









E-Newsletter-Vol - XV

# **LIGHT HOUSE PROJECTS**

April 20, 2022, New Delhi

### **Introducing RACHNA: Trainings & Workshops on Innovative Construction Technologies & Thermal Comfort for Affordable Housing**





The Ministry of Housing and Urban Affairs (MoHUA), in partnership with GIZ & Building Materials and Technology Promotion Council (BMTPC), is hosting a series of trainings and workshops named RACHNA - Resilient, Affordable and Comfortable Housing through National Action. The initiative is under the umbrella of Global Housing Technology Challenge-India (GHTC-I).

The prime focus of the training is thermal comfort and its necessity in the affordable housing sector. The trainings cover thermal comfort basics, material influences, low-cost solutions and codes that are available in India to create Climate-Smart Buildings. The outcome of the training would be to make the stakeholders in the affordable housing sector understand the need for thermal comfort and urge them to include no cost or low-cost strategies in upcoming projects.

#### JS&MD, HFA, presides over RACHNA training programme

A 2-day training programme on Innovative Construction Technologies and Thermal Comfort in Affordable Housing was held in

New Delhi between 20th April 2022 and 21st April 2022 under RACHNA. The programme was presided over by Shri Kuldip Narayan, Joint Secretary & Mission Director (JS&MD), Housing For All (HFA). Shri Narayan delivered the keynote address, wherein he spoke about importance of thermal comfort and energy saving. The event was also attended by Dr. Shailesh Kumar Agrawal, ED, BMTPC, Shri RK Gautam, Director, MoHUA, Mr. Markus Wypior, Dy. Programme Coordinator (IGEN), GIZ, Professor Rajan Rawal, Senior Advisor and CRDF Professor, CEPT University and other officials of MoHUA.

The different topics of discussions were the importance of thermal comfort, its fundamentals, Building materials & methods of construction for affordable housing among others. The workshop was specifically designed for Practitioners. This was the third edition of programme in the series.

Under the Azadi Ka Amrit Mahotsav initiative, 75 trainings & events of RACHNA have been planned for Senior Government Officials & policymakers, building sector stakeholders, built-environment professionals & Technograhis across the country in both physical and online mode.

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## **Message from** JS&MD (HFA) **Shri Kuldip Narayan**

My dear readers, it gives me immense joy to share with you all that the Ministry is constantly taking up efforts to reform the affordable housing and construction sector by introducing several initiatives. After all, our ultimate goal is to provide affordable housing to all. With Light House Projects, we put our best foot forward in adding an extra momentum to our goal. The project, when ready, will transform the urban landscape of India and give a better outlook to people on how the housing sector was once perceived.

Talking about the initiatives we have started, we have recently launched a training workshop on Innovative Construction Technologies & Thermal Comfort for Affordable Housing. It has been named RACHNA and under the programme, we are inviting experts to talk about thermal comfort & its importance in affordable housing sector. The aim is to make people understand the need for thermal comfort and help them in realising the importance of it to include in future projects.

Meanwhile, the series of e-Learning sessions and webinars have also taken off. Every week, stakeholders and Technograhis are being taught about LHP technologies and construction processes & are also taken on virtual tour to the 6 different sites. Here, I'd like to reiterate and urge all stakeholders to register themselves for the webinar and also become a Technograhi.

For the past one year since the module was launched a slew of activities have been carried out for Technograhis are continuing to engage them in bringing the change in construction sector. These initiatives will bring a definitive change in the sector and all of us should participate to become that change maker!

I appreciate the efforts all of you have taken in taking the Mission forward and helping it attain new heights each day and every day.

### MoHUA hosts RACHNA inaugural event in Ranchi with Government of Jharkhand, BMTPC & GIZ

The first RACHNA training was hosted on 7th April 2022 in Ranchi, Jharkhand. The inaugural event was jointly organised by MoHUA, BMTPC, GIZ and Directorate of Municipal Administration (DMA) - Government of Jharkhand. The day-long event evoked great response from over 100 participants from various government departments, building industry stakeholders and professionals from the academia. The event was hosted in the hybrid mode with the participants joining in from other cities through the virtual platform. It was simultaneously streamed on YouTube and covered widely in the digital, print and electronic media.



The training session was followed by a site visit of Light House Project, Ranchi where the participants were given a guided tour of the 1,008 dwellings affordable housing project currently being built using the 3D Volumetric Precast Construction System.

### Stakeholder Meeting for Replicable Designs for Thermally Comfortable Affordable Housing

A stakeholder meeting for Replicable Designs for Thermally Comfortable Affordable Housing was conducted on 11th April 2022 as a workshop under RACHNA to enhance the outreach and acceptability of the Replicable Designs being developed under the Climate Smart Buildings programme. The session began with a keynote address by Shri Kuldip Narayan, JS&MD, HFA. In the address, JS&MD emphasised on the significance of this technical database and the need to guide the construction happening under PMAY-U, especially the self-build Beneficiary Led Construction towards thermal comfort and sustainability by use of passive design and innovative construction materials.



During the consultation, three technical sessions were presented by the experts who familiarised the stakeholders with the methodology and progress of the project and the expected outcomes. Session 1: Overview of existing design and construction practices, including LHPs to identify gaps in achieving optimal Thermal comfort. Session 2: Framework for development of type designs. Session 3: Overview of Thermal performance and Carbon footprint of construction

### JS&MD, HFA, reviews progress of LHPs

A review meeting of the Progress of LHPs was held on 8<sup>th</sup> April 2022 under the chairmanship of Shri Kuldip Narayan, JS&MD, HFA. LHPs, under Global Housing Technology Challenge-India (GHTC-India), are being constructed with allied infrastructure at Chennai (Tamil Nadu), Lucknow (Uttar Pradesh), Rajkot (Gujarat), Indore (Madhya Pradesh), Agartala (Tripura) and Ranchi (Jharkhand). Representatives of six State LHP construction agencies and BMTPC officials attended the meeting.

The meeting began with a welcome address by Shri RK Gautam, Director, HFA. Later, a presentation regarding the status of ongoing construction activities at the LHP sites was made. Subsequently, State-wise progress of each project was reviewed in detail. JS&MD, HFA, directed the respective LHP construction agencies to expedite the construction activities.



Discussions on handing over the homes to beneficiaries at Chennai site since the work is over 95% complete there was held. Deliberations were also made on flat allotment process at other LHP sites. Issues related to the ongoing work related to construction activities was discussed in detail during the meeting.

## Webinar Series: e-Learning & webcasting of LHPs for Technograhis

Under the e-Learning: Webinar series on LHPs started by MoHUA, the Ministry has so far successfully conducted five workshops to enable Technograhis and other stakeholders learn the use of LHP technologies and promote their replication in Indian context. The first workshop was held at LHP Rajkot, followed by Indore, Lucknow, Ranchi, Chennai & Agartala locations. The webinars were chaired by Shri Kuldip Narayan, JS&MD, HFA, during which technical sessions, explaining in detail about each LHP technology, was presented by BMTPC. Webcasting of LHP sites to show live progress at the location was shared with participants. The webinar is serving as learning platform for all stakeholders interested in learning about innovative construction technologies.











The series of 'e-Learning sessions and webcasting of LHP construction process' is being organised in collaboration with BMTPC and GIZ. It aims to widespread the knowledge about the technologies, construction processes, sustainability and mass-cum-fast construction to Technograhis. The webinar also facilitates learning and mass replication of new-age innovative technologies being used in construction of LHPs. As of now, over 33,000 stakeholders have enrolled as Technograhis and are learning the use of such technologies to promote their replication in Indian context.

The sessions are planned every month, focusing and highlighting the progress of LHPs. 35 more such training sessions have been planned in the coming months covering a wide range of topics on different technologies, construction processes and need for thermal comfort.

## PROGRESS OF LIGHT HOUSE PROJECTS AS ON APRIL 20, 2022

## **CHENNAI, Tamil Nadu**

Technology Name: Precast Concrete Construction System-Precast Components





No. of Dwelling Units	:	1152 Nos. (G+5)
No. of Block / Tower	:	12 Blocks
Units in each Block / Tower	:	96 Nos.

Over all Progress 99%

Activities	Progress
Superstructure Work	Completed
Sample unit	Completed
Internal Building work	99% completed
External Painting	1st coat - Around 100% completed. 2nd coat around 100% completed
External Infrastructure	Overall around 98% works completed. Most of the works including Sewer line, storm water drains, water supply works, STP, Road works (Asphalt & concrete) were completed. Testing & commissioning is to be carried out for Lifts, Pumps and STP.
Site development	Compound wall- around 100% completed (Barbed wire fencing to be done) and street lights including solar -100% completed. Landscaping & Horticulture works in completed. Rain water harvesting to be carried out.
Social Infrastructure	Finishing works like Painting, doors & windows, Flooring completed for Anganwadi, shops, milk booth, library and ration shop.

## RAJKOT, Gujarat

Technology Name: Monolithic Concrete Construction using Tunnel Formwork





lling Units : 1144 Nos. (S+13	No. of Dwelling Units
ck / Tower : 11 Blocks	No. of Block / Tower
ck / Tower · 104 Nos.	Units in each Block / Tower

Over all Progress 75%

Activities	Progress
Foundation work	Completed in all 11 blocks
Superstructure work	9 Blocks completed (Block No. 1, 2, 3, 4, 7, 8, 9, 10 & 11) Block No. 6 – (4+7) work is in progress Block No. 5- (4+11) work is in progress
Sample Unit	Completed
Masonry work	• Completed – 8 blocks • In progress – 3 blocks
Internal Building work	Internal plaster is completed in 7 blocks. Kitchen slab, tile work and plumbing are in progress. Installation of lifts is also in progress.
Internal (Electrical work)	In progress – 8 blocks
Social Infrastructure	After completion of Structure work, the Internal finishing is in progress in Anganwadi cum Shopping Complex and Community centre.
External Physical Infrastructure	Infrastructure works including Sewer line, storm water drains, water supply works, boundary wall etc. are in progress.

## PROGRESS OF LIGHT HOUSE PROJECTS AS ON APRIL 20, 2022

## **INDORE, Madhya Pradesh**

Technology Name: Prefabricated Sandwich Panel System





Over all Progress 61%

Activities	Progress
Superstructure	
• PEB Work	40 Floors completed in 8 blocks
· Slab Work	39 out of 72 Floors completed in 8 blocks
• EPS Panel work in Wall	22 out of 64 Floors completed in 8 blocks
Sample Unit	Completed
Infractivisture Moule	Boundary wall, Community Centre, Road work,
Infrastructure Work	underground tank, STP & Sewer line works are in progress.





## **LUCKNOW, Uttar Pradesh**

Technology Name: PVC Stay in Place Formwork System







No. of Dwelling Units : 1040 Nos. (S+13) No. of Block / Tower : 4 Blocks

Units in each Block / Tower : A(494), B(130), C(208) & D(208)

Over all Progress 53%

Activities	Progress	
Superstructure work of Building Blocks		
Pre-Engineered Steel Building (PEB) Work	<ul> <li>PEB erection work is in progress upto 12<sup>th</sup> Floor         in Block A1 (part of Block A)</li> <li>PEB erection work is in progress upto 6<sup>th</sup> Floor         in other 2 Blocks ( Block C &amp; D)</li> </ul>	
Shear Wall Work (Staircase & Lift well)	Stilt to 6 <sup>th</sup> Floor shear wall work is in progress in all 4 Blocks	
Slab Work & SIP Wall Form work	• Casting of 1st floor slab completed in Block C, D & Block A1 • SIP Wall form installation is in progress at 2nd & 3nd Floor level in Block A1 & at 1st Floor level in other 2 Blocks (Block C & D). Electrical & Plumbing work is also in progress	
Sample Unit	Completed	
Social Infrastructure	Community Centre & Commercial Block work completed upto Plinth level.	
Infrastructure Work	<ul> <li>Underground Water Tank foundation work is completed</li> <li>&amp; wall casting is in progress</li> <li>Boundary Wall work is in Progress.</li> <li>Electrical Substation excavation work completed</li> </ul>	

## PROGRESS OF LIGHT HOUSE PROJECTS AS ON APRIL 20, 2022

## RANCHI, Jharkhand Technology Name: Precast Concrete Construction – 3D Volumetric Construction





No. of Dwelling Units	:	1008 Nos. (G+8)
No. of Block / Tower	:	7 Blocks
Jnits in each Block / Tower	1	144 Nos.

Over all Progress 46%

Activities	Progress
Casting Yard (Production of Components)	The casting yard along with steam curing chamber is now functional & building modules and various components are in regular production.
Foundation work	The Raft slab casting of all 7no's of building blocks have been completed.  The shear wall concrete casting has been completed in 6 Blocks (Block 1,2,3,4,5,& 6) & is in progress in remaining two blocks  The back filling in 4 blocks (No.1, 2, 5 & 6) has been completed and is in progress in 2 blocks (No.3 & 4).  The Grade Slab of 4 buildings (No.1, 2,5 & 6) has been completed.  The erection of building components is complete.
Infrastructure work	The pre-cast boundary wall installation has been completed up to 178 mts.

## **AGARTALA**, Tripura

Technology Name: Light Gauge Steel Structural System & Pre-Engineered Steel Structural System





No. of Dwelling Units : 1000 Nos. (G+6) No. of Block / Tower : 7 Blocks Units in each Block / Tower : A(112), B(154), C(118), D(168), E(168), F(168) & G(112)

Over all Progress 37%

Activities	Progress
Foundation (Dwelling Units)	
Pile Work	• Completed - 5 Blocks
	• In progress - 2 Blocks
Excavation	A, E, F & G Block completed
Pile head breaking	A, E, F & G Block completed
Raft & Plinth beam	Raft foundation in F block is in progress and
	PCC in block A, E & G completed
Superstructure	F block is in progress



#### **News Corner**

#### MoHUA ने रांची से किया 'रचना' का आगाज, देशभर में होंगे 75 कार्यक्रम आयोजित

Ranchi: केंद्रीय आवासन और शहरी कार्य मंत्रालय (MoHUA) ने झारखंड के नगरीय प्रशासन निदेशालय और GIZ के सहयोग से रचना नाम के एक दिवसीय प्रशिक्षण कार्यक्रम की शुरुआत रांची से की. कार्यक्रम में सैकड़ों लोगों ने ऑनलाइन और ऑफलाइन हिस्सा लिया. प्रधानमंत्री आवास योजना (शहरी) के तहत बन रहे किफायती आवासों के निर्माण में कैसे नयी तकनीक का उपयोग हो, निर्माण में कैसे थर्मल कंफर्ट को शामिल किया जाए और जलवायु परिवर्तन का असर कम करने को लेकर कार्यक्रम में चर्चा हुई. आने वाले दिनों में देशभर में इस तरह के 75 प्रशिक्षण कार्यक्रमों का आयोजन किया जाएगा

# नयी तकनीकों के इस्तेमाल के लिए कार्यशाला



#### फ्रीडम फाइटर संवाददाता

रांची: प्रधानमंत्री आवास योजना के तहत देश के अलग-अलग प्रदेशों में चल रहे किफायती आवासों के निर्माण में नवीनतम तकनीक का उपयोग, थर्मल कम्फर्ट को शामिल करने एवं जलवायु परिवर्तन को कम करने हेतु केंद्रीय आवासन व शहरी कार्य मंत्रालय, भारत सरकार, नगरीय प्रशासन निदेशालय, झारखण्ड सरकार व GIZ के संयुक्त तत्वावधान में रचना नामक एक दिवसीय प्रशिक्षण कार्यक्रम का आगाज किया गया। इसकी शुरूआत झारखंड की राजधानी रांची से हुई है, जिसके तहत

गुरुवार को Innovative ConstructionTechnologies & Thermal Comfort for Affortable Housing विषय पर रांची स्मार्ट सिटी आडिटोरिएम, जुपमी बिल्डिंग में राष्ट्रीय स्तर का प्रशिक्षण कार्यक्रम का आयोजन किया गया। कार्यक्रम में ऑफलाइन एवं ऑनलाइन सैकड़ों हितग्राहियों ने हिस्सा लिया। आने वाले दिनों में देशभर में इस तरह के 75 प्रशिक्षण कार्यक्रमों का आयोजन किया जायेगा। स्वागत भाषण के दौरान शैलेश प्रियदर्शी, सहायक निदेशक, नगर प्रशासन निदेशालय (डीएमए), झारखंड ने राज्य से भवन और निर्माण क्षेत्र के हितधारकों की क्षमता निर्माण के महत्व पर बल दिया। कार्यक्रम का उद्घाटन नगरीय प्रशासन निदेशालय के निदेशक राजेश कुमार पाठक (भा. प्रा. से.), नगर विकास एवं आवास विभाग के मुख्य टाउन प्लानर गजानंद राम एवं हुडको के क्षेत्रीय प्रमुख अजित कुमार ने संयुक्त रूप से द्वीप प्रज्जविलत कर किया। इस मौके पर डीएमए से सहायक निदेशक शैलेश प्रियदर्शी एवं योगेन्द्र प्रसाद, PMA (व) कोषांग के सभी राज्य स्तरीय विशेषज्ञ सहित डीएमए के समस्त अधिकारी भी उपस्थित थे।

### **Social Media Corner**









Second webinar on e-Learning, webcasting of #LightHouseProjects for Technograhis was held today under chairmanship of Shri @KuldipNarayan, JS&MD, Housing For All. Detailed presentation about #LHPIndore was shared by @bmtpcdelhi.



8:35 PM - Mar 24, 2022 - Twitter Web App

Housing For All 📀

The latest edition of #LightHouseProjects newsletter is here!

Read exclusively about #LHPs as it takes readers through new developments made at six locations, site visits undertaken by officials, progress & other technical details.

Read here: ghtc-india.gov.in/Content/pdf/ne...



At webinar #5 on e-Learning/webcasting of #LightHouseProjects for #Technographis, highlights about the housing project, initiatives undertaken & how construction work is progressing were explained in detail. Focus was on #LHPChennai, where progress has been overwhelming.



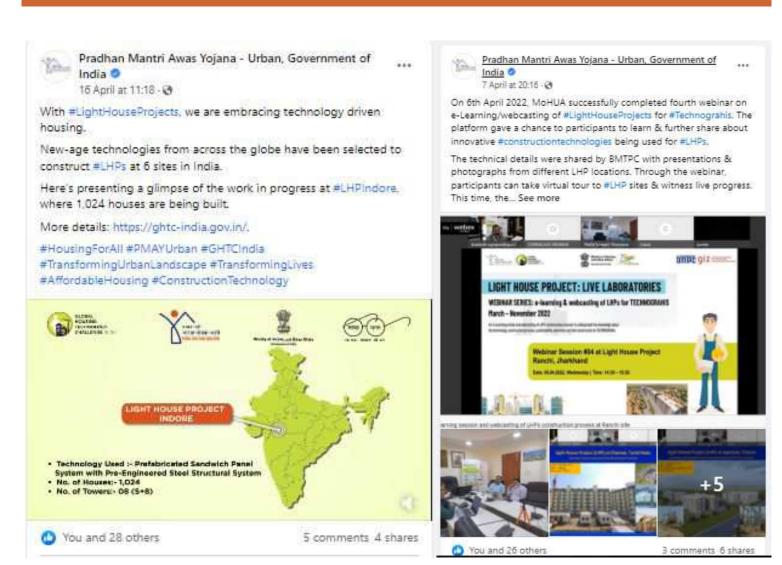
Housing For All

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#### **Social Media Corner**





Highlighting work being done at #LightHouseProject Agartala.

Here, 'Light Gauge Steel Frame System with Pre-Engineered Steel Structural System' technology has been adopted to build 1,000 houses.

More information at: ghtc-india.gov.in.

#### #HousingForAll



8:30 PM · Apr 19, 2022 · Twitter Web App



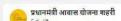
प्रधानमंत्री आवास योजना शहरी

से बताया गया। इस बार एलएचपी चेन्नई साइट का वर्चुअल दौरा कराया गया। इस सत्र की अध्यक्षता. श्री कुलदीप नारायण, संयुक्त सचिव एवं मिशन निदेशक सबके लिए आवासु ने की और प्रतिभागियों को प्रत्यक्ष अनुभव के लिए एलएचपी साइटों पर जोने और अपने अध्ययन में परियोजना विवरण को शामिल करने के लिए प्रोत्साहित किया। एलएचपी चेन्नई की लाइव प्रगति का प्रदर्शन सत्र का मुख्य आकर्षण था, जहां यह देखा जा सकता था कि परियोजना ने कैसे आकार लिया।

आवासन एवं घाहरी कार्य मंत्रातय द्वारा बीएमटीपीसी और जीआईजेड के सहयोग से ऐसे अन्य वेबिनार की योजना बनाई गई है।

#HousingForAll #PMAYUrban #GHTCIndia #LightHouseProjects #Li #AffordableHousing #ConstructionTechnology #TransformingLives #TransformingUrbanLandscape





पीएमएवाई-यू के तहत टेक्नोग्राहियों के लिए 13 अप्रैल 2022 को दोपहर 3 बजे लाइट हाउस प्रोजेक्ट्स की वेबकास्टिंग और पाँचवे वेबिनार सत्र का आयोजन हि ्राप्त अज्ञयन्त्र का वबकास्टिंग और पाँचवे वेबिनार सत्र का आयोजन कि जाएगा। इस बार, वर्चुअल दौरे के माध्यम से एतएचपी चेत्रई की लाइव प्रगति को दिखाया जायेगा।

सत्र में शामिल होने के लिए https://pmayu.webex.com/pmayu/j.php... पर क्लिक करें

यहाँ लाइव देखें: - https://youtu.be/uj-laNh6qlU

अधिक जानकारी के तिए https://ghtc-india.gov.in/ पर जाएं |

हम आपकी भागीदारी के लिए उत्सुक है।

#HousingForAll #PMAYUrban #GHTCIndia #LHP #TransformingLives #TransformingUrbanLandscape #ConstructionTechnology #LightHouseProjects #LHPChennai #Technograhis



