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Office of the Chief Public Relations Officer
Jamia Millia Islamia

Press Release

MMTTC, Jamia Millia Islamia, concludes a Two-Week Multidisciplinary Refresher Course on “Environmental Sustainability through Indian Knowledge System and Innovation” in online mode

New Delhi, September 18, 2026

The Malaviya Mission Teacher Training Centre (MMTTC), Jamia Millia Islamia (JMI), successfully concluded a Two-Week Online Multidisciplinary Refresher Course on “*Environmental Sustainability through Indian Knowledge System and Innovation*” on 16 September, 2026. The programme was conducted in collaboration with the Department of Environmental Science, JMI from 2nd to 16th September, 2026 and brought together 81 participants from various disciplines such as Environmental Sciences, Life Sciences, Social Sciences, Humanities and Languages.

The course was the brain-child of Prof. Mazhar Asif, Hon’ble Vice Chancellor of JMI and the Patron for this course. It was Prof. Asif, who envisioned the sub-theme and designed this innovative course. The course was a success, thanks to the support of Co-Patron, Prof. Md. Mahtab Alam Rizvi, Registrar, JMI.

The Refresher Course was organized under the dynamic leadership of the Director, MMTTC, Prof. Kulwinder Kaur, who was the driving force in communication and co-ordination for the course, right from its inception to its end. The Head, Department of Environmental Science, Prof. Rajeev Singh, was instrumental in the overall scheduling of sessions and bringing eminent resource persons to deliver lectures to the participants. Dr. Sajid Ali and Dr. Arif Ahamad, from the Department of Environmental Science, served as Course Coordinator and Co-Coordinator respectively.

The Refresher Course was designed in response to the urgent environmental challenges of climate change and loss of biodiversity. It was specifically aimed at examining how India’s knowledge traditions relating to water conservation, agriculture, health, biodiversity, architecture and responsible resource use could be studied scientifically and brought into meaningful dialogue with contemporary innovations.

Four academic sessions were organised each day from 10:00 a.m. to 5:00 p.m., providing participants with approximately 45 expert lectures, discussions and academic interactions. The programme was inaugurated by Prof. Madhoolika Agarwal, an eminent scientist from Department of Botany, Banaras Hindu University who gave an overview of the theme of the course which covered various themes spanning traditional ecological knowledge; indigenous practices of water conservation rainwater harvesting, sustainable agriculture; biodiversity and ecosystem services; waste management; climate-responsive design and smart mobility. It also discussed the contribution of classic Indian texts, languages, cultural traditions and social knowledge to ecological awareness.

The programme featured distinguished resource persons from leading universities, research institutions and government organisations across India. Sessions on water, climate and disaster resilience included contributions from Prof. Shakeel Ahmed, Retd. Prof., Department of Geography, JMI, Prof. Haroon Sajjad, Department of Geography, JMI, Prof. Vishwraj Sharma, DU, Prof. P. K. Joshi, JNU, Prof. N. Janardhana Raju, JNU, Prof. R. Bhaskaran, School of Sciences, IGNOU, Prof. Atiqur Rahman, Department of Geography, JMI, Prof. Rashid Umar, Department of Geology, AMU, Dr. Anand Sharma, Scientist G, IMD, Dr. Gopal Krishna, Scientist E, NIH, ROORKEE and Mr. Kunal Satyarthi, Joint Secretary, Land Resources Ministry of Rural Development, GOI. They addressed groundwater, climate-induced hazards, early-warning systems, geospatial technology, rainwater harvesting, disaster management and sustainable geohydrology.

The sessions on Climate processes, atmospheric change and carbon management were taken by Dr. Waliur Rahaman, Scientist F, Bhatnagar Awardee, NCPOR, Goa, Dr. Ashvini Kumar, Principal Scientist, National Institute of Oceanography, Dr. Santhosh Kumar Rai, Scientist F, WIGH, Dehradun, Prof. Sudesh Yadav, JNU and Prof. J. K. Tripathi, JNU. They spoke on the monsoon variability, atmospheric aerosols, ozone dynamics, natural pathways of carbon-dioxide sequestration and rock weathering as a climate solution. Prof. S. C. Garkoti, SES, JNU and Prof. J. Pandey, Department of Botany, JNU discussed ecosystem services and the functioning of large river systems, while Dr. Nitesh K. Khonde, Scientist D, BSIP, Lucknow considered the links between ancient civilisations and climatic change.

The course also highlighted practical pathways for pollution control, sustainable materials, health and technological innovation. Prof. Arun Srivastava, JNU highlighted indoor air pollution and indigenous solutions, while, Prof. Mallika Pathak, DU addressed waste-derived functional materials for water remediation; Dr. Manoj Kumar, Scientist D, NPL explained the microplastics and air pollution; and Dr. Rajeev Pratap Singh, IESD, BHU presented the integration of Indian Knowledge Systems with modern technology for sustainable waste management. However, Prof. Athar Adil Hashmi, Department of Chemistry, JMI; Prof. Sirajuddin Ahmed, Department of Environmental Science, JMI; Prof. Ahteshamul Haque, COE & Prof., Department of Electrical Engg. JMI, Dr. Pankaj Kumar, Scientist-F, National Geochronology Facility, IUAC, Delhi and Dr. Arti Kumari, SOS, IGNOU, contributed sessions on sustainable materials, environment and development, smart mobility, environmental instrumentation and the responsible use of artificial intelligence in teaching and research.

The relationship between cultural knowledge and contemporary sustainability were discussed through sessions by Dr. Ritu Mishra, Allahabad University; Prof. Dayashankar Tiwari, DU and Prof. Pramod Kumar, DU. These deliberations considered practices based on Indian Knowledge System and ancient texts and traditional approaches to achieve environmental sustainability. Together, the sessions demonstrated that traditional knowledge should not be treated only as heritage, but critically studied, scientifically validated and adapted to present environmental conditions.

As part of the academic assessment, participants completed assignments like MCQ test and group presentations on major themes of the course and encouraged collaborative learning and interdisciplinary exchange.

The valedictory address was delivered by Prof. Pradeep Kumar Mishra, Professor of Chemical Engineering, Former Vice Chancellor of AKTU, Lucknow and Jharkhand University of Technology. He emphasized the importance of two deeply important environmental concepts from Indian philosophy and modern climate policy i.e. *Panchamrit* (India's modern 5-point climate target) and *Panchamahabhuta* (the 5 great elements of nature: Air, Water, Earth, Fire, and Space). He reiterated, the need for integrating the classical elements Air, Water, Soil (Earth), and Fire to modern environmental principles and sustainability practices, as they serve as a blueprint for ecological balance. Prof. Kulwinder Kaur, thanked Prof. Mishra for his insightful address and critiqued the ambivalence and dilemma of modern societies that validated consumeristic life styles which led to ecological and social degradation. She invited feedback about the course from the participants. Many of them expressed that the programme was not just academically enriching but also entrusted them with a sense of responsibility to adopt sustainable practices. They expressed an urgency to re-connect with Indian roots and return to traditional practices of sustainability. Dr. Arif Ahamad, also emphasised that effective environmental solutions must be scientifically sound, socially inclusive, locally relevant and culturally informed. He thanked the Vice Chancellor, the Registrar, the director and her team, participants, resource persons, the coordinator, Dr. Sajid Ali, and the department of Environmental Science, for making this programme a huge success.

Prof. Saima Saeed
Chief Public Relations Officer

10:02 AM | 2-Week Online RC on Enviromental Sustainability th... | Prof. Athar Adil Hashmi (D/o Chemistry) (Presenting, annotating) 35

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Futuristic Materials from Sustainable Resources
(Through Indian Knowledge System and Innovation)

By
Prof. Athar Adil Hashmi
Department of Chemistry
Jamia Millia Islamia
New Delhi

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Prof. Athar Adil Hashmi (D/o Chemistry)

Dr. Javid Ali (Assi...)

Deveena Mani Ti...

30 others

MMTTC (FIP/NE...

People

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- Assistant Professor Roh...
- Badikar A. Ganapati
- Deveena Mani Tiwari
- Dr. A. SAMSATH BEGUM
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- Dr. Javid Ali (Assistant P...
- Dr. Pankaj Kumar

10:02 08/09/2026

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2:07 PM | 2-Week Online RC on Enviromental Sustainability th...

Ashwini Kumar (Presenting, annotating)

Refresher Course on Environmental Sustainability through Indian Knowledge System and Innovation, Jamia Millia Islamia University: 09 September, 2026

Atmospheric Aerosol, Air Quality and Biogeochemistry

Ashwini Kumar
Principal Scientist

ashwinik@nio.res.in

CSIR-National Institute of Oceanography, Goa

सीएसआईआर - राष्ट्रीय समुद्र विज्ञान संस्थान

CSIR - National Institute of Oceanography

सागर की खोज

understanding the seas

Ashwini Kumar

MMTTC RC/STP P...

50 others

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Renu Choudhary

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Contributors 55

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Ajay Kumar Singh

Ajay Potbhare, PhD

Amna Khatun / Acet P

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14:07 09/09/2026

Technological Advancements in Smart Mobility to Meet Sustainable Development Goals

By
Prof. Ahteshamul Haque
CoE
08 Sep 2026

Grid of participant tiles:

- Prof. Ahteshamul...
- MMTTC RC/STP ...
- UGC HRDC
- IQAC NC
- Vijayta Sharma
- Banu Karthi
- 33 others
- MMTTC (FIP/NE...

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- Ajay kumar Mishra
- Ajay Potbhare, PhD
- Amna Khatoon (Asstt. P...
- ANKITA SOOD

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Chat, Grid view, Lock icon.

Human Microbiome and Gut Brain – Nexus

Exploring the Invisible Connections Between Microbes, Health and the Mind

HUMAN MICROBIOME

There are now reports that babies acquire microbiome from their mother while in the womb.

- When you are born, your genome is ~100% (20,000 genes).
- Your own genome at the end you have 90% of the genome from microbes (nearly 300,000 genes).

Where do our microbes live?

Site	Percentage
Urogenital	9%
Always	14%
Skin	2%
Oral	26%

Microbial diversity by body site

Site	Microbial diversity
Nasal	Always >200 species
Oral	Always >1,000 species
Skin	Always >1,000 species
Gastro-intestinal	Always >1,000 species
Urogenital	Always >1,000 species

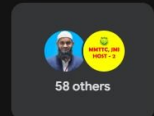
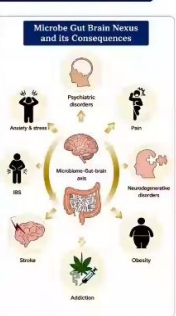
What Do they Do in Human Body

- Help digest food and extract nutrients
- Synthesize vitamins (e.g. B12, D)
- Train and support the immune system
- Protect against harmful pathogens
- Influence mood, metabolism and health

CAN BACTERIA TALK TO YOUR BRAIN?

Microbe Gut Brain Nexus and its Consequences

- Human Brain and Gut Microbiome are interlinked
- Human Gut Microbiome: "Second Brain" and "Virtual Endocrine Organ"
- The composition of second brain affects our first brain via gut-brain axis.



People

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- Amna Khatoon (Asstt. P...
- ANKITA SOOD
- Arifa Farzana
- ASHISH THOMAS
- Assistant Professor Roh...
- Badikar A. Ganapati
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10:25 AM | 2-Week Online RC on Environmental Sustainability th...

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10:25 02/09/2026

