

**MEMORANDUM OF UNDERSTANDING
BETWEEN
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
AND
MAHARASHTRA ENVIRONMENTAL ENGINEERING TRAINING AND RESEARCH ACADEMY
(MEETRA), NASHIK**

This Agreement made and entered into on this day of October 2018 between Indian Institute of Technology Bombay (hereinafter called IITB) situated at Powai, Mumbai 400 076, an Institute of national importance established by a special act of Parliament of Republic of India through its Centre for Urban Science and Engineering (CUSE) and MAHARASHTRA ENVIRONMENTAL ENGINEERING TRAINING AND RESEARCH ACADEMY (MEETRA) and "MEETRA" which expression shall include its successors and permitted assignees) with its registered office Near Divisional Commissioner Office, Nashik Road, Nashik – 422101.

1. OBJECTIVES OF THE MOU

The objective of this Memorandum of Understanding is:

- a. to exchange of data and ideas and solve the real life problems in Water and Sanitation (WASH) sector
- b. To start cooperation and promote interaction between CUSE and MEETRA
- c. To provide formal basis for future specific collaborative engagements

2. PROPOSED MODES OF COLLABORATION

IITB and MEETRA propose to collaborate as given:

- a. CUSE will collaborate with MEETRA for process and template driven, and topical research themes in WASH sector. The process driven research will investigate / assess existing processes and improve their outcomes. It will also recommend new procedures for design, implementation, evaluation and assessment of infrastructure. This research will focus on repeatability and applicability and the outcomes will be a policy / technology paper and guidance to the training side. The topical research will study specific issues such as reducing losses in the transmission and distribution of water, GIS based hydraulic modelling, developing low-cost decentralized systems / solutions, wastewater reclamation, energy / nutrient recovery, improvement in water quality, climate change resilience in water systems. The output here is expected to be a white-paper with possible publication in refereed journals to serve as resources for academics and practitioners in the water and sanitation sector.
- b. Joint training program on specific topics of interest to MEETRA
- c. Joint research projects with external funding
- d. Other collaboration of mutual interest

3. TECHNICAL AREAS OF COLLABORATION

The areas of collaboration will include but not limited to:

- a. Innovative and low-cost solutions in the WASH sector
- b. Demonstration of proposed solutions with the help of Pilot studies.
- c. Cost/benefit analysis of the proposed solutions.
- d. Scaling-up strategies for innovative solutions and practices.
- e. Recommendation for improved practices in WASH sector
- f. Improvement in policies related to water and sanitation.
- g. Decision support tools for augmentation, rehabilitation and rejuvenation.



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- h. Topical themes outputs – e.g. energy/nutrient recovery, application of solar power in WASH etc.
- i. Creation of protocols/guidelines for planning, evaluation studies etc.
- j. Development of free for all GIS based hydraulic modelling tool for designing and modelling water and sewer network
- k. Development of training modules to be passed on to training wing of MEETRA

4. AGREEMENTS FOR COLLABORATION

Each collaboration undertaken by the parties hereunder shall be initiated by the signing of a separate research agreement between the parties if applicable, which will describe in detail:

- a. the nature, scope and schedule of the collaboration.
- b. the form of the collaboration.
- c. the estimated cost of the collaboration together with the amount of funding, if any, to be received from third parties.
- d. the treatment of intellectual property and data rights, including patents, industrial design registration, copyrights and all other proprietary information (including innovations not patented, designs not registered etc.) which result from the collaboration or which belong to a party and are used in collaboration.
- e. other provisions as may be mutually agreed upon, including provisions covering the consequences of default or termination by a participant, term, arbitration of disputes and applicable law.

5. CONFIDENTIALITY

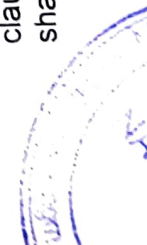
- a. During the term of the MOU, each party agrees to consider as confidential all information disclosed by the other party in written or tangible form or, if orally disclosed confirmed in writing within thirty days of disclosure and identified as confidential by the disclosing party.
- b. The obligations above shall not extend to any confidential information for which the receiving party can prove that this information:
 - is in the public domain at the time of disclosure or comes within the public domain without fault of the receiving party.
 - is already known or become known to the receiving party
 - is received from a third party having no obligations of confidentiality to the disclosing party,
 - is independently developed by the receiving party; or
 - is required to be disclosed by law or court order.

6. NON-EXCLUSIVITY

The relationship of the parties under this MOU shall be nonexclusive and both parties, including their affiliates, subsidiaries and divisions, are free to pursue other agreements or collaborations of any kind. However, when entering into a particular research agreement, the participants may agree to limit each party's right to collaborate with others on that subject.

7. TERM AND TERMINATION

This MOU, unless extended by mutual written agreement of the parties, shall expire 3 years after the effective date specified in the opening paragraph. This MOU may be amended or terminated earlier by mutual written agreement of the parties at any time. Either party shall have the right to terminate this MOU upon 60 days prior written notice to the other party. However, no such early termination of this MOU, whether mutual or unilateral, shall affect the obligations of the participants under any Research Agreement, Confidentiality clause as referenced in clause 6 above, or any other agreement entered into pursuant to this MOU, which obligations shall survive any such termination.



8. RELATIONSHIP

Nothing in this MOU shall be construed to make either party a partner, an agent or legal representative of the other for any purpose.

9. ASSIGNMENT

It is understood by the Parties herein this MOU is based on the professional competence and expertise of each party and hence neither Party shall transfer or assign this Agreement, or rights or obligations arising hereunder, either wholly or in part, to any third party.

10. COSTS OF THE MOU

There are no costs obligations under this MOU to both the parties.

11. DESIGNATED COORDINATORS

Designated Coordinator from CUSE:

Prof. Pradip Kalbar
Assistant Professor
Centre for Urban Science and Engineering
(CUSE)
Room No. 213, Second Floor Civil Engineering
Dept. Building
Indian Institute of Technology Bombay
Powai, Mumbai 400 076, Maharashtra, India
Office Tel.: +91 22 2576 9330
Email: kalbar@iitb.ac.in

Designated Coordinator from MEETRA:

Director
Maharashtra Environmental Engineering
Training and Research Academy (MEETRA)
Near Divisional Commissioner Office, Nashik
Road, Nashik – 422101
Email:
Tel.


12. SIGNED IN DUPLICATE


This MOU is executed in duplicate with each copy being an official version of the Agreement and having equal legal validity.


BY SIGNING BELOW, the parties, acting by their duly authorized officers, have caused this Memorandum of Understanding to be executed, effective as of the day and year first above written.

On behalf of	Director (Administration) & Superintending Engineer Maharashtra Environmental Engineering Training & Research Academy (MEETRA) Nashik
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY	Director (Administration) & Superintending Engineer Maharashtra Environmental Engineering Training & Research Academy (MEETRA) Nashik
By :	By :
Name :	Name :
Title :	Title :
Date :	Date :

Witness :

1.  Prof. Petety Balaji

1.  V.G. Kale, (V.G.Kale) Dp Engr Meeba.

2.  Sanjay Sumade (Sanjay Sumade) — 11

