



13th International Biennial Lake Symposium

LAKE 2022 Schedule

28th to 30th December [Hybrid Mode]

<p>Offline – Venue I: Auditorium, Ground Floor, New Biological Sciences Building, IISc</p>		<p>Venue II: School Students Seminar Hall, 3rd Floor, New Biological Sciences Building</p>
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Online - Zoom (only for experts delivering a talk) Live streaming at You Tube

The proceedings of Lake 2022 International Symposium will be streamed live at

<https://www.youtube.com/@EWRGENVIRONMENTALEUCATIONIISC/streams>

You may subscribe to EWRG channel at YOU TUBE (so that you will receive auto-notification as and when new video / lecture is streamed)

Lake 2022 – Auditorium, Presentations (Live streaming)		
https://www.youtube.com/@EWRGENVIRONMENTALEUCATIONIISC/streams		
Parallel sessions		
Programme	Venue	You tube link
School students 29 December 2022	Seminar Hall, 3 rd Floor	https://www.youtube.com/watch?v=yqRnTRRWbRs
UG, PG and Phd Scholars 29 December 2022	MRDG Seminar Hall, 1 st floor	https://www.youtube.com/watch?v=cCzUk58-ERU

In case you need any assistance during the virtual meeting –

Contact numbers - country code 91, **Abhishek B** (8884855739), Dr. Bharath Settur 9483832144 / 9606828799, Dr. **Vinay S** - 9916488990

LAKE 2022 Schedule [Index]

Date	Time	Session	Venue
28-12-2022	8.30 – 9.00	Lake Symposiums: Capacity Building Programmes at IISc – Overview	Venue I: Auditorium, Ground Floor, New Biological Sciences Building [Near D Gate], IISc campus
	9.00 - 10.30	Inaugural Session	
	11.00 - 1 30	Keynote talks	
	2:15 - 4.00	Technical Session 1	
	4 30 – 5.30	Technical Session 2	
	6.00 – 7.35	Technical Session 3	
28-12-2022	2.15 - 4.00	Johny Biosphere Session -I (co-ordinated by Johny Biosphere, M A Khan) – Inter active session with school students	Venue II: Seminar Hall, 3rd Floor, New Biological Sciences Building [School Children]
Parallel Session	4. 30 - 6.00	Johny Biosphere Session -II (co-ordinated by Johny Biosphere) Inter active session by school students	
			Food Court (behind auditorium) Co-ordinators <ul style="list-style-type: none"> • M A Khan • Manoj Kr. Singh • Chaturved Shet • G R Rao • Vrijulal • Ranjit Rao
Live stream at https://www.youtube.com/@EWRGENVIRONMENTALELUCATIONIISC/streams			

29th December 2022

Date	Time	Session	Venue	Co-ordinators
29-12-2022	8.30-12.30	School Students Presentations	Venue II: Seminar Hall, 3rd Floor, New Biological Sciences Building	Nagaratna A V M A Khan Sreevidya Shreya M Singh Tulika
Parallel Session	1.30 – 6.30			
		Live stream at https://www.youtube.com/watch?v=yqRnTRRWbRs		
29-12-2022	8 30 – 10 30	UG	Venue III: MRDG Seminar Hall, 1st Floor, New Biological Sciences Building	Aruna H K Manoj Kumar Netravathy K Vrijulal Vinay S Kaushik P M
Parallel Session				
		Live stream at https://www.youtube.com/watch?v=cCzUk58-ERU		

29-12-2022 Parallel Session	10.30 – 4.00	PG and Research Scholars	Venue III: MRDG Seminar Hall, 1st Floor, New Biological Sciences Building	Durga Madhab Sudarshan Sri Niwas Singh Kaushik P M
		Live stream at https://www.youtube.com/watch?v=cCzUk58-ERU		
29-12-2022 Parallel Session	4.30 – 6.30	Faculty	Venue III: MRDG Seminar Hall, 1st Floor, New Biological Sciences Building	E V Ramasamy M N V Prasad Aruna H K Kaushik P M
		Live stream at https://www.youtube.com/watch?v=cCzUk58-ERU		
Date	Time	Session	Venue	
29-12-2022	8.30 – 10.30	Technical Session 4	Venue I: Auditorium, Ground Floor, New Biological Sciences Building [Near D Gate], IISc campus	
	11.00 – 1.15	Technical Session 5		
	2.00 - 4.00	Technical Session 6		
	4.30 – 8.00	Technical Session 7		
Live stream at https://www.youtube.com/@EWRGENVIRONMENTALEUCATIONIISC/streams				

30th December 2022

Date	Time	Session	Venue
30-12-2022	8.30–11.00	Technical Session 8	Venue I: Auditorium
	11.30–1.15	Technical Session 9	
	2.00 - 5.30	Technical Session 10	Venue II: Seminar Hall, 3rd Floor
	5.30 – 6.30	Cultural Programme	Venue I: Auditorium
	6.30 – 7.30	Valedictory	
Live stream at https://www.youtube.com/@EWRGENVIRONMENTALEUCATIONIISC/streams			

Day 1, WEDNESDAY: 28th December 2022



8:15 am	Registration	
8:30 – 9:00 am	Environment Education: Biennial Lake Symposiums Capacity Building Programmes at IISc: Overview - T V Ramachandra Environment Education and Environment Literacy: Need and Opportunities - Medha	
9:00 to 10.30 am - Inaugural Session		
Timings	Type	Speaker
09:00 - 09:15 am	Welcome Address	Dr. TV Ramachandra Convener, LAKE 2022
09:15 - 09:30 am	Inaugural Address	Dr. Tejaswini Ananth Kumar Founder & Managing Trustee, Adanya Chetana
09:30 - 09:45 am	Guest of Honour	Dr. Vijai Rajagopalan (virtual, online) Independent Education Management Professional, & Director, Vidyaniketan Public School
09:45 - 10:00 am		Dr. Harish Krishnamurthy Chairman - Vagdevi Vilas Institutions, Bengaluru
10:00 - 10:15 am		Dr. Nagalaxmi B.N. , Principal, Maharani Lakshmi Ammanni College for Women (MLAC)
10:15 – 10:25 am	Presidential Address	Dr. Rajasekara Murthy , Emeritus Professor, Environment Canada, Canada
10:25 – 10:30 am		Vote of thanks

Tea – 10:30 to 11:00 am

11:00 -12:00 pm	Keynote Address	Conservation of Wetlands: Ecosystem-based Adaptation of Climate Change – T V Ramachandra
12:00 – 12:45 pm	Keynote talk	Documenting Biodiversity by involving youth at village levels: Opportunities and Challenges - M D Subashchandran

12: 45 – 1:30 pm	Keynote talk	Plants, Ecosystems and Climate Change - K Sankara Rao
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Lunch - 01:30 - 02:15 pm

Technical Session 1 (02:15 pm to 4.00 pm)			
Venue: Auditorium, Ground Floor, New Biological Sciences Building			
Moderators: B M Kumaraswamy, Bharath Setturu			
Timings	Type	Speaker	Title
2.15 – 2.45 pm	Keynote	B M Kumaraswamy	Status of Forest Cover in India and Climate Change threats
2.45 – 3.05 pm	Plenary talk	Bharath Setturu	Insights of land use dynamics for conservation of Sambhar Lake
3.05 – 3.25 pm	Oral (online)	Aishwarya, N Bharath, H.A VIRTUAL- Zoom	Flood Resilient Scenario Modelling (FReSMo): for assessing coastal flood impact of built infrastructure
3.25 – 3.45 pm	Oral	Samar Singh Viridi	Conservation and sustainable management of Sambhar Lake, a Ramsar Site of International importance
3.45 – 4.00 pm	Oral	Manjunath D	Western Ghats biodiversity spatial information system

Tea – 04:00 to 04:30 pm

Technical Session 2 (4.30 pm to 5.30 pm)			
Venue: Auditorium, Ground Floor, New Biological Sciences Building			
Moderators: Upendra Nongthomba, Vinay S			
Timings	Type	Speaker	Title
4.30 – 5.00 pm	Keynote	Upendra Nongthomba	Evaluation of cytogenotoxic potential and embryotoxicity of KRS-Cauvery River water in zebrafish (Danio rerio)
5.00 – 5.30 pm	Plenary	Vinay S	Environmental flow assessment in rivers of Karnataka
5.30- 5.45 pm	Oral	Sincy V	Spatial DSS for managing fish resources in Bangalore
5.45 – 6.00 pm	Oral	Asulabha KS	Microalgal SDSS for sustainable management of lakes

Technical Session 3 (6.00 to 7.30 pm)			
Venue: Auditorium, Ground Floor, New Biological Sciences Building			
Moderators: M D Subash Chandran, Sincy V			
6.00– 6.15 pm	Oral	Abhishek B	Expert system for managing biodiversity
6.15 – 6.30 pm	Oral	Tulika Mondal	Machine Learning based land use classification of heterogenous landscape using Big Data
6.30- 6.45 pm	Oral	Paras Negi	AI based prudent management of natural resources in agrarian landscape
6.45 -7.00 pm	Oral	Prasanna B M	Decentralized Solar power generation: Challenges and opportunities
7.00 – 7.15 pm	Oral	Sara Kunnath	SEEA Protocol for Accounting of Energy Assets
7.15 – 7.30 pm	Oral	Ravishankar Mishra	Plant of Phytogeographic regions of India
7.30 – 7.35 pm	Poster	Kaushik P M	Carbon sequestration potential of wetland
7.35- 7.40 pm	Poster	Vishnu Mukri	Traditional knowledge on medicinal plants in Uttara Kannada district
7.40 – 7.45 pm	Poster	Gayathri Naik	Gonda's of Bhatkal, Uttara Kannada: Socio ecological perspective
7.45 – 7.50 pm	Poster	Srikanth Naik	Ethno ornithological knowledge and uses of birds in the coastal region of Uttara Kannada
7.50 – 8.00 pm		Convenor, Lake 2022	Concluding Remarks of Day 1

Day 2 - 29th December 2022



29th December [8.30 to 10.30 am IST]

Technical Session 4

Moderators: Rajasekara Murthy, Sara Kunnath

Timings	Type	Speaker	Title
8.30 -9.05am	Expert Lecture	Ramachandra Rao (Burlington) Virtual -Zoom	Assessing and addressing the water quality in Lake Erie
9.10- 9.45 am	Expert Lecture	Rajasekhara Murthy	North American Great Lakes Water Quality Management
9.50 to 10.30 am	Expert Lecture	Nikolay Filatov (Petrozavodsk) Virtual -Zoom	The Present state and changes of Large Lakes of Russia under Climate Warming and Anthropogenic Impact

Tea – 10:30 to 11.00 am [29th December]

Technical session: 5

Moderators: Karthick B, Asulabha K S

11.00 – 11.32 am	Expert Lecture	Shigeki Mayama Tokyo Gakugei University, Japan Virtual -Zoom	Taking diatoms to school – a two-decades experience
11.33 – 11.50 am	Invited talk	Mihir Kulkarni CCMB, Hyderabad	Temporary waters: "Hotspecks" of Diversity in the Freshwater Realm
11.51 – 12.08 pm	Invited talk	Vidyadhar Atkore SACON, Coimbatore	Dams and Freshwater fishes

12.09 – 12.26 pm	Invited talk	Biswa Bhusan Mahapatra, NCBS	Invasive freshwater molluscs – Patterns in spreading.
12.27 – 12.44 pm	Invited talk	Girish & Rasika, ATREE and WWF	River Health Assessment - Developing a tool for multi-dimensional hydro-ecological measurements for river systems in India
12.45 – 1.15 pm	Plenary talk	Karthick Balasubramanian, ARI, Pune	Diatoms as an indicator of Myristica swamp conditions in the Western Ghats

Lunch 01:15 - 02:00 pm [29th December]

Technical session: 6			
Moderators: M N V Prasad, Chandan M C			
2.00 to 2.30 pm	Plenary	M C Chandan	A robust spatial decision support system for combating unplanned growth across selected cities of India
2.30- 3.00 pm	Plenary	E V Ramasamy	Microplastics in the Wetlands and Estuaries of Kerala Coast : Risks and Challenges
3.00 to 3.30 pm	Plenary	Deepika Shetty	Developing sustainable goals in architecture design and its contribution towards water management in built environment
3.30 to 4.00 pm	Plenary	M N V Prasad	Conservation of aquatic resources - Ecosystem-based Adaptation (EbA) of Climate Change for Disaster Risk Reduction (EbA-DRR)

Tea– 04:00 to 04:30 pm

Technical session: 7 [4.30 – 8.00 pm]			
Moderators: G R Rao, Prasanna B M			
4.30- 5.00 pm	Plenary	Akshay Chakravarthy	Impact of Climate Change on Aquatic Arthropods
5.00 – 5.30 pm	Plenary	Sri Niwas Singh	A multi criteria selection in wheat breeding.
5 30 – 6.00 pm	Plenary	G. Ramachandra Rao	An Insight into the world of plant endemics of Western Ghats
6.00 – 6 30 pm	Plenary	Sudarshan P. Bhat	Role of Macrophytes in phytoremediation and phytochemistry
6.30- 7 00 pm	Plenary	Durga Madhav Mahapatra	Bioderivatives for a sustainable bioeconomy

7.00 – 7.15 pm	Oral	Narasimhaiah N	Dietary composition and feeding habits of fish, <i>Gerres filamentosus</i> (Cuvier) from Mangalore Coast, Karnataka, India
7.15 – 7.30 pm	Oral	Manoj Kumar Singh	Nakti nala watershed - a product of Narwa 2019-2020 A GIS based approach for the assessment of work done in 2019-2020
7.30 – 7.45 pm	Oral	Sourosree Lahiri	Environmental and health impacts of microplastics
7.45 – 7.50 pm		Convenor, Lake 2022	Concluding Remarks of Day 2

Day 3 - 30th December 2022



30th December [8.30 to 10.30 am IST]

Technical Session 8

Moderators: Rejini Simpson, Samar Virdi

Timings	Type	Speaker	Title
8.30 -9.05 am	Plenary	Krushnamegh Kunte	Butterflies
9.05 – 9.30 am	Plenary	Rejini Simpson	LiFE (Lifestyle for Environment): Low carbon lifestyle
9.30- 10.00 am	Plenary	Surabhi Mehrotra	Climate Resilient Strategies to Manage Socio- Ecological Systems- Wetlands
10.00 – 11.00 am		Teachers from Uttara Kannada, Channagiri	

Tea– 11 am 11 30 am [29th December]

Technical session: 9 [11. 30 – 1.15 pm]

[Big data, AI and ML for Environmental Management)

Moderators: Uttam Kumar, Abhishek B

11.30 – 11.45 am	Oral	Anindita Dasgupta	Assessment of changes in LST during the last two decades: urban transformation
11.45- 12.00 pm	Oral	Madhurima Panja VIRTUAL- Zoom	Epicasting: An Ensemble Wavelet Neural Network for Forecasting Epidemics)
12.00– 12.15 pm	Oral	Rahisha Thottolil	Cloud Computing for Big Geospatial Data Analysis with Google Earth Engine – Urban Research Applications

12.15 - 12 30 pm	Oral	Tanujit Chakraborty VIRTUAL- Zoom	Past, Present and Future of Time Series Forecasting
12.30 -1 15 pm	Plenary	Uttam Kumar	Semi-supervised Tree Canopy Detection and Classification of Plant Disease using Convolutional Neural Network based Transfer Learning Models

Lunch 1: 15 - 02:00 pm [30th December]

Technical session: 10 [2.00 to 3.30 pm]

Panel discussion 1	Media's role in the prudent management of lakes and green cover	Aksheev Thakur Bosky Khanna Deepika Cariappa Kere Manjunath Siraj Rasheed Kappan
Tea 3.30 – 4.00		

Technical session: 10 [4.00 to 5 30 pm]

Panel Discussion 2	Problems and challenges of lake conservation and the strategies to mitigate the problem -	Almitra Patel KS Bhat Elangovan K Prabhu Shankar Rai Sonali Singh Jagadish Reddy Vinod Jacob
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Cultural Programme [5 30 – 6 30 pm]

Valedictory

Lake 2022 – Recommendations		
Lake 2022 – Sahyadri Awards Presentations		
06.30 – 07.30 pm	Chief Guest	Anandi Subramanian
	Guest of Honors	Aruna H K
		M D Subash Chandran
		M A Khan
		Sreevidya
		B M Kumaraswamy
7.30 – 7.45 pm	Convenor, Lake 2022	Concluding Remarks and Way forward

LAKE 2022

Protect Native Forests for Water

Wetlands for People and Nature

XIII BIENNIAL SYMPOSIUM
28th to 30th December 2022

IISc, Bengaluru
Energy and Wetlands Research Group
CES, Indian Institute of Science, India
<http://wgbis.ces.iisc.ernet.in/energy/>