Themes

9th India Biodiversity Meet 2026

International Conference

2-4 February, 2026

Indian Statistical Institute, Kolkata

In collaboration with

Ratanlal Brahmachary Memorial Foundation

Hello all,

Greetings from the Indian Statistical Institute, Kolkata.

It is our immense pleasure to inform you that the Agricultural and Ecological Research Unit of the Indian Statistical Institute, Kolkata will be organizing the **9th India Biodiversity Meet 2026** (IBM 2026) from **February 2 to 4, 2026** in collaboration with the Ratanlal Brahmachary Memorial Foundation.

IBM 2026 aims to provide an excellent platform for researchers in the fields of biology, mathematical and statistical ecology to come together and share their research findings, fostering constructive ideas for research and conservation strategies applicable to both the Indian and global contexts.

- **Dates:** February 2 to 4, 2026
- **Major Themes:**
    - Biodiversity and Ecosystems
    - Mathematical Ecology & Epidemiology
    - Sustainable Agriculture
    - Climate Impact Assessment
    - Business-Biodiversity Links
    - Nanotechnology and Its Application in Biological Sciences
    - Applied Microbiology and Biotechnology
    - Natural Product Chemistry
    - Diversity in Biomedical Genomics: Uncovering Variation that Shapes Health
- **Registration opens: December 01, 2025**; **Registration closes: December 31, 2025**
- **Students' Paper Contest:** IBM 2026 will organize the students' paper contest (SPC) as a separate session in the conference. Each student paper competition winner will receive a monetary award and a certificate/plaque. An SPC participant has to submit an **extended abstract** during registration.
    - Best paper will receive the **Ratanlal Brahmachary Memorial Young Scientist Award**
    - **Submission requirement:** Extended abstract (template available on the webpage) & valid student ID card

Please see the webpage for detailed instructions**:** https://ibm2026.wixsite.com/ibm2026
Email for communication: ibm2026.isi@gmail.com
Register here: Registration | IBM2026
We sincerely hope that you would be interested in participating in this event.

Themes of the conference

Biodiversity—the fundamental basis of ecosystem structure and function—holds immense value for the life-supporting services it provides. In India, it sustains the livelihoods, cultures, and well-being of millions. Although the country occupies just 2.4% of the world's land area, it harbors nearly 7–8% of all recorded species, owing to its unique position at the tri-junction of the Afrotropical, Indo-Malayan, and Palearctic biogeographic realms.

However, this rich natural heritage is increasingly under threat from climate change, deforestation and habitat fragmentation, over-exploitation of resources, invasive species, and escalating pollution. These pressures have eroded ecosystem resilience and compromised the capacity of natural systems to recover from disturbances—posing serious implications for environmental stability and human survival.

With these warning signals growing ever more urgent, the 9th India Biodiversity Meet (IBM) aims to bring these critical challenges—biodiversity loss, food security, and climate change—to the forefront of discussion. IBM-2026 will offer a vital platform for scientists, conservationists, and practitioners to share research insights, exchange innovative ideas, and collaboratively explore pathways toward safeguarding biodiversity and strengthening ecosystem sustainability for the future.

Here are the major themes and the subthemes with detailed descriptions.

1. Biodiversity and Ecosystems

The relationship between biodiversity and ecosystem functioning has emerged as one of the central issues in environmental research during the last decade. Because ecosystems collectively regulate the Earth system, the potential ecological consequences of biodiversity loss have aroused considerable interest. Loss and fragmentation of natural habitats, overexploitation of plant and animal species, the impact of invasive alien species, and climate change create havoc on global biodiversity. IBM-2026 will attempt to understand patterns of biodiversity change in the light of the following:

- Causes and consequences of biodiversity loss (observational, experimental, and theoretical studies)
- Biodiversity conservation
- Community ecology
- Chemical ecology
- Spatiotemporal aspects of biodiversity patterns
- Citizen science

2. Mathematical Ecology & Epidemiology

Ecology has entered a phase of development where the subject is approached by quantitative reasoning. This may occur through the application of statistical models to theoretical questions in ecology, or it may be achieved through sophisticated use of statistical techniques for experimental design and hypothesis testing. At the end of the day, a fusion of these approaches is expected to comprehend the ecological theories and answer this domain's fundamental questions. The 9th IBM-2026 will strive to showcase the state of the art of these quantitative methods in the following areas:

- Mathematical/Statistical modelling on species sustainability
- Epidemiological modelling of communicable disease
- Statistical Methods in Evolutionary Genetics
- Population demography and statistics
- Spatial Data Handling (Remote sensing and GIS)
- Species Distribution Modelling (SDM)
- Survival analysis
- Resource System Analysis
- Wildlife Biometrics and Population Analysis
- Mathematical modelling of biological system
- Population Genetics
- Bioinformatics

3. Sustainable Agriculture

Sustainable food production has never been more important - with the world population ever increasing, the environmental pressures on our planet have never been greater. The concept of sustainable agriculture embraces a wide range of techniques, including organic, free-range, low-input, holistic, and biodynamic crop production. Like previous years, IBM-2026 is focusing on recent developments towards sustainable agriculture practices in these sectors:

- Agronomy and plant breeding
- Biotechnology
- Soil plant relationships
- Plant and Environmental Health
- Horticultural science
- Livestock and Poultry Science
- Land Use & Management
- Agricultural Microbiology & Gene Technology

- Agribusiness Sales and Applied Market Research
- Environmental Monitoring and Assessment
- Natural resource management

4. Climate Impact Assessment

Research on climate impacts has grown considerably in the past 5 years regarding the potential risk of damage associated with projected climate change and the vulnerabilities to climate change of a wide range of ecological systems. One of the major themes of IBM-2026 is to assess the sensitivity, adaptive capacity, and vulnerability of natural and human systems to climate change and the potential consequences of climate change on:

- Changes in land use and land cover
- Terrestrial and freshwater ecosystems
- Coastal Zones, groundwater, and marine Ecosystems
- Human health

5. Business - Biodiversity links

We live in an age where the importance of environmental and sustainability issues is more realised than ever before, but we are also faced with financial crisis and economic uncertainty. Though environmental and economic issues may appear to be very different and at odds with each other, they are actually deeply intertwined. In a logistic framework, a considerable business opportunity lies in the collaboration of sustainability and biodiversity protection. There are many things that companies can do and are doing to create a beneficial impact on the environment and to their bottom. This year, IBM is providing a platform to discuss the ideas and the following:

- Biodiversity policy and law
- Developing incentives, regulations and guidelines to encourage business development in sustainable production and consumption
- Case studies of businesses taking actions

6. Nanotechnology and Its Application in Biological Sciences

Nanotechnology has a transformative role in different aspects of life sciences, enabling precise manipulation at the nanoscale for improved agricultural and environmental applications, diagnostics, targeted drug delivery, tissue engineering, etc. It enhances disease detection, treatment efficiency, agricultural productivity, and sustainability, making it a key technology for advancing healthcare, biotechnology, and environmental management. IBM 2026 will place a special emphasis on emerging frontiers in nanotechnology with broad implications for the

biological sciences. The conference will highlight advances and applications in the following key areas:

- Green synthesis and its applications
- Role of nanotechnology in agriculture and environment
- Nanomedicine and drug delivery
- Nanotechnology in molecular biology

7. Applied Microbiology and Biotechnology

Applied microbiology and biotechnology is a multidisciplinary field that harnesses microorganisms and their biological activities for practical use across industry, agriculture, healthcare, and environmental management. It focuses on investigating, engineering, and optimizing bacteria, fungi, viruses, and algae to generate valuable products or carry out beneficial processes.

Microbial biotechnology supports the production of antibiotics, vaccines, enzymes, biofuels, fermented foods, probiotics, and various industrial compounds. In agriculture, biofertilizers, microbial inoculants, and biopesticides improve soil health, boost crop productivity, and promote sustainable farming. Environmental uses include wastewater treatment, pollutant degradation, and conversion of waste into energy. In medicine, microbes play key roles in diagnostics, therapeutic production, and recombinant DNA technologies. IBM 2026 provides a dedicated platform to discuss these advances and their growing relevance for a sustainable future.

8. Natural Product Chemistry

Natural product chemistry focuses on chemical compounds derived from living organisms, including plants, animals, and microorganisms. It encompasses the isolation, purification, structural characterization, and synthesis of these substances to better understand their biological roles and explore potential applications. These natural products often possess diverse and complex molecular structures shaped by evolutionary processes. They play essential ecological roles, including defense, signaling, and competition.

Natural products remain a vital source of pharmaceuticals, agrochemicals, nutraceuticals, fragrances, and biomaterials. Many notable therapeutic agents, such as penicillin, paclitaxel, artemisinin, and aspirin, originated from natural sources. Owing to their biological significance and structural uniqueness, natural products remain a powerful driving force in drug discovery and chemical research. IBM 2026 provides an essential forum for discussing these emerging developments and their implications for long-term sustainability.

9. Diversity in Biomedical Genomics: Uncovering Variation that Shapes Health

This session will highlight the crucial role of genetic, molecular, and population-level diversity in shaping human health and disease. It brings together insights from genomic variation, multi-omics research and population genetics to better understand the complexity of biomedical traits and to advance precision medicine.