# SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

# SDG 15
# LIFE ON LAND

WWW.SATHYABAMA.AC.IN

# SDG 15 - LIFE ON LAND

## Sathyabama Institute of Science and Technology: Nurture the Earth, Sustain the Future

**Sathyabama Institute of Science and Technology actively contributes to SDG 15 – Life on Land, which focuses on protecting, restoring, and promoting sustainable use of terrestrial ecosystems, halting biodiversity loss, and ensuring sustainable management of forests and natural resources. The university's initiatives address multiple SDG 15 targets through research, capacity building, workshops, and technological innovations.**

**Sathyabama demonstrates strong commitment to SDG 15 through extensive green cover enhancement, biodiversity conservation, and environmental restoration initiatives. The institution has significantly expanded its campus greenery by planting a wide variety of trees, shrubs, herbs, palms, aquatic plants, cacti, and grasses, creating a rich and diverse ecosystem. These efforts support habitat creation, carbon sequestration, and ecological balance.**

**The University promotes sustainable ecosystem management through the establishment of dedicated green zones, botanical collections, and landscaped areas that enhance both environmental quality and biodiversity. Continuous efforts in tree plantation drives, native species promotion, and maintenance of green spaces further strengthen land restoration and conservation practices. Through these initiatives, Sathyabama contributes to reducing land degradation, protecting terrestrial ecosystems, and establishing a climate-resilient and biodiverse campus environment—directly advancing the targets of SDG 15: Life on Land. Sathyabama maintains a strong commitment to preserving and enhancing terrestrial ecosystems through continuous expansion of green cover on campus. The institution nurtures a diverse collection of plant species—trees, shrubs, herbs, palms, aquatic plants, cacti, grasses, and climbers—ensuring rich biodiversity and ecological balance.**

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## Research Centres Contribution towards SDG 15

Sathyabama has a well-established research centre which equipped with advanced laboratory tools for animal research, offering valuable resources to benefit scholars and scientists across various disciplines.

## Centre for Earth and Atmospheric Sciences

Centre comprises of multi-disciplinary team of meteorologists, geologists, hydrogeologists, physicists and geochemists who are actively engaged in basic research on Earth Science, Remote Sensing, GIS, Modeling, Agriculture, Environmental and Air Pollution studies. It is an emerging interdisciplinary centre that aims to tackle climate change and work to preserve the natural resources. Advanced GeoEnvironmental Laboratory stands as a beacon of innovation within the Centre, equipped with cutting-edge instruments and technologies that redefine learning and research.

## Centre for Laboratory Animal Technology and Research

Centre for Laboratory Animal Technology and Research (CLATR) marks a significant milestone for Sathyabama Institute of Science and Technology. This cutting-edge, CCSEA-approved laboratory animal facility adheres to Good Laboratory Practice (GLP) standards and meets international benchmarks. Crafted with global expertise, the centre is positioned to make a major impact on the worldwide research community.

It provides a controlled and sterile environment for housing animals, with specialized equipment to monitor their health and well-being. The facility plays a crucial role in bridging the gap between basic research and clinical trials, ensuring the safety and efficacy of potential treatments before human testing.

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## Tree Plantation Drives - a sustainable approach towards green campus approach

**The NSS unit of Sathyabama Institute of Science and Technology conducted a Tree Plantation Drive on 27.03.2024 to promote the significance of strengthening our ecosystem. This is an attempt to encourage the concept of Natural Regeneration and planted 100 saplings in our campus. Around 80 NSS Volunteers have participated and made the event successful.**


**Foreign delegates who visited our university as a part of the International Conference ICIST 2024, have also taken part in the Tree plantation drive that was organised near Sathyabama on 2nd February 2024.**

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## Sathyabama's policies to ensure sustainability

**Sathyabama supports SDG 15 through biodiversity-rich green campus policies, environment friendly practices, food policy, afforestation drives, sustainable landscaping, soil and water conservation practices, responsible waste management systems, and consistent awareness programmes aimed at protecting and restoring terrestrial ecosystems.**

**Sathyabama has various policies tonsure the Conservation, Restoration and Sustainable use of Terrestrial Ecosystems, Conservation of Endangered Species, Waste Management, Water Quality, food policy to ensure that food on campus is sustainably farmed, Marine pollution policy and policy to reduce the impact of alien species on campus.**

**Sathyabama has a policy to ensure that food on campus is sustainably farmed. Sathyabama's Food Policy Framework is designed to advance the sustainability of both aquatic and agricultural food systems. The framework promotes responsible production, equitable resource use, and ecosystem stewardship, as outlined in Clause 3 of the Food Protocols Followed in Sathyabama Campus (p. 5).**

**https://sist.sathyabama.ac.in/download/FoodPolicy.pdf**

**The Institution has water quality standards and guidelines for water discharges to uphold water quality in order to protect ecosystems, wildlife, and human health and welfare. The institution is actively working toward enhancing water sustainability, as evidenced by the initiatives outlined on page 4 of the Water Quality Standards and Guidelines for Water Discharge. This has been achieved with the use of water efficient fixtures, waste water treatment technologies, rain water harvesting and other initiatives. Reducing water consumption and protecting water quality shall be the key objectives of sustainable policy of our Institute. The Institute views water from the three interrelated dimensions of efficient conservation, responsible consumption and restoring surface and groundwater.**

**https://sist.sathyabama.ac.in/download/Water_Quality.pdf**

**Sathyabama university has a comprehensive waste-management policy that explicitly mandates the avoidance of plastic items on campus. The policy is detailed in Clause 3.2, Plastic Waste Management, on page 7 of Environment Friendly Practices. The Institution does not recommend the use of plastic items like milk packets, plastic covers, PET bottles, plastic bags, food packaging and containers inside the campus. If such materials are used, they shall be segregated from other waste streams and disposed of in designated separate bins.**

**https://sist.sathyabama.ac.in/download/EnvironmentFriendly.pdf**

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**Sathyabama has a policy on waste management that aims to promote responsible waste production and disposal practices on campus. This policy ensures that generation of all types of waste viz., liquid waste, solid waste, plastic waste, e-waste, food waste etc. are minimized and disposed of in a responsible manner without affecting the land and aquatic ecosystem. The policy is outlined in clause 2.5 of waste management policy.**

**https://sist.sathyabama.ac.in/download/WasteManagementPolicy.pdf**

**Sathyabama has a policy to reduce the impact of alien species on campus. It is available in clause 2.2 , Step 2 available on page 14 of Terrestrial Ecosystem Policy.**
**Sathyabama university also has a policy to ensure the conservation, restoration and sustainable use of terrestrial ecosystems associated with the university, in particular forests, mountains and drylands. The strategies are detailed in Terrestrial Ecosystems policy of sathyabama.**

**https://sist.sathyabama.ac.in/download/TerrestrialEcosystemPolicy.pdf**

**Sathyabama has policy to identify, monitor and protect any IUCN Red Listed species and national conservation list species with habitats in areas affected by the operation of our university. Outcomes of the research projects from Centre for Laboratory Animal Technology and Research contributes in framing policies to support government for monitoring and protecting any IUCN Red Listed species.**

**https://research.sathyabama.ac.in/research/CentreforLaboratoryAnimalTechnologyandResearch**

## Institutional Animal Ethics Committee (IAEC)

**Centre for Laboratory Animal Technology and Research, Sathyabama Research Park, Sathyabama Institute of Science and Technology (SIST), Chennai, conducted "21st Institutional Animal Ethics Committee (IAEC) on 22nd July, 2023. A 8 member team appointed by the Committee for Control and Supervision on Experiments in Animals (CCSEA), Ministry of Fisheries, Animal husbandry and Dairy screened the proposals. 14 researchers, 4 from SIST and 10 from various institutes and industry such as Vel's Institute of Science, Technology and Advanced Studies, SDNB Vaishnav College, Tagore Dental College and Hospital, SRM Institute of Science and Technology, Affyclone Laboratories Pvt. Ltd. participated in the IAEC meeting.**

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## Sathyabama's contribution towards events and outreach activities

**Sathyabama supports and organises events aimed to promote conservation and sustainable utilisation of the land, including forests and wild land. Sathyabama's commitment to integrating local biodiversity into planning and development is demonstrated through multiple campus initiatives and documented activities. In commemoration of International Day for Disaster Risk Reduction, Centre for Remote Sensing and Geoinformatics, Sathyabama Institute of Science and technology in association with Department of Geography, Bharathi Women's College and Department of Civil Engineering, SRM Institute of Science and Technology and Indian Society of Remote Sensing (ISRS) organized a workshop on Fighting inequality for a resilient future Water Resources Management in a Changing Environment.**

INTERNATIONAL DAY FOR DISASTER RISK REDUCTION
Two days online workshop on
WATER RESOURCES MANAGEMENT IN A CHANGING ENVIRONMENT

**About Workshop:**
Join us for a transformative experience at the Two-Day Online Workshop on Water Resources Management in a Changing Environment, hosted by the Centre for Remote Sensing and Geoinformatics at Sathyabama Institute of Science and Technology in Chennai and In collaboration with the Department of Geography at Bharathi Women's College (BWC), Chennai, this workshop aims to explore innovative approaches to address the evolving challenges in water resource management. As our World faces increasing environmental changes, understanding and effectively managing water resources are critical. This workshop offers a unique platform to engage with experts, share insights, and gain valuable knowledge in remote sensing, Geoinformatics, and geography. Together, let's harness technology and expertise to safeguard our precious water resources for a sustainable future. Don't miss this opportunity to be part of a collaborative effort that will shape the future of water resource management. Register now and join us on this enlightening journey towards a more resilient and sustainable world.

**Workshop Outcomes:**
- Participants will learn about water resource management in a changing environment. Hands-on practice will help them implement these abilities in real life.
- Participants can network and cooperate with professionals, researchers, and peers at the workshop. Future research collaborations and partnerships may result.
- Participants will receive interdisciplinary water resource management insights. Holistic approaches can yield better results.
- Participants will be better able to promote sustainable water resource management in their communities and organizations.
- The workshop can help to create and implement sustainable water resource management..

**Chief Patron**
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**Organizing Secretary**
Dr. B. Sheela Rani, Director (Research)

**Conveners**
Dr.K.Nagamani
Asst. Professor/Head
Centre for Remote Sensing and Geoinformatics
Sathyabama Institute of Science and Technology

Dr.R. Santhi Devi
Associate Professor
Department of Geography
Bharathi Women's college (BWC), Chennai

Dr.R.Nagalakshmi
Associate Professor
Department of Civil Engineering
SRM Institute of Science and Technology,KTR,Chennai

Registratation Link
https://forms.gle/gCKhRQ3qFUoMKh8j7
**Registration Fees: Rs.100/-**
**(Last date of Registratation : 12th October 2023)**

Payment Account Details
Account No. 6569293542,
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IFSC Code: IDIB000S201,
Account holder: Director Research-
Sathyabama Institute of Science and Technology
Note:It is mandatory to include candidate name, center, and purpose (Name of the Program)
Mode of payment - Google pay, Phone Pay, Online transaction.

**For Further Details Contact : Dr.K.Nagamani**
Email: nagamani@sathyabama.ac.in
Mobile: 8939267132

**Who can Apply:**
**Faculty members, researchers, UG and PG students from academia, and others government departments are eligible to apply.**

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited "A++" Grade by NAAC 12B Status by UGC Approved by AICTE

**International Day for Disaster Risk Reduction**
**Theme: Fighting inequality for a resilient future Water Resources Management in a Changing Environment**

**Date for Programme**
**13th to 14th October 2023**

**Organized by**
**Centre for Remote Sensing and Geoinformatics**
**Sathyabama Institute of Science and Technology Chennai, 600119**

**In association with**
**Department of Geography**
**Bharathi Women's College , Chennai**
**&**
**Department of Civil Engineering**
**SRM Institute of Science and Technology,KTR, Chennai &**
**Indian Society of Remote Sensing (ISRS-Chennai Chapter)**

## Sathyabama's collaboration with International Institute for Agriculture Research

**Sathyabama offers educational programme and outreach for local and national communities on sustainable management of land for agriculture. Scientists from Centre for Drug Discovery and Development and Centre of Modern Organic Agriculture (C-MOAR), Sathyabama Institute of Science and Technology, Chennai, India has visited Research Institute of Modern Organic Agriculture - King Mongkut's Institute of Technology Ladkrabang ((RIMOA-KMITL), Association of Agricultural Technology in Southeast Asia (AATSEA), NC Organic Coconut Farm, Kings Former Fertilizer Company, Institute of Molecular Bioscience, Mahidol University, Mahidol Hospital; Research Centre, Superior ART Bangkok, Thailand during 3 – 6, April 2024. This visit significantly expanded the research in terms of joint projects for collaborative research work on sustainable management of land for agriculture.**

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## Hands on Training on Preclinical animals and its Research”

**Centre for Laboratory Animal Technology and Research, Sathyabama Research Park, Sathyabama Institute of Science and Technology, Chennai conducted “Hands on Training on Preclinical animals and its Research” from 30th January to 1st February 2024. Participants were from Tamil Nadu Government Siddha Medical College, Chennai and Anna University, Chennai and acquired knowledge on lab animal handling and research from basics. The three days’ program was organized with the objective of, Hands on experience in handling of various lab animals with the basics of laboratory animal maintenance, and ethics in order to carry out the most basic experiments on lab animals. The participants were educated on CCSEA guidelines and the Institutional Animal Ethics Committee constitution. The participants visited the lab animal facility, where the structure and function of the facility were explained to them.**

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## Workshop on " Basic Techniques in Small Animal Research"

**Sathyabama works directly to maintain and extend existing ecosystems and their biodiversity, of both plants and animals, especially ecosystems under threat. Sathyabama Research Park - Centre for Laboratory Animal Technology and Research, Sathyabama Institute of Science and Technology, conducted a Workshop on " Basic Techniques in Small Animal Research" during 16-18th October, 2023. Participants were from Tamil Nadu Government Siddha Medical College, Schieffelin Institute of Health – Research & Leprosy Centre of Leprosy, AVVM Islamiah College (Autonomous) Vaniyambadi and Sathyabama Institute of Science and Technology. The three days program was organized with the objective of, Hands on experience in handling various lab animals with the basics of laboratory animal maintenance, and ethics in order to carry out the most basic experiments on lab animals. The participants were educated on CCSEA guidelines and the Institutional Animal Ethics Committee constitution.**

## Hands on training in Biomedical research in Small animals

**The Centre for Laboratory Animal Technology and Research, Sathyabama Institute of Science and Technology, Chennai conducted Summer Internship Program on "Hands on training in Biomedical research in Small animals from 13th to 15th May 2024. A total of 10 participants, from Government Siddha Medical College, Vellore Institute of Technology participated in the program and gained knowledge with the basics of animal research.**

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**The three days' program was organized with the objectives of basic research in small animals, the basics of laboratory animal maintenance, and ethics in order to carry out the most basic experiments on lab animals, maintenance, and toxicity analysis. They were taught with brief lectures. The participants were sensitised about the proper use of animals, laboratory maintenance, adherence to CCSEA guidelines and Institutional Animal Ethics Committee regulations, drug administration techniques, necropsy procedures, blood collection methods, behavioural studies. The program emphasized the humane treatment of animals throughout the research process.**

## Institutional Animal Ethics Committee (IAEC)

**Centre for Laboratory Animal Technology and Research, Sathyabama Research Park, Sathyabama Institute of Science and Technology (SIST), Chennai, conducted "21st Institutional Animal Ethics Committee (IAEC) on 22nd July, 2023. Dr.D.Saravanan Convened the Program. A 8 member team appointed by the Committee for Control and Supervision on Experiments in Animals (CCSEA), Ministry of Fisheries, Animal husbandry and Dairy screened the proposals. 14 researchers, 4 from SIST and 10 from various institutes and industry such as Vel's Institute of Science, Technology and Advanced Studies, SDNB Vaishnav College, Tagore Dental College and Hospital, SRM Institute of Science and Technology, Affyclone Laboratories Pvt. Ltd. participated in the IAEC meeting.**

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## Pre-Clinical Animal Models and its Research

**Centre for Laboratory Animal Technology and Research, Sathyabama Institute of Science and Technology, Chennai conducted Hands on Training on " Pre-Clinical Animal Models and its Research " during 13-15th September, 2023. A total of twelve participants, from Tamil Nadu Government Siddha Medical College, AVVM Sri Pushpam Womens College and Justice Basheer Ahmed Sayeed College for Women, participated in the program and gained knowledge with the basics of lab animal handling and research.**

**The participants were educated on CCSEA guidelines and the Institutional Animal Ethics Committee constitution. They were taught with brief lectures and hands on training on the routes of administration of drugs, necropsy, and collection of blood, behavioural study of lab animals, sampling, biochemical analysis, and microscopy techniques. The participants were sensitised about the proper use of animals for research and the humane use of animals before, during, and after animal experiments. The participants visited the lab animal facility, where the structure and function of the facility were explained to them.**

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## One-day hands-on training with Next-Generation Surveying Tools like DGPS, DRONE and LIDAR

**The Centre for Earth and Atmospheric Sciences, Sathyabama Research Park, SIST and Land Coordinates Technology, Chennai organized One-day hands-on training with Next-Generation Surveying Tools like DGPS, DRONE and LIDAR on 25th September, 2023. Mr. Selvam Arul, Managing Director, Land Coordinates Technology, was the Chief Guest of the program and delivered the Special Address. During his speech, he emphasized the significance of Next-Generation Geo-Spatial Surveying Tools like DGPS, DRONE & LIDAR. Mr. Selvam Arul and his team presented theoretical aspects followed by hands-on training.**

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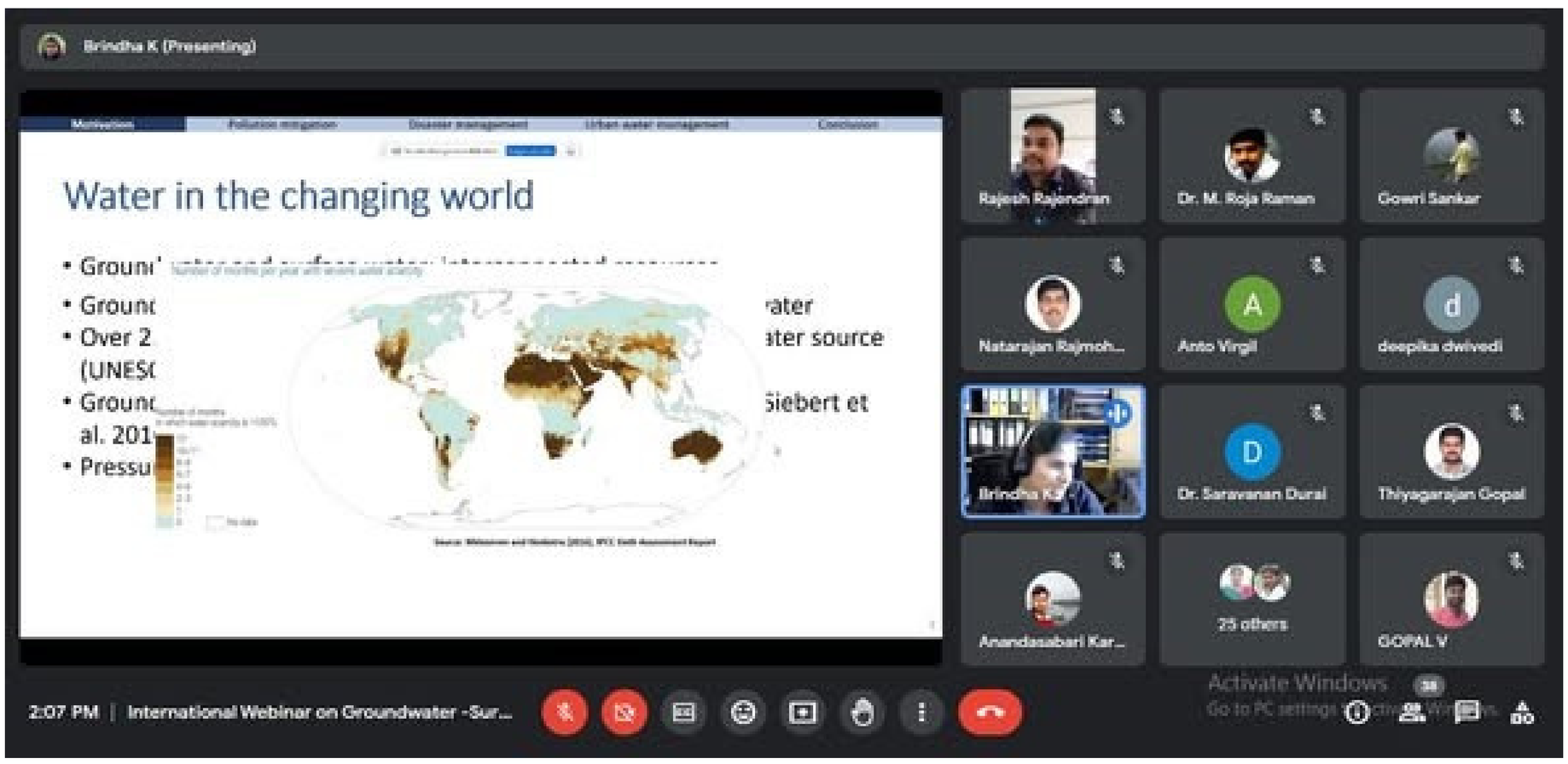
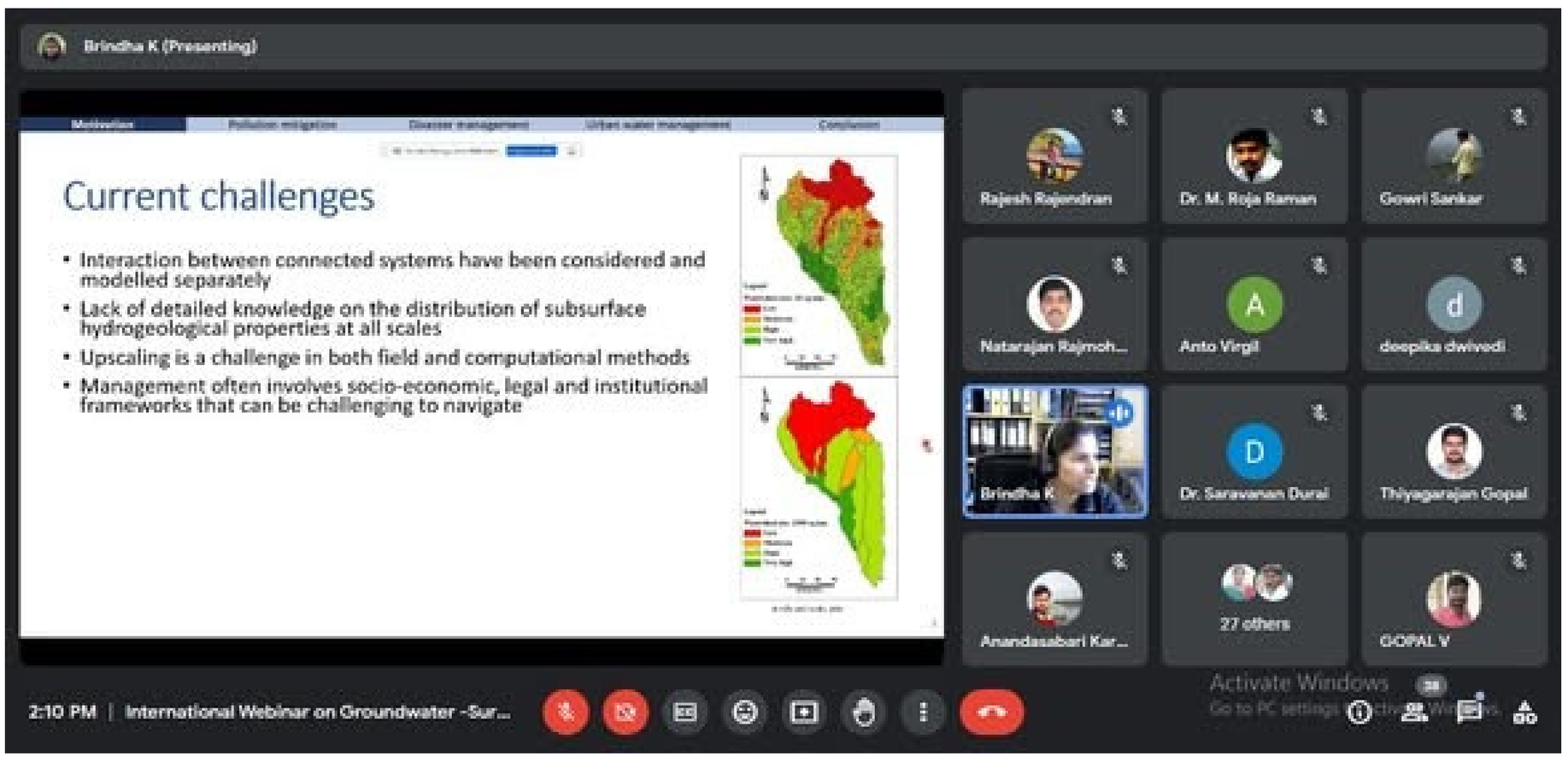
## Groundwater-Surface water Interaction

**Sathyabama Research Park - Centre for Earth and Atmospheric Sciences, Sathyabama Institute of Science and Technology and Freie University, Berlin, Germany jointly organized International Webinar on "Groundwater-Surface water Interaction: Insights from Modelling and Field Applications. The Special guest speaker Dr Brindha Karthikeyan presented the groundwater- surface interaction significance and detailed about aquifer recharge techniques and how to reduce the pollution from groundwater- surface water and also to find out the impact of MAR structures on the local community and agricultural activities. Participants from various universities, colleges and government organizations (Indian Institute of Science, NIT Calicut, NIOT, Anna University, University of Madras, VOC College, AMET University, Tamil Nadu Water Resources Department, King Abdulaziz University, Geological Survey of India) participated.**



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## INDO-UK expert lecture series-1 "Exploring Human Tissue Culture”

**Centre for Drug Discovery and Development, Department of Biotechnology and Department of Biomedical Engineering in association with international relations organized INDO-UK expert lecture series- "Exploring Human Tissue Culture” on 25th August 2023Dr. Kalpana Delivered an eminent lecture on Cell culture- Basics to Frontiers and Dr. Kanagaraj delivered an eminent lecture on Genome Instability. In addition to this Dr. Soytong Kasem, President, Association of Agricultural Technology in Southeast Asia (AATSEA) from, Thailand delivered a special lecture on Sustainable Agriculture and Organic Farming. The joint initiatives of SIST and University of Westminster was explained by Dr. Ramesh, Associate Professor & Head, Department of Biotechnology, Felicitation address was given by Eminent speakers Dr. Kanagaraj Radhakrishnan and Dr. Kalpana Surendranath, from University of Westminster, London, UK and vote of thanks was given by Dr. Radhakrishnan, Professor, CDDD.**


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## Village Outreach on Community Development

**The NSS unit of Sathyabama Institute of Science and Technology orchestrated a Village Outreach on Community Development on 28.07.2023, involving 100 enthusiastic volunteers. Through various initiatives like awareness campaigns, skill training, and infrastructure development, the program aimed to uplift rural communities in agriculture, fostering sustainable growth and empowerment.**

## World Tourism Day 2023 on the theme: Tourism and Green Investments

**Sathyabama university offers educational programme and outreach for local or national communities on sustainable management of land for tourism. Centre for remote sensing and Geoinformatics organized "World Tourism Day 2023 on the theme: Tourism and Green Investments" on 27th September 2023 to create awareness on the sustainable management of land for tourism.**

Centre for Remote Sensing and Geoinformatics organized

" World Tourism Day 2023 – Theme: Tourism and Green Investments "

on 27th September , 2023


## Outreach on Go Green in Rural Area

**The NSS unit of Sathyabama Institute of Science and Technology organized an Outreach Program on Go Green in Rural Areas on 18.08.2023 at Kumizhi Panchayat, Near Guduvanchery, Chennai, with the participation of approximately 100 volunteers. The event aimed to foster community development through various initiatives, including health camps, educational workshops, environmental awareness campaigns, and infrastructure improvement projects. Volunteers engaged with residents, offering support and resources to address their needs. The program exemplified the institute's commitment to social responsibility and fostering positive change in surrounding communities. The event catalysed fostering a culture of environmental stewardship among the youth, aligning with the broader sustainable development goal on life on land.**

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## Sea Shore- Mangrove Associated Fauna along Chennai Coast: From Basic Taxonomy to Recent Trends

**Sathyabama offers educational programmes on ecosystems looking at wild flora and fauna for local or national communities. Centre for Ocean Research, Col. Dr. Jeppiaar Research Park in association with "Earth Science and Technology Cell, Ministry of Earth Sciences" organized Three Days Training programme on "Sea Shore- Mangrove Associated Fauna along Chennai Coast: From Basic Taxonomy to Recent Trends" from 1st March – 3rd March 2023. In this training programme practical knowledge in collecting, processing and identifying the marine samples specific to Corals and Brachyuran crabs was delivered to the participants. The participants of the training programme include Faculty, Research scholars and Students from various universities and colleges across India.**