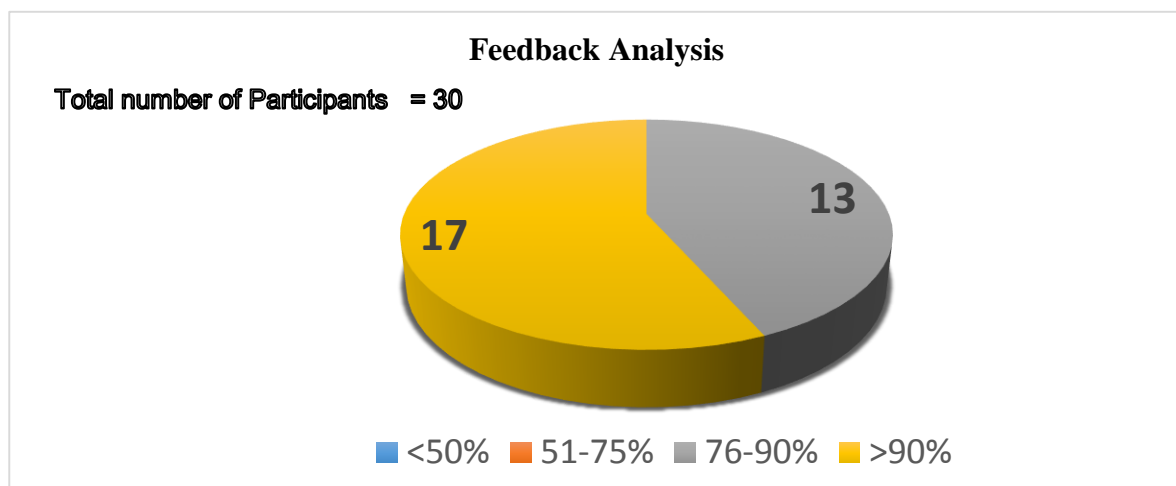
- Concepts and application of Digital Elevation Model, Thermal, Hyperspectral and Microwave remote sensing.
- Geographic Information System covering spatial data concepts, concepts on GIS analysis & empirical models for mineral exploration and lineament analysis.

प्रतिपुष्टि /Feedback:

प्रशिक्षुओं ने ई-प्रशिक्षण कार्यक्रम के विभिन्न पहलुओं के बारे में अपनी राय व्यक्त करते हुए अपनी प्रतिक्रिया प्रस्तुत की। उन्होंने इस महामारी की स्थिति में ई-प्लेटफॉर्म के माध्यम से इस प्रशिक्षण कार्यक्रम का संचालन करने के लिए इसरो के राष्ट्रीय प्राकृतिक संसाधन प्रबंधन प्रणाली (एनएनआरएमएस) कार्यक्रम के तहत पीजीआरएस प्रभाग, जीएसआईटीआई द्वारा की गई पहल की सराहना की। सभी प्रतिभागियों ने पाठ्यक्रम संरचना की अत्यधिक सराहना की; विषय को सैद्धांतिक कक्षाओं, विभिन्न व्यावहारिक अभ्यासों पर व्याख्यान और प्रदर्शनों को प्रस्तुत करने में संकाय के प्रयासों की भी प्रशंसा की। 17 प्रतिभागियों (57%) ने ई-प्रशिक्षण को अत्यधिक लाभकारी (>90%) और 13 प्रतिभागियों (43%) को अपने व्यावसायिक / शोध कार्यों के साथ-साथ अकादमिक शिक्षण में भी बहुत फायदेमंद (76-90%) के रूप में चिन्हित किया।

The trainees have submitted their feedback, expressing their opinion about various aspects of the e-training programme. They appreciated the initiative taken by the PGRS Division, GSITI under the National Natural Resource Management System (NNRMS) program of ISRO to conduct this training programme through e- platform in this pandemic situation. All participants highly appreciated the course structure; the topic covered in theory classes, the demonstration and the efforts of the faculty in delivering the lecture and demonstrations on various practical exercises. 17 participants (57 %) found the e- training to be highly beneficial (> 90%) and 13 participants (43 %) participants expressed as very beneficial (76-90%) for their professional /research work as well as in academic teaching.

Statistics on - "How this e-Training has benefitted the participant in his/her skill upgradation in the relevant subject ?



Course Coordinator: Dr. Nisha Rani. Superintending Geologist

Faculty:



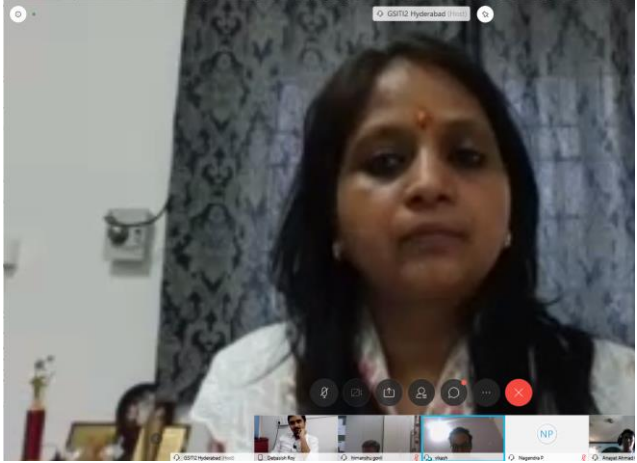
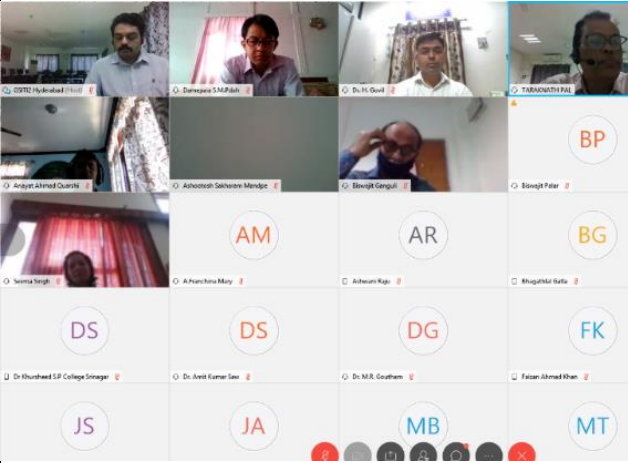
CORE FACULTY	
PGRS DIVISION	
Dr. Nisha Rani, Superintending Geologist & Course coordinator Shri Anoop V. M, Sr. Geologist	
CGMT DIVISION	
Shri. R. Balaji, Director Smt. Nidhi Mishra, Sr. Geologist	
PETROLOGY DIVISION	
Dr. Vikash Tripathy, Sr. Geologist	
GUEST FACULTY	
Amar Bisram Ekka, Superintending Geologist, PGRS Division, GSI, Hyderabad	

List of Participants:

LIST OF PARTICIPANTS			
S.No	Name	Designation	Institute / Organization / University
1	Matte Siva Teja	Research Scholar	Acharya Nagarjuna University, Guntur
2	Anayat Ahmad Quarshi	Senior Asst. Professor	Amar Singh College, Srinagar, J&K
3	Junaid Ahmed	Scientific officer-D	Atomic Minerals Directorate for Exploration and Research, Southern Region, Bengaluru
4	Debasish Roy	Scientific officer-D	Atomic Minerals Directorate for Exploration and Research, Southern Region, Bengaluru
5	Dr. Ashwani Raju	Assistant Professor	Banaras Hindu University, Varanasi
6	Rashmi Chandan	Research Scholar	Central University of Kerala, Kasargod
7	Biswajit Palar	Research Scholar	Centre for Oceans, Rivers, Atmosphere and Land Sciences, IIT Kharagpur
8	Dr. Rajesh Ranga	Scientific Officer	Kurukshetra University, Haryana
9	Ashootosh Sakharam Mandpe	Senior Research Fellow	CSIR-National Environmental Engineering Research Institute, Nagpur
10	Ghadamode Vikas Dhyaneswar	Research Scholar	CSIR-National Geophysical Research Institute, Hyderabad.
11	Radha Kishan Saran	Research Fellow	Maharaja Ganga Singh University, Rajasthan
12	Manoranjan Behera	Geophysicist	Directorate of Geology, Odisha, Bhubaneswar
13	Damepaia S. M. Pdah	Assistant Geologist	Directorate of Mineral Resources, Govt. of Meghalaya, Shillong
14	Dr. M.R. Goutham	Assistant Professor	Government College (Autonomous), Rajahmundry, Andhra Pradesh

15	Jaipal Singh	Assistant professor	Govt. College, Narnaul, Haryana.
16	Faizan Ahmad Khan	Phd Scholar	Indian Institute of Science Education and Research, Bhopal
17	Gopal T Daware	Scientific Assistant	Jawaharlal Nehru Aluminium Research Development and Design Center, Nagpur
18	Dr. Prem Prakash Mishra	Lecturer	Jawaharlal Nehru Smarak P.G College, Uttar Pradesh
19	Himanshu Govil	Assistant Professor	National Institute of Technology, Raipur
20	Franchina Marry	Assistant Professor	Nirmala College for Women, Coimbatore.
21	Dr. Amit Kumar Saw	Sr. Manager (Geology)	NMDC Limited, Hyderabad
22	Dr. Partha Sarthi Jena	Dy. Manager (Geology)	NMDC Limited, Hyderabad
23	Bhagathlal Gatla	Research Scholar	Osmania University, Hyderabad
24	Dr Seema Singh	Assistant Professor	Panjab University, Chandigarh.
25	Dr. Khursheed Ahmad Parray	Assistant Professor	S.P. College, Srinagar, J&K
26	Pranshu	Junior Research Fellow	Snow and Avalanche Study Establishment DRDO, Chandigarh
27	Saheli De	Post-Doctoral Fellow	University of Calcutta, Kolkata
28	Nagendra.P	Research Scholar	University of Mysore, Mysore
29	Ernest Amitha Roy. A	Research Scholar	V.O. Chidambaram College , Thoothukudi, TN
30	Vandit Pankaj Vyas	Assistant Manager	Western Coal India Limited, Nagpur

Glimpses of Activities

	
<p style="text-align: center;">Inaugural address by Shri. Biswajit Gangopadhyay Dy. D.G., RTD & FTC, GSITI</p>	<p style="text-align: center;">Dr. Taraknath Pal, Director (TC), GSITI interacting with participants in the inaugural function.</p>
	
<p style="text-align: center;">Dr. Nisha Rani, Superintending Geologist, PGRS Division, GSITI interacting with participants in the inaugural function.</p>	<p style="text-align: center;">Dignitaries and participants interacting during the Inaugural session of the Course</p>

Cisco Webex Meetings

File Edit Share View Audio Participant Meeting Help

Viewing GSIT12 Hyderabad's...

Alteration Zone Mapping

Legend

- Opaque Index
- Ferric Oxides
- Iron Oxide Alteration
- Al-OH Group
- Sericite/Muscovite
- Muscovite
- Calcite
- Permian Sillites

Participants: 33

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GSIT12 Hyderabad

GSIT12 Hyderabad (Host)

GSIT12 Hyderabad

SD

NP

Saheli De

Nagendra P

BG

RS

Bhagathal Gatta

RADHA KISHAN SARAN

AQ

AM

Anayat Ahmad Quarshi

Ashootosh Sakharan Mar...

DG

AM

Dr. M.R. Goutham

A.Franchina Mary

Online lecture and demo session by Dr. Nisha Rani Superintending Geologist, PGRS Division

Cisco Webex Meetings

File Edit Share View Audio Participant Meeting Help

Untitled-1 -

Viewing GSIT12 Hyderabad's...

Raster

Drawing

Format

Table

File Home Manage Data Raster Vector Terrain

Raster

Rescale

Input File: (*.img)

Output File: (*.img)

rescale_0bit_01_07.img

Coordinate Type: Subpixel Definition: From Inquire Box

UL X: 667200.00 LR X: 893400.00

UL Y: 1714800.00 LR Y: 1483800.00

Data Type: Input Range Options:

Input: Unsigned 16 bit

Output: Unsigned 8 bit

Minimum Maximum

Standard Deviation 2.00

Input Statistics Parameters:

Values to use for stats: Use All Values

Output Parameters:

Min: 0 Max: 255

Clip to this range?

Output value for ignored input values: 0

☒ Ignore value in output stats? Ignore value 0

OK Cancel Batch View ... Help

Accept all info and issue the job.

GSIT12 Hyderabad

Participants (33)

Search

AV Anoop VM1

GSIT12 Hyderabad

Host

AM A.Franchina Mary

AQ Anayat Ahmad Quarshi

AR Ashwani Raju

BG Bhagathal Gatta

BP Biswajit Palar

DS Damepaia S.M.Pdah

DS Damepaia S.M.Pdah

DR Debasish Roy

DS Dr. Khursheed S.P College Srinagar

Online lecture and demo session by Shri Anoop V M Senior Geologist, PGRS Division



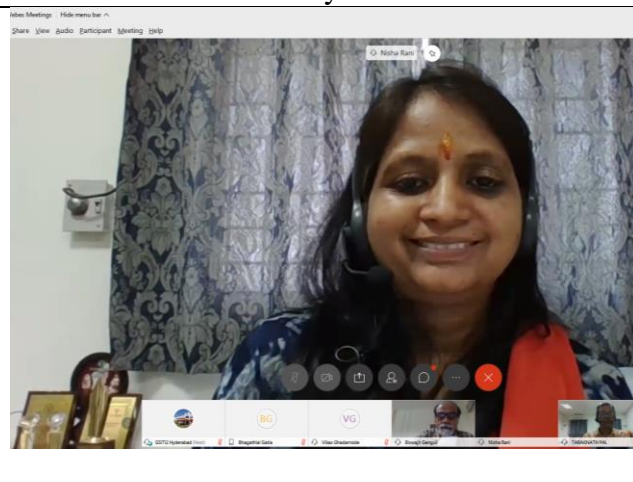
Address by Shri. Ch. Venkateswara Rao
Dy. D.G & Head, Mission-V, GSITI during
valedictory function.



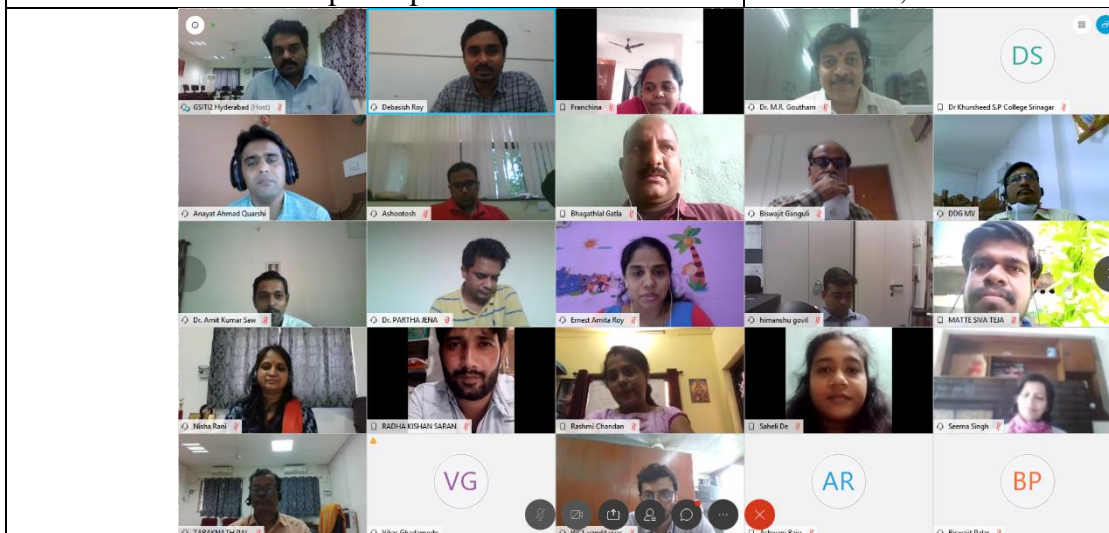
Address by Shri. Biswajit Gangopadhyay Dy.
D.G., RTD & FTC, GSITI GSITI, during
valedictory function.



Dr. Taraknath Pal, Director (TC), GSITI interacting
with participants.



Dr. Nisha Rani, Superintending Geologist, PGRS
Division, GSITI interacting with participants



Feedback session by the participants