

Government of India
Ministry of Housing & Urban Poverty Alleviation
(HFA-4)

Room No. 204-G
Nirman Bhavan, New Delhi.

Dated the 21st July, 2015

OFFICE MEMORANDUM

Subject: Constitution of a Technology Sub-mission under the Housing for All (Urban) Mission.

The Ministry of Housing and Urban Poverty Alleviation has launched a new mission on "Housing for All (HFA) on the 25th June, 2015 covering the urban poor. A copy of the Scheme Guidelines of the mission has been circulated to all the State Governments/Union Territories *vide* the Ministry's O.M. No. N-11026/06/2014-PPG/FTS-11733 dated 25.06.2015. The guidelines are also available on the Ministry's web site www.mhupa.gov.in.

2. Technology Sub-mission is an important component of the Housing for All mission. The Technology Sub-mission will focus on: (i) Design and Planning; and (ii) Technical Solutions. The focus areas of the Sub-mission would include area specific design and technology keeping in view geo-climatic conditions, use of earthquake resistant technologies, promotion of green, environmentally sustainable technologies and alternate cost effective technologies.

3. The objectives of the Technology Sub-Mission broadly are:

- (i) Identification, evaluation and adaptation of new emerging technologies for facilitating their speedy introduction in the states taking into consideration the diverse geo-climatic and hazard condition of the country.
- (ii) To extend technical support, capacity building & handholding to state Government by creating a pool of professionals and skilled manpower through association with technical institutes like IITs and NITs.
- (iii) Provide support in planning and designing of housing projects for building affordable housing including technical documentation such as specifications, standards, manuals, etc.
- (iv) To facilitate enabling policy framework for use of new, emerging and green technologies in the states.
- (v) To facilitate development of online portal for technologies and best practices including online monitoring & use of GIS.

4. The Ministry, keeping in view the above focus areas and objectives of the Sub-mission, has been engaging with the Indian Institutes of Technology (IITs) and the National Institutes of Technology (NITs) on the possible areas of cooperation and technical expertise that can be shared by the IITs and NITs with the State Governments and its agencies during the operationalization of the 'Housing for all' mission. Pursuant to the extensive discussions, a matrix of the areas where the IITs and NITs can lend their expertise (along with the States which can be geographically covered by the institutes concerned) has been prepared (Annexure-I).

5. In terms of the understanding arrived with the IITs/NITs regarding their role *vis-à-vis* the Ministry and the State Governments and its agencies, a broad structure of the MoU to be signed between the Ministry and the IIT/NIT, is enclosed at **Annexure-II**.

6. In order to ensure smooth operationalisation of, both, the Sub-mission as well as the process of engagement of the IITs/NITs with the State Governments, the Technology Sub-mission envisages a three tier structure. Tier-1 will be the Sub-mission itself under the chairmanship of the Joint Secretary and Mission Director (Housing for All), Ministry of Housing and Urban Poverty Alleviation and comprising other experts/institutions as follows:

1.	Joint Secretary (HFA) Ministry of HUPA, Nirman Bhawan, New Delhi	Chairman
2.	Shri Sudhir Kumar Jain, Director, IIT, Gandhinagar, Gujarat	Member
3.	Prof. C.V.R. Murty Director, IIT Jodhpur	Member
4.	Prof. Sudhir Mishra Department of Civil Engineering, IIT, Kanpur	Member
5.	Prof. A. Meher Prasad Head, Department of Civil Engineering, IIT, Madras	Member
6.	Prof. Yogender Singh Department of Earthquake Engineering, IIT Roorkee	Member
7.	Dr. Anil Sawhney, Associate Dean, RICS School of Built Environment, Amity University, Noida	Member
8.	Shri P.R. Mehta, Architects and Environment Planner, Design Action Group, New Delhi	Member
9.	Principal Secretary (Housing) Government of Gujarat	Member
10.	Principal Secretary (Housing) Government of Maharashtra	Member
11.	Principal Secretary (Housing) Government of Karnataka	Member
12.	Principal Secretary (Housing) Government of Andhra Pradesh	Member
13.	Principal Secretary (Housing) Government of Odisha	Member
14.	Principal Secretary (Housing) Government of Haryana	Member
15.	Deputy Secretary(HFA-4) Ministry of HUPA, Nirman Bhawan, New Delhi	Member
16.	Dr. Shailesh Kumar Agrawal, Executive Director, BMTPC, New Delhi	Member Secretary

7. Other States/institutions would be represented, on rotation basis, in the Sub-mission. The Committee will also be free to co-opt other members/experts if considered necessary.

8. In Tier-II, will be regional hubs represented by IITs/NITs in the respective region. Each hub will cover 5-6 States and will provide technical support to States, comprehensive testing facilities, R&D, Training, technical vetting, preparation of manual and guidelines, etc. Tier-III will involve IITs/NITs, State Engineering colleges engaging with State agencies based on expertise available with the institute including random testing, technical audit, etc.

9. The broad terms of reference of the Sub-mission are:

- (i) to extend technical support to the 'Housing for All' Mission for introducing alternate technologies other than conventional technologies in the States;
- (ii) to guide Regional Hubs envisaged in the mission and support State Governments on issues related to implementation of technologies;
- (iii) to consider specific proposals relating to technical cooperation or research, etc emanating from the IITs or NITs for placement before the CSMC;
- (iv) to identify and facilitate areas of technical cooperation between the State Governments/agencies and the technical institution with regard to the HFA mission; and
- (v) to consider any other issue referred to it in the context of the HFA mission.

10. A technical cell will be set up in the Building Materials and Technology Promotion Council (BMTPC) under the Ministry, to support the Sub-mission. The Sub-mission will function under the overall guidance of the Central Sanctioning and Monitoring Committee (CSMC) envisaged in the HFA mission and headed by the Secretary, Ministry of Housing and Urban Poverty Alleviation.

11. All the State Governments/Union Territories are requested to urgently delineate the areas where the technical expertise of the IITs/NITs would be beneficial for filling the gaps in the capacity of the implementing agencies under them.



(S.K. Valiathan)

Deputy Secretary to the Govt. of India
Tele No.: 23061206

All State Governments/UTs

All IITs

All NITs

Copy to;

ED, BMTPC

Copy also to;

All Directors/DS/US in the HFA Division

Institute-wise compilation of the area of expertise identified with IITs/NITs

Name of the Institute	States to be covered by IITs/NITs	Area of expertise indicated by IITs/NITs
IITs		
Bhubaneshwar	Odisha	1. Technical training of planners and engineers 2. Monitoring of quality on random basis 3. Set up mechanism for testing and accepting materials 4. Take up long term research projects
Bombay	Maharashtra, Gujarat, Goa, Dadra and Nagar Haveli	1. Identifying specific solutions and appropriate designs. 2. Monitoring of quality on random basis 3. Technical training of planners and engineers 4. Set up mechanism for testing and accepting materials 5. Take up long term research projects
Guwahati	Assam, Mizoram, Nagaland, Tripura	1. Identifying specific solutions and appropriate designs. 2. Preparation of Manual and Guidelines 3. Technical audit of DPRs 4. Technical training of planners and engineers 5. Identifying and transplanting global best practices. 6. Set up mechanism for testing and accepting materials. 7. Arrange for pilot testing and demonstration projects 8. Take up long term research projects
Hyderabad	A.P., Telangana, Karnataka, Tamilnadu	1. Arrange for pilot testing and demonstration projects
Kharagpur	Entire Eastern Zone of India.	1. Identifying specific solutions and appropriate designs 2. Preparation of Manual and Guidelines 3. Technical training of planners and engineers 4. Take up long term research projects 5. Set up mechanism for testing and accepting materials
Kanpur		1. Technical training of planners and engineers 2. Preparation of Manual and Guidelines 3. Monitoring of quality on random basis 4. Set up mechanism for testing and accepting materials
Roorkee	Uttarakhand & U.P.	1. Identifying specific solutions and appropriate designs 2. Preparation of Manual and Guidelines 3. Technical audit of DPRs 4. Monitoring of quality on random basis 5. Technical training of planners and engineers 6. Identifying and transplanting global best practices 7. Set up mechanism for testing and accepting materials 8. Arrange for pilot testing and demonstration projects 9. Take up long term research projects.
Delhi	Delhi	In agreement with MoU
Gandhinagar	Gujarat, Daman and Diu	In agreement with MoU
Jodhpur	Rajasthan	In agreement with MoU
Patna	Bihar	Response Awaited
Madras	Andaman and Nicobar Islands, Tamil Nadu	In agreement with MOU
NITs		
Allahabad	Uttar Pradesh and Uttarakhand	1. Identifying specific solutions and appropriate designs 2. Preparation of Manual and Guidelines 3. Technical audit of DPRs 4. Monitoring of quality on random basis 5. Technical training of planners and engineers 6. Identifying and transplanting global best practices 7. Set up mechanism for testing and accepting materials 8. Arrange for pilot testing and demonstration projects 9. Take up long term research projects
Itanagar	Arunachal Pradesh	1. Preparation of Manual and Guidelines 2. Monitoring of quality on random basis 3. Take up long term research projects 4. Set up mechanism for testing and accepting materials

Silchar	Assam	In agreement with MoU
Bhopal	Madhya Pradesh	1. Technical audit of DPRs 2. Set up mechanism for testing and accepting materials 3. Take up long term research projects
Calicut	Kerala, Lakshadweep, Mahe (Part of Puducherry, UT)	1. Technical training of planners and engineers 2. Set up mechanism for testing and accepting materials 3. Take up long term research projects
Durgapur	W.B, Jharkhand & Sikkim	1. Preparation of Manual and Guidelines 2. Technical audit of DPRs 3. Technical training of planners and engineers 4. Monitoring of quality on random basis 5. Take up long term research projects 6. Set up mechanism for testing and accepting materials
Hamirpur	Himachal Pradesh, Uttarakhand and J&K	1. Identifying specific solutions and appropriate designs 2. Preparation of Manual and Guidelines 3. Technical training of planners and engineers 4. Identifying and transplanting global best practices. 5. Take up long term research projects
Kurukshetra	Haryana, Punjab and UT of Chandigarh	1. Set up mechanism for testing and accepting materials
Imphal	Manipur	1. Identifying specific solutions and appropriate designs 2. Set up mechanism for testing and accepting materials
Shillong	Meghalaya	In agreement with MoU
Nagpur	Central India, Eastern Maharashtra (Vidarbha), MP	1. Identifying specific solutions and appropriate designs 2. Take up long term research projects 3. Set up mechanism for testing and accepting materials
Karaikal	Puducherry including Karaikal	1. Technical audit of DPRs 2. Monitoring of quality on random basis
Raipur	Chhattisgarh and part of MP	1. Monitoring of quality on random basis 2. Set up mechanism for testing and accepting materials
Rourkela	Odisha	1. Technical training of planners and engineers 2. Technical audit of DPRs 3. Set up mechanism for testing and accepting materials 4. Take up long term research projects
Srinagar	Jammu & Kashmir	1. Set up mechanism for testing and accepting materials 2. Take up long term research projects
Surathkal	Karnataka	1. Identifying specific solutions and appropriate designs 2. Preparation of Manual and Guidelines 3. Monitoring of quality on random basis 4. Technical audit of DPRs 5. Identifying and transplanting global best practices
Tiruchirappalli	Tamil Nadu state (Central and Southern Zones) and Pondicherry	1. Identifying specific solutions and appropriate designs 2. Preparation of Manual and Guidelines 3. Monitoring of quality on random basis 4. Technical training of planners and engineers 5. Technical audit of DPRs 6. Set up mechanism for testing and accepting materials 7. Arrange for pilot testing and demonstration projects
Garhwal	Uttarakhand	1. Monitoring of quality on random basis 2. Technical training of planners and engineers 3. Set up mechanism for testing and accepting materials 4. Take up long term research projects
Warangal	Telangana State and Andhra Pradesh	1. Identifying specific solutions and appropriate designs 2. Preparation of Manual and Guidelines 3. Technical audit of DPRs 4. Technical training of planners and engineers 5. Set up mechanism for testing and accepting materials 6. Arrange for pilot testing and demonstration projects.
Delhi	Delhi, Haryana & U. P	In agreement with MOU

Compilation based on area of expertise identified with IITs/NITs

Sl. No.	Role of Institute envisaged as per proposed MoU	Institutes which have given consent
1.	Identifying specific solutions and appropriate designs considering local conditions and requirements	<u>IITs:</u> Bombay, Guwahati, Kharagpur, Roorkee <u>NITs:</u> Allahabad, Hamirpur, Imphal, Nagpur, Surathkal, Tiruchirappalli, Warangal
2.	Preparation of Manual and Guidelines for project design and formulation	<u>IITs:</u> Guwahati, Kharagpur, Kanpur, Roorkee <u>NITs:</u> Allahabad, Itanagar, Durgapur, Hamirpur, Surathkal, Tiruchirappalli, Warangal
3.	Technical audit of DPRs	<u>IITs:</u> Guwahati, Roorkee <u>NITs:</u> Allahabad, Bhopal, Durgapur, Karaikal, Rourkela, Surathkal, Tiruchirappalli, Warangal
4.	Monitoring of quality on random basis for Government of India	<u>IITs:</u> Bhubaneshwar, Bombay, Kanpur, Roorkee <u>NITs:</u> Allahabad, Itanagar, Durgapur, Karaikal, Raipur, Srinagar, Surathkal, Tiruchirappalli, Garhwal
5.	Technical training of planners and engineers	<u>IITs:</u> Bhubaneshwar, Bombay, Guwahati, Kanpur, Kharagpur, Roorkee <u>NITs:</u> Allahabad, Calicut, Hamirpur, Durgapur, Rourkela, Tiruchirappalli, Garhwal, Warangal.
6.	Identifying and transplanting global best practices with adaptation for local conditions.	<u>IITs:</u> Guwahati, Roorkee <u>NITs:</u> Allahabad, Hamirpur, Surathkal
7.	Set up mechanism for testing and accepting materials including new materials in construction	<u>IITs:</u> Bhubaneshwar, Bombay, Guwahati, Kharagpur, Kanpur, Roorkee <u>NITs:</u> Allahabad, Itanagar, Bhopal, Calicut, Durgapur, Kurukshetra, Imphal, Nagpur, Raipur, Rourkela, Srinagar, Tiruchirappalli, Garhwal, Warangal
8.	Arrange for pilot testing and demonstration projects showcasing latest in technology, design, material etc.	<u>IITs:</u> Hyderabad, Guwahati, Roorkee <u>NITs:</u> Allahabad, Tiruchirappalli, Warangal
9.	Take up long term research projects in the field of slums, slum rehabilitation, design, technology	<u>IITs:</u> Bhubaneshwar, Bombay, Guwahati, Kharagpur, Roorkee <u>NITs:</u> Allahabad, Bhopal, Itanagar, Calicut, Durgapur, Hamirpur, Nagpur, Rourkela, Srinagar, Garhwal

MEMORANDUM OF UNDERSTANDING

MEMORANDUM OF UNDERSTANDING - This Memorandum of Understanding (**MoU**) is made on this ----- day of ----- in the year ---
-----.

(“Effective Date”) by and between:

Ministry of Housing and Urban Poverty Alleviation is an apex body of Government of India, to formulate policies, implement and support programmes through allocation of funds to the State Governments for Housing and Urban Poverty Alleviation in the country (hereinafter referred to as **MHUPA**)

and

Indian Institute of Technology, an institution established under the Institutes of Technology Act, 1961 and having its registered office at -----
----- (hereinafter referred to as “**IIT-.....**”)

MHUPA and IIT-..... are hereinafter collectively referred to as “Parties” and individually as “Party

1. GOALS

This MoU is signed for the institute to function as a resource centre for aspects related to technology including capacity building consultancy and conducting pilot projects with the support of State Government and Urban Local Bodies.

This MoU is signed within the ambit of Housing for All (Urban) under Pradhan Mantri Awas Yojana. Housing for All (Urban) is an All India Mission implemented by Ministry of Housing and Urban Poverty Alleviation, Government of India through State Governments and Urban Local Bodies for providing housing to all. The proposed Mission includes the following four components (i) Slum

Rehabilitation of Slum Dwellers with participation of private developers using land as a resource (ii) Promotion of Affordable Housing for weaker section to Credit Linked Subsidy (iii) Affordable Housing in Partnership with Public and Private Sectors and (iv) Subsidy for beneficiary-led individual house construction. Mission proposes to exploit available and emerging technologies in faster delivery of quality and reliable homes.

This MoU seeks to define the broad ambit of role of the Technical agencies in the Mission for Housing for All.

2. PURPOSE

In this background the role of technical agencies is envisaged to include the following:

- (i) Identifying specific solutions and appropriate designs considering local conditions and requirements in specific cases identified by State and Central Government.
- (ii) Preparation of Manual and Guidelines for project design and formulation incorporating emerging, environmental friendly, energy efficient, earthquake resistance and cost effective technologies with focus on locally available material.
- (iii) Technical audit of DPRs approved by State Governments or Government of India construction undergoing and monitoring of quality on random basis for Government of India
- (iv) Detailed technical training of planners and engineers creating awareness and expertise in technical aspects of efficient planning and construction.

- (v) Identifying and transplanting global best practices with adaptation for local conditions.
- (vi) Advise the City, State and Central Governments for adoption of new designs and techniques.
- (vii) Set up mechanism for testing and accepting materials including new materials in construction.
- (viii) Arrange for pilot testing and demonstration projects showcasing latest in technology, design, material etc.
- (ix) Institutes would also be encouraged to take up long term research projects in the field of slums, slum rehabilitation, design, technology in construction covering entire gamut of the housing needs. These research should be of practical usages to implementators, planners and policy setters.
- (x) Any other input which can benefit the Mission by making it more economical, effective and efficient.

3. Operationalization

Institute and Ministry along with State Government will prepare an annual action plan. Institute and Ministry would both nominate a nodal officer for operationalization of Action Plan. Activities beyond action plan can also be taken with mutual convenience and consultation.

There would be broadly two types of activities:

- (i) Short term activities by way of consultancy would be undertaken in close coordination with respective State Governments under the overall ambit of this MoU.
- (ii) Long term research projects and related lab development utilizing M.Tech, MDes and PhD students to work on these areas for explorations and searching for major breakthroughs through experimenting and validating innovations through pilot projects.

The Mission is being implemented through State Governments, therefore institute shall work in close coordination with respective State Government and may need to execute another MoU with the State Governments.

4. PUBLICATION

There shall be no restriction on the publication of research materials emerging from these assignments. The Parties agree to ensure that in all publications, outputs, conferences, workshops and related publications the support provided by the Ministry and/or State Governments as applicable will be acknowledged. The form of this acknowledgement shall be as agreed between the Parties.

5. INTELLECTUAL PROPERTY RIGHTS

The ownership of any technology, design, product or process which is developed or invented by any student(s) or faculty member (“intellectual property right”) shall vest with IIT The Ministry of Housing & Urban Poverty Alleviation shall have the right to make use of such Intellectual Property Right (s) for the purpose of research and non-commercial purpose. The current IIT..... policies, apply to promote creation and exploitation of Intellectual Property Rights.

This is a non-exclusive agreement, that is to say, Ministry may deem necessary to sign such MoUs with several institutes.

6. FUNDING

Financial support for various activities, would be worked out by the Institute and approved by the Ministry. For specific activities also, institute and Ministry will work out financial contribution.

7. TERM

The MoU shall be valid for the duration of the Mission. Either of the parties may withdraw from the arrangement after giving notice of three months. The Parties may, by mutual consent, renew the term of this MoU further.

8. DISPUTE RESOLUTION

In the event of disputes arising between the Parties out of or in connection with this MoU, whether such dispute relates to the interpretation of MoU or otherwise, shall be settled through mutual consultation between the respective representatives of the parties. In the event that a dispute cannot be resolved by amicable effort and goodwill, the Parties may initiate arbitration proceedings in accordance with the provisions of the Arbitration and Conciliation Act, 1996. Arbitrator shall be selected by mutual consent. The award of the arbitral tribunal shall be final and binding on the parties. The seat of arbitration shall be Delhi, India.

9. GENERAL PROVISIONS

Neither this MoU, nor the rights and obligations contained herein, may be assigned by either Party without the express written permission of the other Party, which permission shall not be unreasonably withheld.

The rights and obligations of the Parties under this MOU shall be governed by and construed in accordance with the laws of India.

IN WITNESS WHEREOF, the Parties hereto have caused this MoU to be signed in duplicate by their respective duly authorized representatives effective as of the last date written below:

**MINISTRY OF HOUSING AND URBAN POVERTY ALLEVIATION,
GOVERNMENT OF INDIA**

Signature

NAME

DESIGNATION

INDIAN INSTITUTES OF TECHNOLOGY,

Signature

NAME

DESIGNATION