

# Geoenvironment-2020: DETAILED SCHEDULE

**Day 1 : 17th February 2020, Monday**

**Venue: Seminar Hall, IIT Delhi**

<b>0800-0900</b>	<b>Registration</b>	
<b>0900-1000</b>	<b>Inauguration</b>	
	Welcome Address by <i>Prof. R. Ayothiraman</i>	(0900-0902)
	About Geoenvironment-2020 by <i>Prof. Manoj Datta</i>	(0902-0910)
	About the New Equipment & Field Demonstrations by <i>Prof. G.V. Ramana</i>	(0910-0915)
	Inaugural Address by <i>Mrs Geeta Menon, Joint Secretary, MoEF&amp;CC</i>	(0915-0930)
	Keynote Address by <i>Prof. V. Ramgopal Rao, Director, IIT Delhi</i>	(0930-0945)
	Global Perspective - Contaminated Sites & Geoenvironment by - <i>Prof. Peter Dietrich, Hemholtz Centre for Environmental Research, Germany</i> - <i>Prof. Michael Harbottle, Cardiff University, U.K.</i> - <i>Prof. Gopal Achari, University of Calgary, Canada</i>	(0945-1000)
	Vote of Thanks by <i>Prof. Prashanth Vangla</i>	(1000-1002)
<b>International Seminar on Contaminated Sites</b>		
<b>1002-1100</b>	<b>Session A</b>	
<i>Session Chair</i>	<i>Gopal Achari, University of Calgary, Canada</i>	
	Direct Push Methods for Environmental Sampling & Logging in Soils and Unconsolidated Formations <i>Wesley McCall &amp; Adam McMath</i>	(30+5)
	Case Studies on Use of XRF and PID/VOC Detector for Sub-Surface Investigation and Remediation <i>Padmanabhan Girinathannair</i>	(20+5)
<b>1100-1130</b>	<b>Tea (Red Square)</b>	
<b>1130-1335</b>	<b>Session B</b>	
<i>Session Chair</i>	<i>Michael Harbottle, Cardiff University, UK</i>	
	Status of Contaminated Sites in India <i>B. Vinod Babu, G. Rambabu, Gargi Biswas</i>	(20+5)
	Recent Advances in 3D Electrical Resistivity for Geotechnical and Environmental Engineering <i>Orlando Leite/LD Mohapatra and J.Gance</i>	(25+5)
	On-site Screening of Heavy Metals in Soils using the Thermo Scientific Niton XL3t GOLDD+ Handheld XRF Analyzer <i>M. Bauer and Malathesh MR</i>	(20)
	State-of-the-art GPR Technologies for Surveying of Contaminated Sites <i>Parampreet Singh</i>	(15)
	Shallow Depth Environmental Soil Sampling <i>Neeraj Chadha</i>	(15+5)
	About Optical Imaging Hydraulic Profiling Tool <i>Wesley McCall</i>	(15)
<b>1335-1430</b>	<b>Lunch (Red Square)</b>	
<b>1430-1550</b>	<b>Session C</b>	
<i>Session Chair</i>	<i>J.K Saha, ICAR-IISS, Bhopal</i>	
	Remediation of Contaminated Sites: Two Case Studies <i>Tapan Chakrabarti</i>	(20+5)
	Geomicrobiology for Remediation of Contaminated Subsurface <i>Pinaki Sar</i>	(20+5)
	Inventory and Mapping of Probably Contaminated Sites in India <i>Sangram A. Kadam</i>	(15+5)
	Contaminated Sites at Waluj in the State of Maharashtra <i>V.M. Motghare</i>	(15)
<b>1550-1615</b>	<b>Tea (Red Square)</b>	

**Demo  
Session  
Group 1  
1430-1630**

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Venue: Seminar Hall, IIT Delhi

**Conference on Geoenvironment and Sustainability**

1615-1845		Session D	] Intermixed mode	Demo Session  Group 1 1430-1630
Session Chairs		Theme A(I): Contaminated Land: Investigations & Remediation Theme B: Landfills and Slurry Ponds <i>J.T. Shahu and G.V. Ramana, IIT Delhi</i>		
#228	Stability Assessment of Water-Retention Type Tailings Dam in Static and Pseudo-Static Conditions <i>Pankaj Kumar, BVS Viswanadham</i>			
#103	Quantifying Remediability- The Need and a Possible Approach <i>Lakshmi Priya, George K Varghese</i>			
#130	Environmentally Sustainable Alternative of Coal Ash Disposal in Mine Void Filling <i>Vinod Kumar Mauriya</i>			
#129	Hybrid Bioreactor Landfill: A Novel Approach for Enhancement of Rate of Degradation in Anaerobic Bioreactor Landfill <i>T. S. Khambekar, S. T. Mali</i>			
#163	Performance Evaluation of Sand-Bentonite Enriched Soils as Barrier Material in Engineered Landfills <i>Jaskiran Sobti, S. K. Singh</i>			
#133	Electrokinetic Treatment (EKT)- A laboratory Study for Remediating Soils Contaminated with Leachate <i>Vikas Gingine, Rafaela Cardoso</i>			
#119	Height Raising of Iron Ore Tailing Dam over Soft Tailings <i>S. K. Rout, B. Das, A. K. Mandal, Manoj De</i>			
#110	Groundwater Pollution Risk Assessment Correlated to Pollution Potential from the Non-Engineered Landfill Site <i>M. K. Kaushik</i>			
#139	Understanding the (Bio)geochemistry of an Arsenic-Contaminated Aquifer for Sustainable Remediation <i>Akshat Verma, G. Pahuja, A. Kumar, J. J. Nilling, P. A. Murugan, S. Matheswaran, A. Singh</i>			
#117	Challenges of Eco-friendly Solid Waste Disposal in Ethiopia: The Case of Hawassa Industrial Park <i>K. T. Berhe, Sunil B.M., S. Shrihari</i>			
#136	Indicators Based Performance Evaluation of Municipal Solid Waste Management System – An Insight <i>A. J. Kotangale, R. M. Damgir</i>			Tutorials/ Interactive Sessions  TT1 & TT 2  1730-1830
#106	Efficacy Assessment of Amended Laterite Soil as a Subsurface Liner to Attenuate Migration of Contaminants in Leachate of Ash Pond Structures <i>Avishek Adhikary, S. K. Dutta Mazumdar, Supriya Pal</i>			
#120	Stability Assessment of Pond-Ash Embankments for Static and Seismic Conditions <i>Gaurav Sharma, M. Shazan, Koushik Pandit, Pradeep Kumar</i>			
#150	Subsurface Soil Contamination and Remediation Strategy for Industrial Area of Bangalore <i>Prathima B, Lokesh H. K, G. L. Sivakumar Babu</i>			
#193	Direct Push Technique for Collecting Continuous Core Soil Samples for Environmental Studies in Delhi Silt <i>Tanmay Gupta, D. Bansal, D. Parida, Upendra M., Vinay K. Singh, M. Datta, G. V. Ramana</i>			
#184	Assessment of Moisture Migration from an Open Wastewater Drain using ERT <i>Debaprakash Parida, Vinay K. Singh, D. Bansal, R. Ayothiraman, Manoj Datta, G. V. Ramana</i>			

# Geoenvironment-2020: DETAILED SCHEDULE

**Day 2 : 18th February 2020, Tuesday**

**Venue: Seminar Hall, IIT Delhi**

<b>0800-0900</b>	<b>Registration</b>	
<b>International Seminar on Contaminated Sites</b>		
<b>0900-1100</b>	<b>Session A</b>	
<i>Session Chair</i>	<i>Peter Dietrich, Hemholtz Centre for Environmental Research, Germany</i>	
	Risk-Based Remediation Planning of Contaminated Sites <i>Gopal Achari</i>	(30+5)
	A Comparison of Soil Sampling Methods for Environmental & Geotechnics Studies <i>Manoj Datta, G.V. Ramana and R. Ayothiraman</i>	(20+5)
	Choosing the Appropriate Remedial Application for your Site <i>Anthony Cole, Chetan Zaveri</i>	(30+5)
	Approach for Bioremediation of Municipal Solid Waste Dumps <i>G L Sivakumar Babu, P Sughosh, B Prathima, TG Parameswaran, N Anusree</i>	(20+5)
<b>1100-1130</b>	<b>Tea (Red Square)</b>	
<b>1130-1335</b>	<b>Session B</b>	
<i>Session Chair</i>	<i>GL Sivakumar Babu, IISc Bengaluru</i>	
	Insights on Soil for Remediation of Soil for Mercury Contamination <i>Atul Narayan Vaidya</i>	(20+5)
	Prioritisation of Contaminated Sites using Sparse Data (Preliminary) <i>R. J. Thiessen &amp; Gopal Achari</i>	(30+5)
	Safe Concentration Limit of Heavy Metals in Soil & Compost: Approaches in their Determination <i>J. K. Saha</i>	(20+5)
	Bio-strategies for Assessment & Remediation of Sites Contaminated with Recalcitrant Compounds <i>Vivek Kumar Gaur, Varsha Tripathi, Natesan Manickam</i>	(20+5)
	Use of Airborne, Surface, and Borehole Geophysical Techniques at Contaminated Sites <i>Sanjay Rana</i>	(20+5)
<b>1335-1430</b>	<b>Lunch (Red Square)</b>	
<b>1430-1550</b>	<b>Session C</b>	
<i>Session Chair</i>	<i>Tapan Chakrabarti, CSIR-NEERI, Nagpur</i>	
	Entailing Transformation in Sanitation Facilities using DRDO Biotoilet, an Eco-friendly and Appropriate Sanitation Solution <i>Soumya Chatterjee, Mohan G. Vairali, Sampriya Katak, Sonika Sharma</i>	(20+5)
	Investigations at a Fuel Oil Contaminated Land for Source Identification <i>George K. Varghese, Muhammed Siddik A</i>	(10)
	Sewage Contamination of Groundwater- Fixing Responsibility <i>George K. Varghese, M. S. P. Yadav</i>	(10)
	Case Studies of In-situ Remediation of LANPL and Heavy Metal (As) Polluted Shallow Groundwater Sites <i>Brijesh Kumar Yadav, Shreejita Basu, Shashi Ranjan, Pankaj Kumar Gupta</i>	(15)
	Case Study by SPCB <i>Awaited</i>	(12)
	Case Study by SPCB <i>Awaited</i>	(12)
<b>1550-1615</b>	<b>Tea (Red Square)</b>	

**Demo  
Session  
Group 2  
1100-1300**

**Demo  
Session  
Group 3  
1430-1630**



# Geoenvironment-2020: DETAILED SCHEDULE

**Day 3 : 19th February 2020, Wednesday**

**Venue: Seminar Hall, IIT Delhi**

## International Seminar on Contaminated Sites

<b>0900-1100</b>	<b>Session A</b>	
<i>Session Chair</i>	<i>Indumathi M Nambi, IIT Madras</i>	
	Balancing Between Goal Specification, Modelling and Site Characterization Efforts <i>Peter Dietrich</i> (30+5)	
	Use of Sustainability Principles and Field Screening Tools to Optimize Contaminated Media Disposal Volume for Soil Remediation Project in India <i>Nin Prakash, Rajat Srivastav</i> (25+5)	
	Subsurface Investigation on Perchloro Ethylene Drycleaning Sites (Michigan, USA) <i>Sunil Kulkarni</i> (20+5)	
	The Circular Geoenvironment - Maximising Geoenvironmental Services to Minimize Environmental Harm <i>Michael Harbottle</i> (30+5)	
<b>1100-1130</b>	<b>Tea (Red Square)</b>	
<b>1130-1335</b>	<b>Session B</b>	<b>Demo Session</b>  <b>Group 4</b> <b>1100-1300</b>
<i>Session Chair</i>	<i>Ron J. Thiessen, University of Calgary and Advisian, Canada</i>	
	Mitigating Human Health Risk due to Petroleum Contamination of Groundwater through Advanced Electrochemical Oxidation Methods <i>Indumathi M Nambi</i> (20+5)	
	Heavy Metals in Soils from Landfills - An International Review <i>Ingo Holzle</i> (25+5)	
	Assessment of the Impact at Contaminated Sites <i>Gowri Sankar Kowtha</i> (20+5)	
	Advantages of Environmental Subsurface Profiling over Soil Sampling <i>G. V. Ramana, Manoj Datta, R. Ayothiramn, P. Vangla</i> (20+5)	
	Contamination Caused by Open Dumpsites in Delhi : Results of Sub-Surface Investigations <i>Kamlesh Parikh, Nick Cawthorne, Shashank Prajapati, M. Somani, Manoj Datta</i> (20+5)	
<b>1335-1430</b>	<b>Lunch (Red Square)</b>	
<b>1430-1550</b>	<b>Session C</b>	
<i>Session Chair</i>	<i>Bappaditya Manna, IIT Delhi</i>	
	Case Study of Hazardous Waste Landfill Site <i>Manoj Patel</i> (20+5)	
	Remedial Measures Following Failure of Leachate Collection Layer of Hazardous Waste TSDF <i>Bhanu Prakash V.</i> (15)	
	Heavy Metal Contamination in Soil of Jaipur City <i>Amit Kumar, Aditya Sharma, Sanyam Dangyach</i> (15)	
	Ground and Surface Water Contamination due to Boragaon Dumpsite in Guwahati City <i>Abinash Mahanta, Amarsinh B. Landage</i> (12)	
	Case Study by SPCB <i>Awaited</i> (12)	
<b>1550-1615</b>	<b>Tea (Red Square)</b>	

**Day 3 : 19th February 2020, Wednesday****Venue: Seminar Hall, IIT Delhi****Conference on Geoenvironment and Sustainability**

<b>1615-1700</b>	<b>Session D</b>	<b>Tutorials/ Interactive Sessions</b>  <b>TT 5</b>  <b>1615-1700</b>
	<b>Theme D: Others/Special Topics</b>	
<i>Session Chair</i>	<i>G.V. Ramana, IIT Delhi</i>	
<b>#214</b>	Assessment of the heavy metals contamination in the soil of coalfield by using conventional and probabilistic approach; a case study of Jharia coalfield <i>Azeem Uddin Siddiqui</i>	
<b>#</b>	Awaited Case Studies	
<b>#</b>	Presentations of Awaited Papers	
<b>1700-1800</b>	<b>Closure</b>	
<i>Session Chair</i>	<i>Manoj Datta, IIT Delhi</i>	
	Summarization	
	Feedback	
	Distribution of Participation Certificates	

# GEOENVIRONMENT-2020

## \*\*Workshop (Demonstration Sessions)

**Venue: Site in between roundabout & Kailash hostel**

Demonstrations will be carried out in four groups (each of 25-40 participants) with one 2-hour session per group. Each group will witness all field tests. These sessions will be in parallel with the International Seminar/Conference. The following will be demonstrated in each session:

- Group 1: 14:30-16:30 on 17/02/2020
- Group 2: 11:00-13:00 on 18/02/2020
- Group 3: 14:30-16:30 on 18/02/2020
- Group 4: 11:00-13:00 on 19/02/2020
- Group 5: 10:30-13:30 on 20/02/2020 and 21/02/2020 (on expression of interest)

Field Equipment	Activity	Field Coordinated by
<b>1a.</b> Direct Push Environmental Soil Sampling using 7822 DT Rig by Geoprobe Systems	Operation of Geoprobe Rig 7822DT will be demonstrated to show how an environmental soil sample is recovered using dual tube system	Wesley McCall and Adam McMath
<b>1b.</b> Benchtop demonstration of OIHPT using 7822 DT Rig by Geoprobe Systems	Operation of Geoprobe Rig 7822DT will be demonstrated to show how OIHPT testing is performed	Wesley McCall and Adam McMath
<b>2.</b> Shallow Depth Environmental Soil Sampling with AMS Sampling Kits	The following kits will be displayed: environmental soil sampling kit, petrol powered continuous soil coring kit, augering kit, GVP kit. Operation of some of the kits will be shown.	Neeraj Chadha and Nitish Puri
<b>3.</b> Electrical Resistivity Test using SYSCAL Junior/R1Plus by IRIS Instruments	An electrical resistivity test will be underway at the site and the results obtained will be displayed.	Orlando Leite and L.D. Mohapatra
<b>4.</b> Ground Penetration Radar Survey using GroundVue by Utsi Electronics	GPR will be operated to show how buried utilities at shallow depth are located.	Parampreet Singh
<b>5.</b> Handheld XRF XL3t 98 GOLDD+ by Thermo Fisher Scientific and VOC Monitor Tiger LT	Handheld XRF will be used to distinguish between materials spread on ground surface. VOC monitor will be shown for on-site detection of VOC in soil gas sample.	Padmanabhan Girinathannair and Malathesh MR

Participants can choose a demo group (see table above) as per their convenience on the website or can attend within Group 1 to Group 5 depending on their ID# as indicated below

**Groups Assigned:** As per registration for demo sessions on the website

**For non-registered delegates:**

Group 1: ID# 1-25 and 100-140

Group 2: ID# 26-50 and 141-180

Group 3: ID# 51-75 and 181-220

Group 4: ID# 75-100 and 220-260

Group 5: Overflow and those who choose to attend again

## GEOENVIRONMENT-2020

### \*\*\*Tutorial / Interactive Sessions

**Venue 1:**  
CE Committee (Block IV-221)

**Venue 2:**  
Soil Engineering Laboratory (Block V-223)

**Venue 3:**  
Engineering Geology Lab (Block IV-331)

Tutorials/Interactive sessions will be conducted in parallel to the conference. Duration of each tutorial will be around 40 to 60 minutes. These sessions may run in parallel to each other or in sequence. The following tutorials/interactive sessions are being offered:

- A. Field Equipment related:** All participants will meet the Field Coordinator(s) during demonstration sessions. Detailed discussions can also be done on the field after completion of demonstration. For specific queries requiring classroom setup for tutorial/interaction, participants can register for that specific tutorial/interactive session with the Field Coordinator(s) of the demonstration session.

*Venue 3: Engineering Geology Lab (IV-331)*

*Start time: 1730 on Day 1 and Day 2; 1615 on Day 3*

*To be registered with the Field Coordinator(s) while attending demo sessions; no pre-registration required*

- B. Offered by Invited Speakers:** Participants interested in attending any of the following tutorial/interactive session offered by Invited Speakers have to register in advance or at the registration desk (feasibility will depend on registration by minimum 10-15 participants).

	Title	Offered by	Day	Time	Venue
<b>TT 1</b>	Case studies on remediation	Tapan Chakrabarti, CSIR-NEERI, Nagpur	17th Feb 2020	1730-1830	Venue 1 (Block IV-221)
<b>TT 2</b>	Genomic and metagenomic tools and approaches for designing bioremediation strategies	Pinaki Sar, IIT Kharagpur	17th Feb 2020	1730-1830	Venue 2 (Block V-223)
<b>TT 3</b>	An example of how to conduct risk assessment of contaminated sites	Gopal Achari, University of Calgary, Canada	18th Feb 2020	1730-1830	Venue 1 (Block IV-221)
<b>TT 4</b>	An example of how to prioritise contaminated sites will be developed	Ronald James Thiessen, University of Calgary & Advisian, Canada	18th Feb 2020	1730-1830	Venue 2 (Block V-223)
<b>TT 5</b>	Use of hollow stem auger	Gowri Sankar Kowtha, Stratus Environmental, Inc., USA	19th Feb 2020	1615-1700	Venue 1 (Block IV-221)

Participants can choose a specific tutorial session depending on their interest expressed on the website or at registration desk.  
A tutorial/interactive session will be held if atleast 10-15 participants express interest.