







Ministry of Housing & Urban Affairs
Government of India

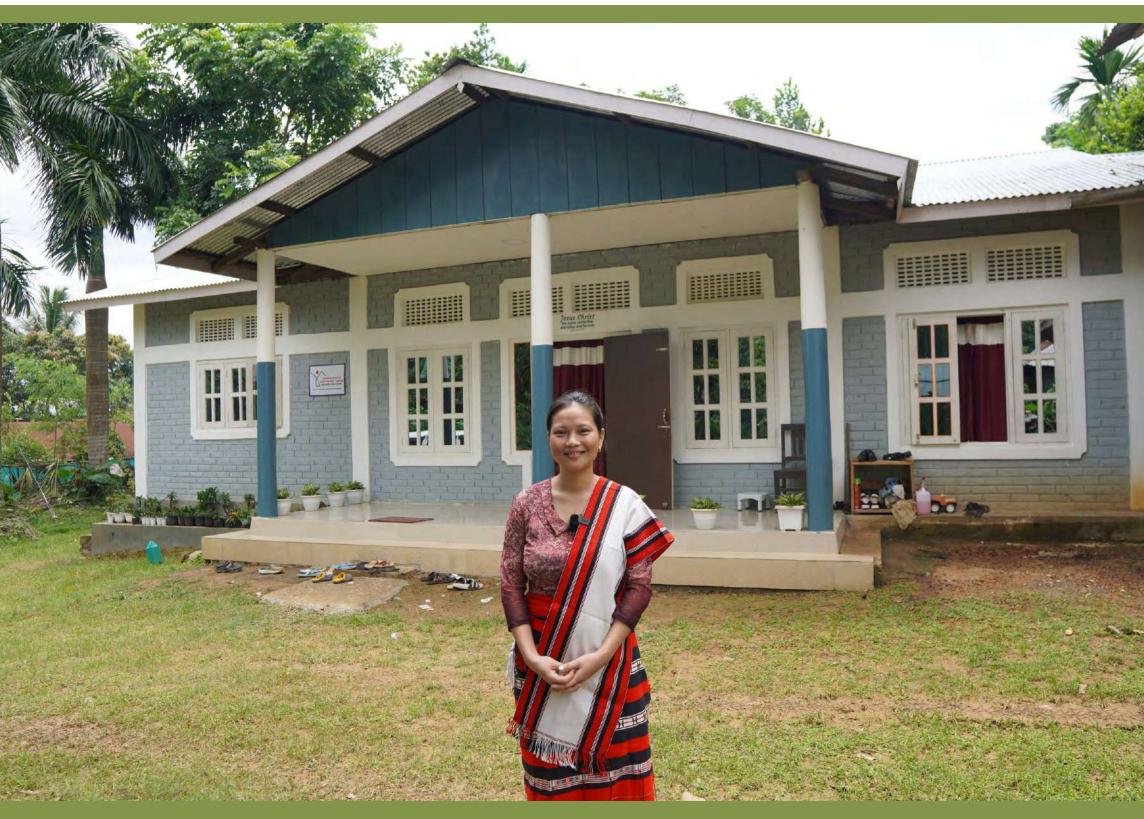






The all-round work that is being done to achieve this goal of housing for all is bringing about a major change in the lives of crores of poor and middle class families. These houses are boosting the confidence of the poor. These houses are augmenting the capabilities of the youth of the country. Many doors are opening together with the keys of these houses. When someone gets the key to the house, it is not limited to just the door or the four walls. When the key to the house comes in the hand, it opens the door for a dignified life and a secure future. The property rights open the door of savings and the growth in one's life. It opens the door for a new identity among 5-25 people, in the society and the fraternity. A sense of respect is restored. Confidence thrives. These keys are also opening the doors of people's development and progress. Not only that, it may just be a key to the door, but it also opens the locks of the mind and he starts cherishing new dreams, moves forward with a new resolution and weaves dreams of doing something in life. This key has such power.

- Hon'ble Prime Minister



PMAY(U) Beneficiary: Achuile Zeliang Jalukie, Nagaland

## FROM THE MINISTER'S DESK

#### हरदीप एस पुरी HARDEEP S PURI





Message

आवासन और शहरी कार्य मंत्री पेट्रोलियम एवं प्राकृतिक गैस मंत्री भारत सरकार

Minister of Housing and Urban Affairs; and Petroleum and Natural Gas Government of India

The Pradhan Mantri Awas Yojana (Urban) (PMAY-U) was launched by the Hon'ble Prime Minister in June 2015 with the aim of providing a *pucca* house to eligible beneficiaries of urban India. Today, we are marking the 7<sup>th</sup> anniversary of PMAY-U. It has been a momentous journey of challenges overcome, milestones reached and achievements celebrated. Under the leadership of Hon'ble Prime Minister, Shri Narendra Modi, since 2015 the country has undertaken the most comprehensive, planned urbanisation programme undertaken anywhere in the world through the flagship missions of PMAY-U, Swachh Bharat Mission, Smart Cities Mission and Atal Mission for Rejuvenation and Transformation.

Under PMAY-U today, Ministry of Housing and Urban Affairs has sanctioned more than 1.22 crore houses, out of which over one crore houses have been grounded for construction and more than 60 lakh houses have already been delivered to beneficiaries.

Intervention of new age technologies which are more efficient than the conventional construction methods and provide houses that are sustainable, safer and quality driven, have also played a crucial role in the implementation of PMAY-U. I would also like to thank our beneficiaries, who are at the core of the mission. Their trust in us acted as a catalyst that spurs us to work towards our goal.

On the occasion of 7<sup>th</sup> anniversary of PMAY-U, Ministry of Housing and Urban Affairs has prepared this e-book highlighting the achievements in these seven years of the Mission. I would like to thank and congratulate the officials of the Ministry, State Governments, all stakeholders and the beneficiaries who have been an integral part of this glorious seven years of Pradhan Mantri Awas Yojana-Urban.

(Hardeep S Puri)

New Delhi 25 June, 2022



PMAY(U) Beneficiary: Sutharam Ramanjaneyulu Ongole, Andhra Pradesh

# **MESSAGE FROM SECRETARY (HUA)**

मनोज जोशी सचिव Manoj Joshi Secretary







भारत सरकार आवासन और शहरी कार्य मंत्रालय निर्माण भवन, नई दिल्ली—110011 Government of India Ministry of Housing and Urban Affairs Nirman Bhawan, New Delhi-110011



#### **MESSAGE**

We at Pradhan Mantri Awas Yojana (Urban) are celebrating seven years of transforming lives of people. 25<sup>th</sup> June 2022 marks the seventh anniversary of PMAY-U and on this occasion, I am happy to share with the readers this publication which takes you to the journey of the Mission from the start till now.

PMAY-U celebrates the never-dying spirit of beneficiaries and the unending support of States/UTs. Our beneficiaries form a vital role in the implementation of the Mission and this publication widely encapsulates the journey and emotions that the families undergo after moving into their dream house. The concerted efforts of all the stakeholders at Centre, State & UT level have led the Mission into its seventh successful year.

The Ministry is fully committed to realise Hon'ble Prime Minister's vision of 'Housing for All'. Over the years, we have adopted new reforms and measures so that the benefits of the Mission reach maximum people. A house with basic amenities has dynamic interlinking impacts on the life of family. It improves their quality of living by giving them access to better health, education, and livelihood, apart from social recognition and respect.

In these seven years, PMAY-U has transformed the lives of millions of beneficiaries, for whom a house was once a distant dream. During my interactions with these families, I am told how their lives have got a new meaning after moving into the pucca house.

I appreciate the efforts put in by 'Housing for All' Mission Directorate in compiling the publication on this momentous occasion. My compliments to the States/UTs who have left no stone unturned in the implementation of the scheme.

Manoj Joshi)

New Delhi 25<sup>th</sup> June, 2022



PMAY(U) Beneficiary: Kaveri M Kumbar Davanagere, Karnataka

# **ABOUT PMAY(U)**

Ministry of Housing and Urban Affairs (MoHUA) launched the Pradhan Mantri Awas Yojana - Urban (PMAY-U) on 25th June, 2015, as a flagship Mission of Government of India. It addresses urban housing shortage among the Economically Weaker Section (EWS)/Low Income Group (LIG) category including the slum dwellers by ensuring a pucca house to eligible urban households. An eligible beneficiary family will comprise of a husband, wife, unmarried sons and/or unmarried daughters. The beneficiary family should not own a pucca house (an all-weather dwelling unit) either in his/her name or in the name of any member of his/her family in any part of India. An adult earning member (irrespective of marital status) can be treated as a separate household.

PMAY-U adopts a demand driven approach wherein the housing shortage is decided based on demand assessment by States/Union Territories (UTs). All houses built or acquired or purchased under the Mission have basic amenities like kitchen, water supply, electricity and toilet. The Mission promotes women empowerment by providing the ownership of houses in the name of female member or in joint name. Preference is also given to women (with overriding preference to widows, single women), persons belonging to Scheduled Castes/Scheduled Tribes/Other Backward Classes, Minorities, Persons with disabilities and Transgender.

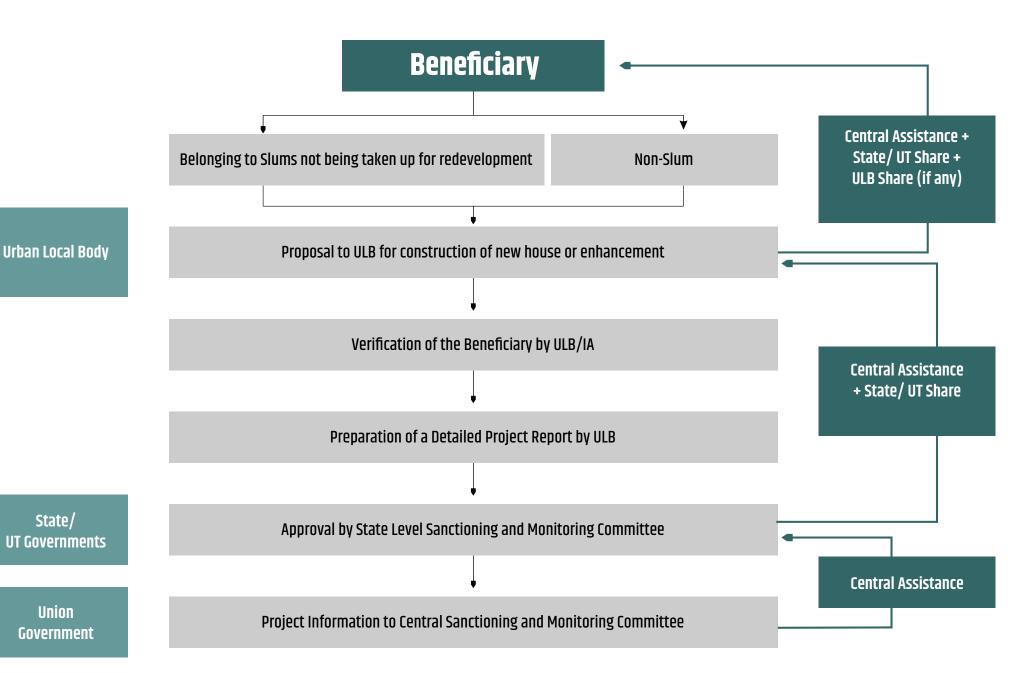
The Scheme is being implemented through the following four verticals:

Subsidy for Beneficiary-Led Individual house construction or enhancement	Affordable Housing in Partnership	"In-Situ" Slum Revelopment	Affordable Housing through Credit Linked Subsidy Scheme*
<ul> <li>For Individuals of EWS category requiring individual house</li> <li>State to prepare a separate project for such beneficiaries</li> <li>No isolated/splintered beneficiary to be covered</li> </ul>	<ul> <li>With private sector or public sector including Parastatal agencies</li> <li>Central Assistance per EWS house in affordable housing projects where 35% of constructed houses are for EWS category</li> </ul>	<ul> <li>Using land as a resource</li> <li>With private participation</li> <li>Extra FSI/TFR/FAR if required to make projects financially viable</li> </ul>	A. Interest subsidy for EWS & LIG  - EWS: Annual household income up to ₹3,00,000 & house sizes upto 30 sq.m  - LIG: Annual Household income from ₹3,00,000 to ~6,00,000 & house sizes upto 60 sq.m  B. Interest subsidy for MIG  - MIG: Annual household income up to ₹6,00,000 to ₹12,00,000 & house sizes upto 160 sq.m  - MIGII: Annual Household income from ₹12,00,000 to ₹18,00,000 & house sizes upto 200 sq.m

- (I) "In-situ" Slum Redevelopment (ISSR): Slum redevelopment grant of ₹1 lakh per house is admissible for all houses built for eligible slum dwellers under the vertical of In-situ Slum redevelopment using land as Resource with participation of private developers.
- (ii) **Credit Linked Subsidy Scheme (CLSS)**: An interest subsidy of 6.5%, 4% and 3% on loan amount upto ₹6 lakh, ₹12 lakh and ₹18 lakh are available for the eligible beneficiaries belonging to Economically Weaker section (EWS)/Low Income Group (LIG), Middle Income Group (MIG)-I- and Middle-Income Group (MIG)-II respectively seeking housing loans from Banks, Housing Finance Companies and other such institutions.
- (iii) **Affordable Housing in Partnership with public or private sector (AHP):** Central Assistance of ₹1.5 lakh per EWS house is provided by Government of India in projects where at least 35% of the houses in the projects are for EWS category and a single project has at least 250 houses.
- (iv) **Beneficiary-led individual house construction or enhancement (BLC):** Under this vertical, Central Assistance of ₹1.5 lakh is available to individual eligible families belonging to EWS categories.

The Mission is implemented as a Centrally Sponsored Scheme (CSS) except the CLSS vertical of PMAY-U Mission which is being implemented as a Central Sector Scheme. The Mission covers the entire urban area consisting of all statutory towns and areas falling within Notified Planning/ Development area under the jurisdiction of an Industrial Development Authority/ Special Area Development Authority/ Urban Development Authority or any such Authority under State legislation which is entrusted with the functions of urban planning and regulations. So far 4.476 cities/towns of 35 States/UTs have been included under PMAY-U.

## IMPLEMENTATION STRUCTURE



State/

**UT Governments** 

Union Government

- **Decentralisation** and **devolution** of power in implementation structure.
- States/Union Territories have the freedom to decide their share and on-ground details of the project.
- **Convergence** of PMAY(U) with infrastructure and livelihood programs/ and policies of Central and State/UT Governments.

## **ECO-SYSTEM OF HOUSING FOR ALL**

#### **Project Management Reforms**

- •Direct Benefit Transfer
- •Geo Tagging of all construction stages of houses
- •Management Information System
- •PMAY(U) Dashboard

#### **Fiscal Reforms**

- •Infrastructure Status to Affordable Housing
- •100% Foreign Direct Investment in affordable housing sector
- •Amendments in income tax rates
- Amendments in GST rates

#### Administrative Reforms

- Devolution of power to States/ UTs
- •Earmarking land for affordable housing
- Single Window Clearance
- Building Controls/ Permissions



Housing For All



#### **Financial Reforms**

- National Urban Housing Fund
- Budgetary and Extra Budgetary Resources
- Affordable Housing Fund
- •COVID response: AatmaNirbhar Bharat Fund

# Construction technology Reforms

- •Technology Sub Mission under PMAY(U)
- ·Global Housing Technology Challenge- India
- Light House Projects & Demonstration Housing Projects
- •Indian Housing Technology Mela





#### **Regulatory Reforms**

- •Real Estate (Regulation and Development) Act, 2016
- •Enhancement in Ease of Doing Business Rankings: Online Building Permit System

#### **Social Reforms**

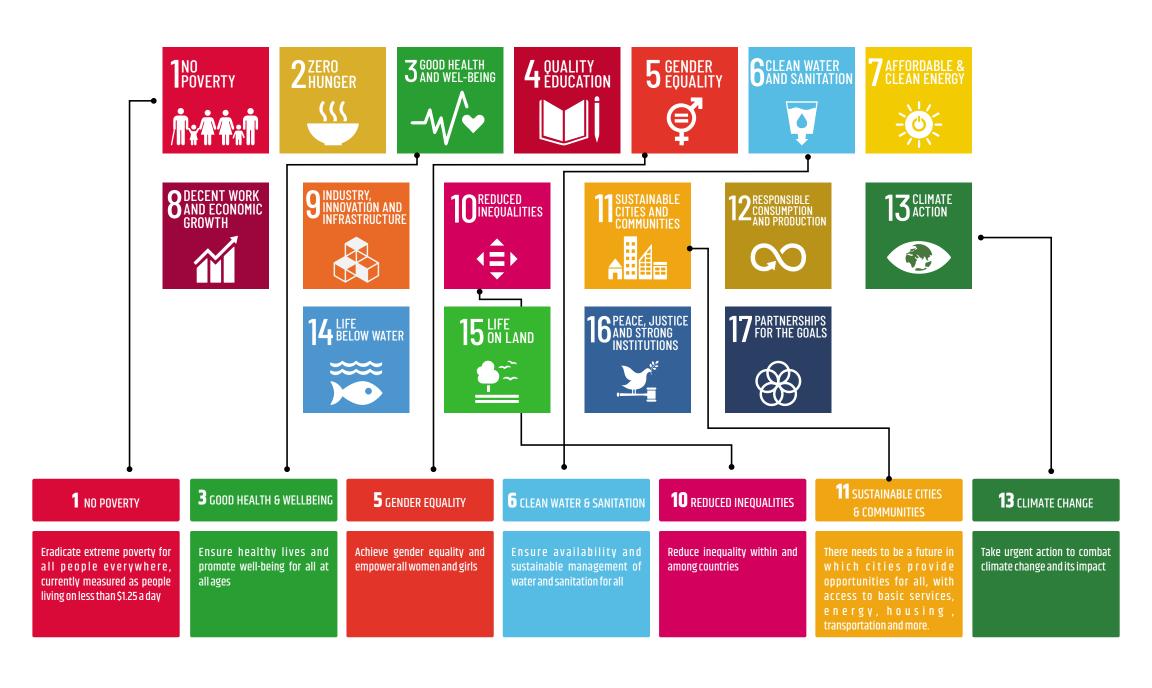
- Angikaar: A socio-economic change management campaign
- •Requirement of Social Audit for PMAY(U) projects



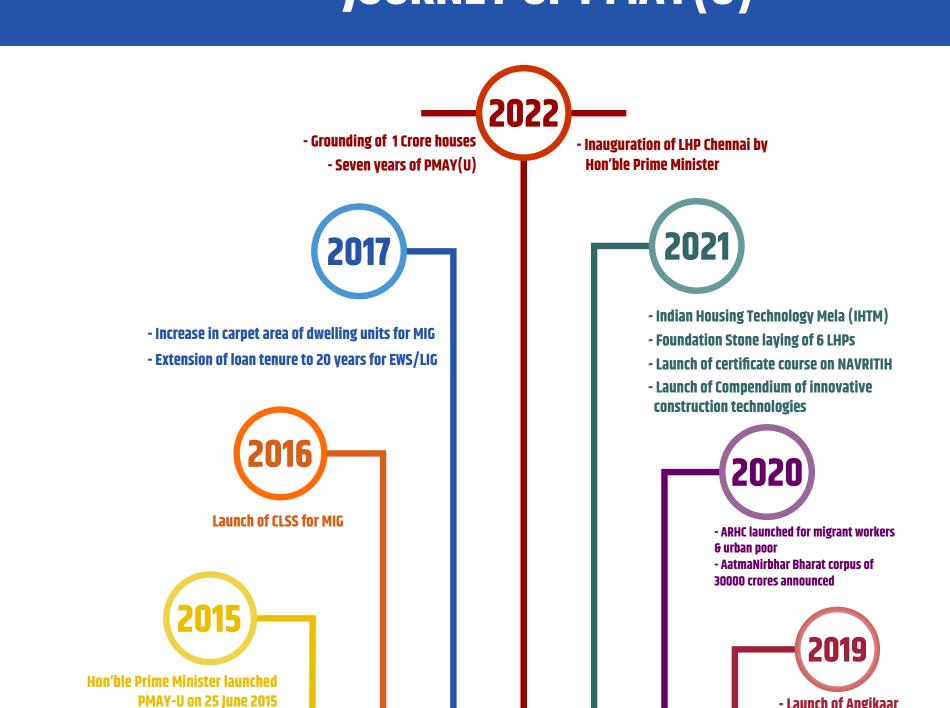
PMAY(U) Beneficiary: Phoyang Rangjang Khonsa, Arunachal Pradesh

# ADDRESSING SDGs THROUGH PMAY(U)

# SUSTAINABLE GEALS DEVELOPMENT GEALS



# **JOURNEY OF PMAY(U)**



**Hon'ble President's Announcement of** 

'Housing for All'



- Announcement of GHTC and CTI at the **World Urban Forum, Kualalumpur** 

- Launch of Angikaar

- CTI-2019

- Launch of CLAP (CLSS Portal)

- Inclusion of planning area/ development authority/industrial area
- Increase in carpet area of dwelling units for MIG 1 to 160 sqm and MIG 2 to 200 sqm
- Launch of NUHF & AHF

# **ACHIEVEMENTS AT A GLANCE**















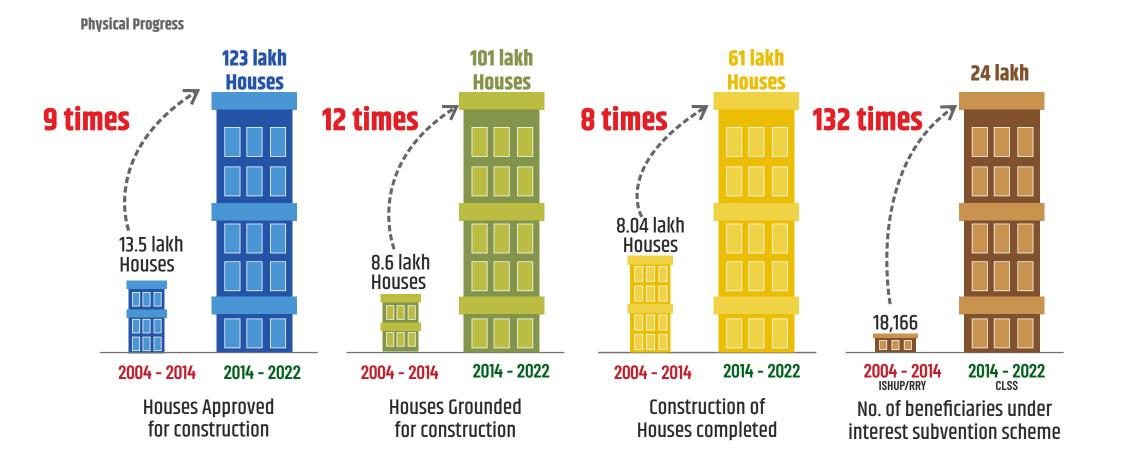


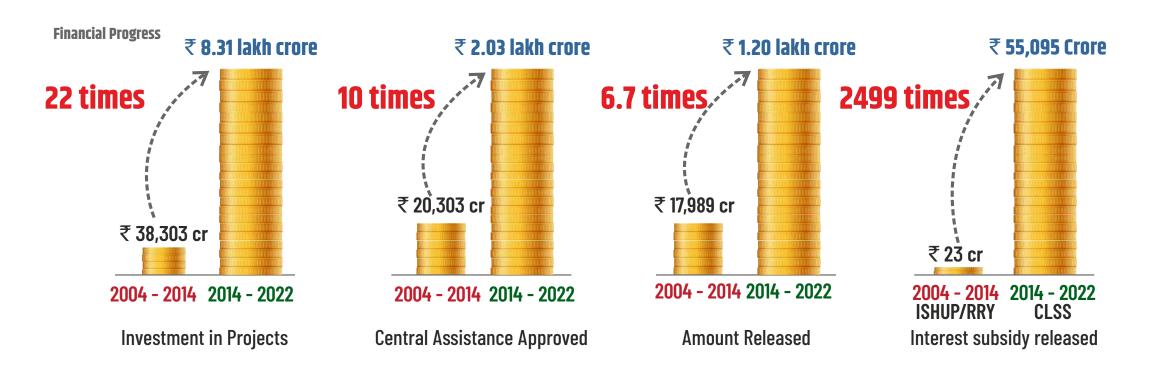


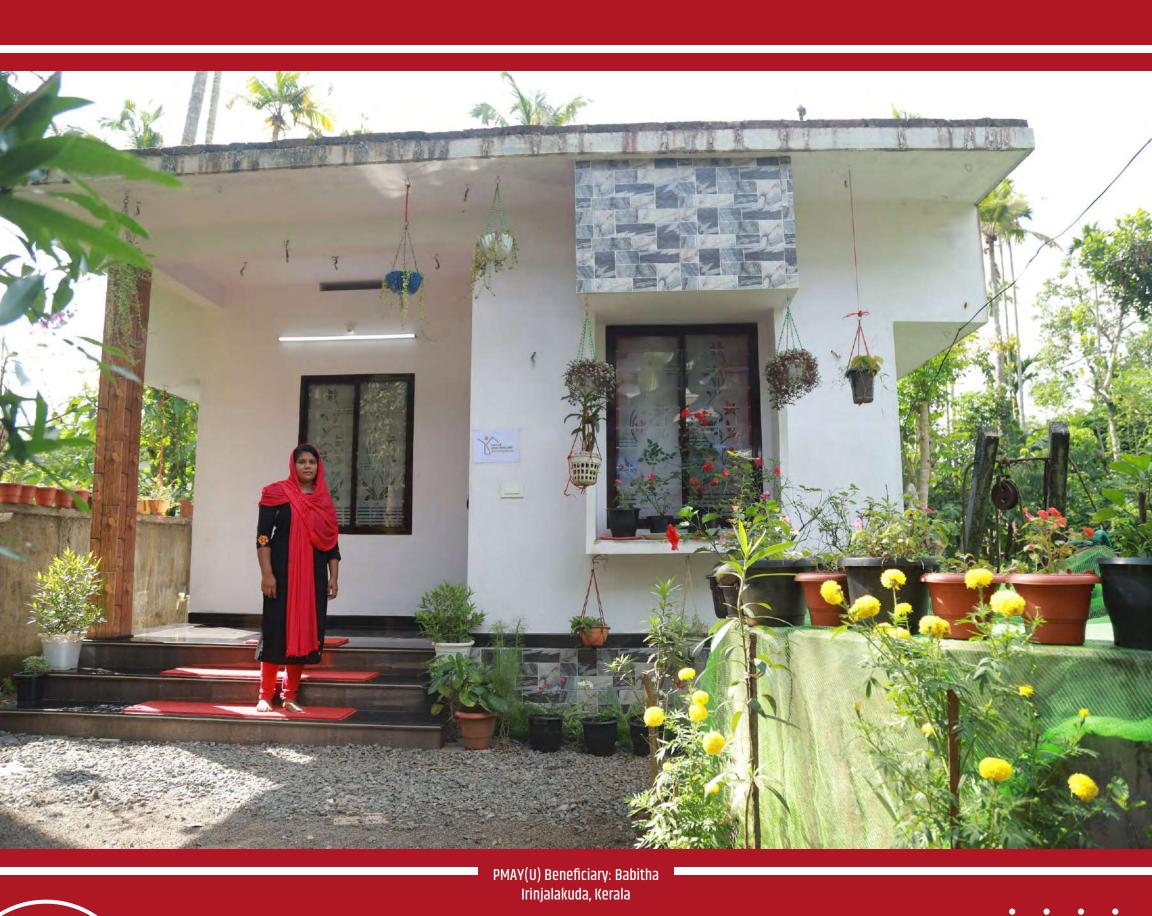




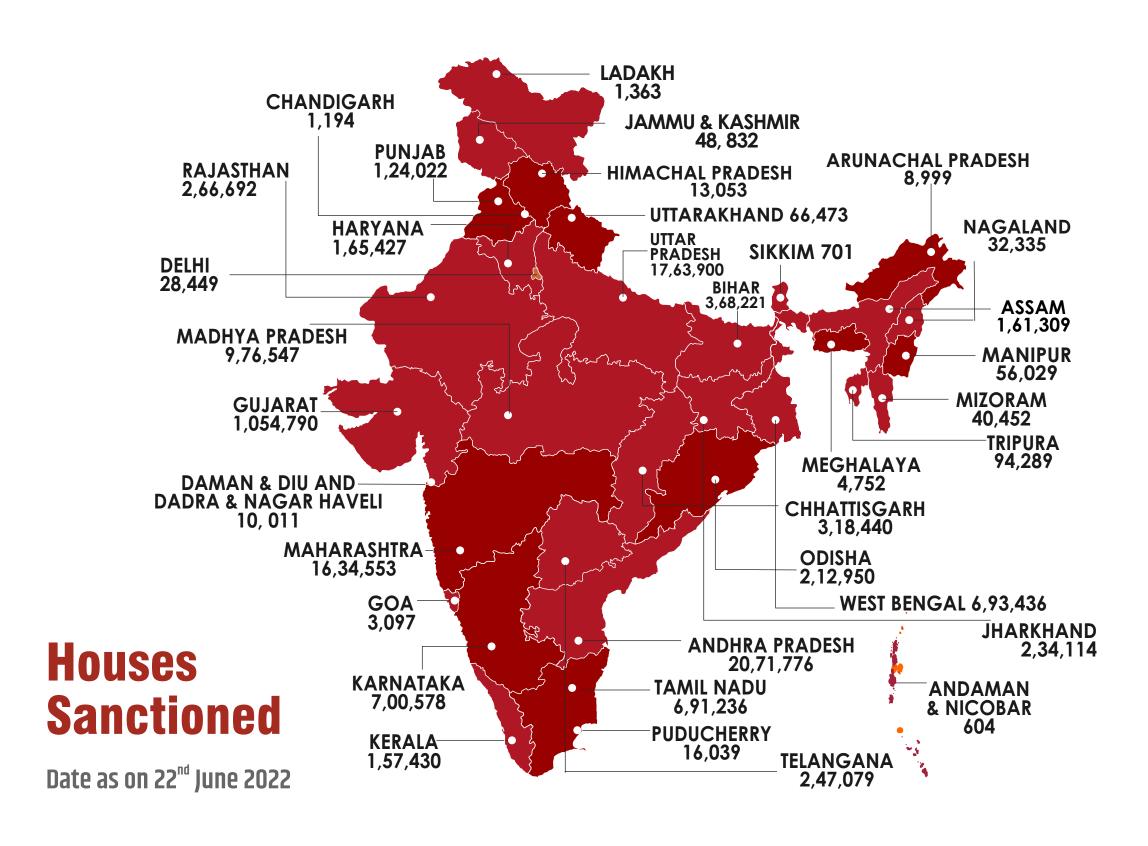
## **COMPARITIVE PROGRESS**





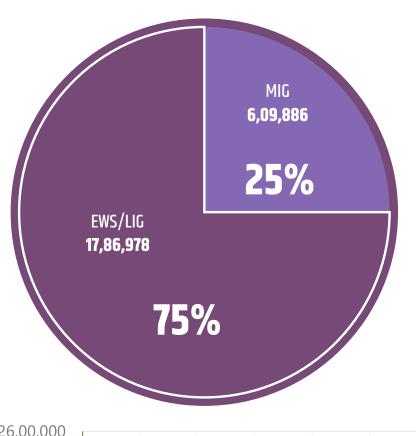


## STATE WISE SANCTIONED HOUSES

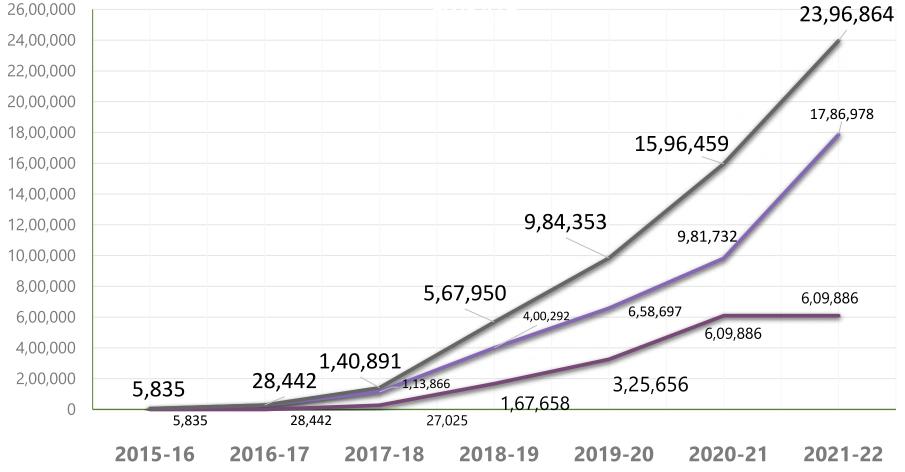




# **CREDIT LINKED SUBSIDY SCHEME**







**→**MIG **→**EWS/LIG **→**Total

## **OUTCOMES**

#### **Social Outcomes**



**94** Lakh
Houses on the name
of women/joint ownership



Lakh
MIG Beneficiaries receiving interest subvention



18 Lakh
Houses to households
from minority groups

#### **Economic Outcomes**



<130
Sectors of the economy impacted



96.3

Lakh Metric Ton Steel Consumed



426
Lakh Metric Ton
Cement Consumed





240
Lakh Jobs
Created

- Relevance: PMAY(U) is one of the largest housing programmes in the world. It is highly relevant and aligned with national development priorities and global goals for providing 'Housing for All'. Recognizing the need for tenure security, the Scheme acknowledges the demand for housing across EWS, LIG and MIG sectors and aims to build adequate physical and social infrastructure by providing all-weather 'pucca' housing units with water, kitchen and toilet facilities.
- Effectiveness: PMAY(U) has scaled up the program for delivery of affordable housing units multiple times compared to its' predecessor schemes and brought its focus towards 'Housing for All'.
- Efficiency: Unlike earlier Schemes of housing development, PMAY(U) follows a multi-pronged approach and provides a set of options to beneficiaries to choose from as per their eligibility (one out of the four verticals) and preference. It builds up on a bottom-up demand driven approach. The Scheme is highly relevant and has appropriately developed

- different design elements over the time to meet the needs of the different target groups for housin g and dignified living.
- Institutional Sustainability: The Scheme adopts a demand driven approach strengthening the ethos of cooperative federalism. States/UTs desirous of participation in the Scheme were to sign a Memorandum of Agreement (MoA) with Union Government agreeing to reforms and modalities to implement PMAY(U) as mandated in the guidelines. Thirtyfive States/UTs have signed MoA with Union Government through Ministry of Housing and Urban Affairs (MoHUA) for implementation of the Scheme.

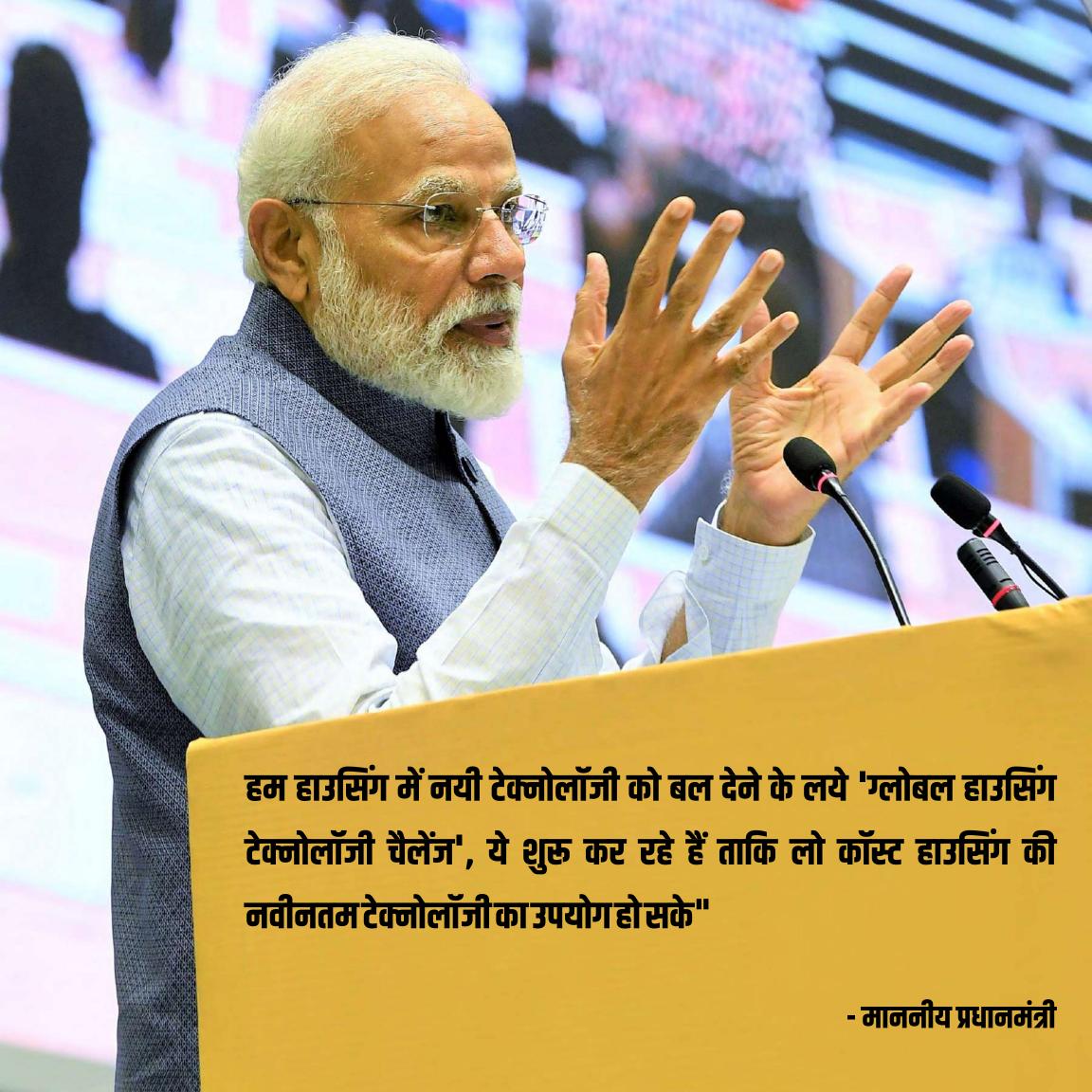
All powers of appraisal, approval and modalities of implementation is delegated to States/UTs. State Level Sanctioning and Monitoring Committee (SLSMC), chaired by Chief Secretary, approves the projects and forwards it to the Ministry for consideration of release of Central Assistance. Pursuing the vision of "Housing for All", States/UTs were mandated to conduct demand survey with full coverage based on defined eligibility criteria.



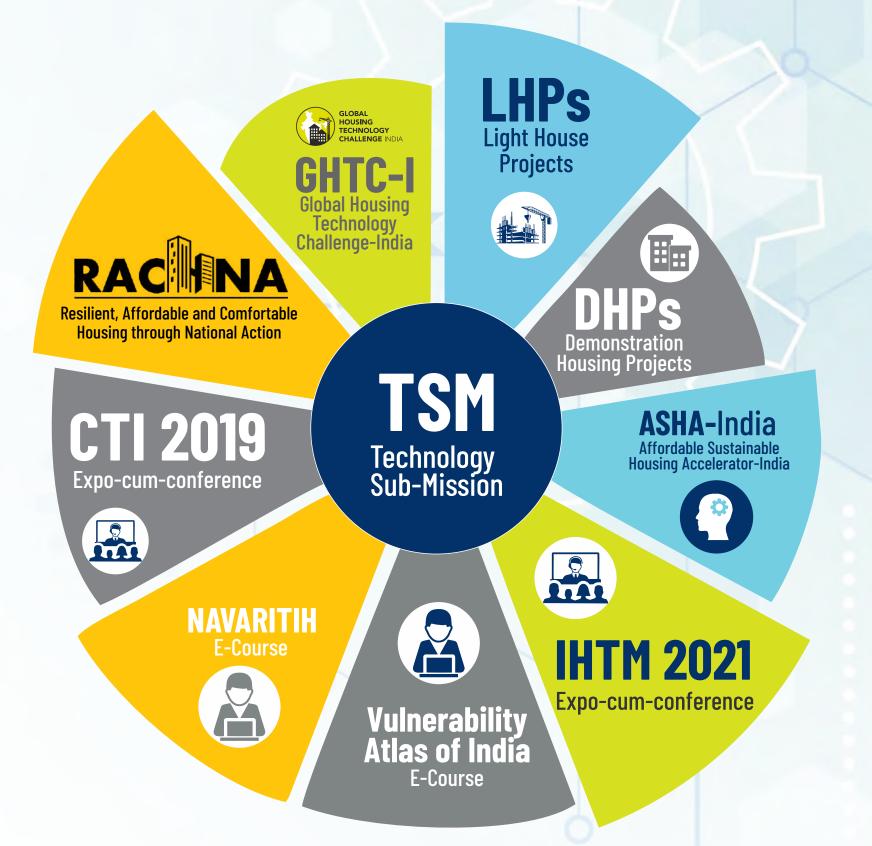
PMAY(U) Beneficiary: Rabiya Lucknow, Uttar Pradesh



PMAY(U) Beneficiary: Lujikulu Burma Dimapur, Nagaland



## **TECHNOLOGY SUB-MISSION**



**Promotion of Innovative construction Technologies** 

## **GLOBAL HOUSING TECHNOLOGY CHALLENGE- INDIA**



#### Launched in 2019 to select best global innovative construction technologies through a challenge process

#### Construction Technology India EXPO-CUM-CONFERENCE



- Biennial Conference including prototypes exhibition & panel discussions
- Promotion of Innovative Construction Technologies
- Participation of 2,500+ delegates from 32 Countries

### PROVEN DEMONSTRABLE TECHNOLOGIES



- 54 proven innovative technologies from 25 countries identified
- 6 Light House Projects (LHPs) being constructed in Agartala, Chennai, Indore, Lucknow, Rajkot and Ranchi
- LHPs are serving as Live Laboratories for learning and different aspects of transfer of technologies

54

## POTENTIAL FUTURE TECHNOLOGIES



- Affordable Sustainable Housing Accelerator-India
- Incubation and acceleration support Indian Potential Future technologies
- ASHA-India centres setup in 4 IITs and CSIR-NEIST Jorhat

**GHTC-India** launched on 14<sup>th</sup> January 2019

**CTI-2019:** Hon'ble prime Minister inaugurated the CTI Expo on 2<sup>nd</sup> March 2019

**Light House Projects** Foundation stone laid by Hon'ble Prime Minister in January 2021

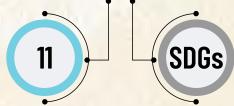


identified through GHTC-India

Proven innovative technologies

Post-prototype technologies selected for acceleration support under ASHA-India

Pre-prototype technologies selected for incubation support under **ASHA-India** 



Contribution towards achieving the SDGs, **New Urban Agenda & Paris Climate Accord** 

#### **Compendium**





Hon'ble Prime Minister declared 2019-20 as the 'Construction Technology Year'

#### **GHTC IN NUMBERS**

COMPONENT 1 **Construction Technology India:** Expo-cum-Conference

> Delegates **Countries**

> National/ Technical International Speaker Sessions

> > Indian

Support Partner

COMPONENT 2 **Identifying Proven Innovative Technologies** for Light House Projects

Innovative **Broad Groups Technologies** Shortlisted

Cost

Technologies **Technologies**PACS Certification

by BMTPC

29 **Technologies** SoRs Issued

**Houses in 6 LHPs** 

Distinct LHP

**COMPONENT 3 Supporting Potential Domestic Technologies Through ASHA-India** 

Shortlisted Pre-protype Technologies being incubated at IITs

Incubation Centres

Shortlisted Post-Prototype Technologies 37

**Technologies** Accelerated

Best Post-protype Technologies

e-Courses

**Visitors** 

**Exhibitors** 

**N** 3.500+

(New, Affordable, Validated, Research Innovation Technologies for Indian Housing)

#### **Certificate Course on Innovative Construction Technologies**

NAVARITIH is a certificate course to build capacities amongst building professionals about new, emerging building materials and technologies for housing and building construction.



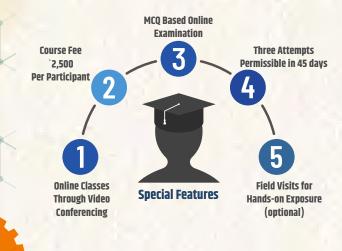
Scan Here & Register

#### **Objectives**

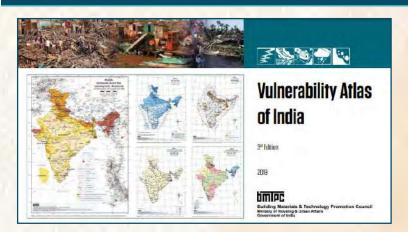
Familiarise professionals with latest materials and technologies being used worldwide for housing

Provide awareness about state of art materials & technologies and construction methodologies

Provide exposure to executed projects where such materials and technologies have been implemented



#### E-Course on Vulnerability Atlas of India



The e-learning course offers awareness and understanding about natural hazards, helps identify regions with high vulnerability with respect to various hazards (earthquakes, cyclones, landslides, floods) and specifies district-wise level of damage risks to the existing housing stock.



#### This unique E-Course offers

Awareness and understanding about natural hazards namely, earthquakes, wind/cyclones, landslides, floods

Help individuals in evaluation of multi-hazard profile of the region and incorporating them in DPRs, Design Basis and Tenders

District-wise damage risk levels to the existing housing stock

Basic understanding of earthquake, flood & cyclone resistant housing & disaster mitigation measures

#### **Special Features**





# LIGHT HOUSE **PROJECTS**

under **GHTC-India** 



Light House Projects (LHPs) are housing projects being constructed using shortlisted proven innovative technologies under GHTC-India, suitable to the diverse geo-climatic and hazard conditions of the region.



Technology

**Precast Concrete Construction System** -Precast Components **Assembled at Site** 

Technology

**Monolithic Concrete Construction using Tunnel Formwork** 

Technology

**Prefabricated Sandwich Panel System with Pre-engineered Steel** Structural System

Technology

Stay In Place PVC Formwork with **Pre-Engineered Steel** Structural System

Technology

**Precast Concrete Construction System** - 3D Volumetric

1,008

Technology

Light Gauge Steel Framed (LGSF) System with Pre-engineered Steel Structural System

**Overall Progress** 

100%

**Overall Progress** 

92%

**Overall Progress** 

**73%** 

**Overall Progress** 62%

**Overall Progress** 50%

**Overall Progress** 



# Change Agents of Innovative and Sustainable Construction Technologies

# 35,000+ TECHNOGRAHIS ENROLLED

MoHUA has initiated an Online Enrolment Drive all stakeholders to register themselves as Technograhis to visit these pilot projects, learn the use of latest innovative technologies, innovate and adapt as per their local needs and contexts for construction technologies to be adopted as 'Make in India'. Technograhis are acting as catalysts to transform the urban landscape for 'New Urban India' for fulfilling the vision of 'AatmaNirbhar Bharat'. Hon'ble Prime Minister also enrolled as Technograhi





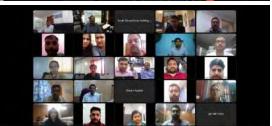
# **LHP: LIVE LABORATORIES**WEBINAR SERIES & e-LEARNING FOR TECHNOGRAHIS

MoHUA is hosting series of 'e-Learning sessions and webcasting of LHP construction process' webinar to widespread the knowledge about the technologies, construction processes, sustainability, and mass-cum-fast construction to Technograhis. The main purpose is to create awareness of the different technologies used in the construction of LHPs through technical session and webcasting of work at site. The e-Learning sessions and webinars are plannedare being conducted in partnership with BMTPC and GIZ (Climate Smart Building Cell).

















# **DEMONSTRATION HOUSING PROJECTS (DHPs)**

DHPs under PMAY(U) are model housing project built with new/alternate technologies to promote use of such technologies & provide on-site orientation to practitioners in housing sector

NELLORE IDHRA PRADESH





Project of 36 (G+1) houses used for Social Welfare Activities

**TECHNOLOGY** 

Glass Fibre Reinforced Gypsum (GFRG) Panel System

**PROJECT PROFILE** 

- Carpet area of each unit: Type A: 31.06 sqm., Type B: 29.39 sqm., Type C: 56.74 sqm
- Built area of each unit: Type A: 45.51 sqm., Type B: 42.24 sqm., Type C: 77.86 sqm
- Each Unit consists of One living room, one bedroom, kitchen, one separate bath and WC
- One Community Building in an area of 6900 sq.ft
- Includes Earthquake Resistant Features

UBANESWAR ODISHA



Project of 36 (G+2) houses used as Sports Hostel & for other Social Welfare Activities

**TECHNOLOGY** 

Expanded Polystyrene Core Panel System with Sprayed Concrete Structural Plaster for wall/slab/roof PROJECT PROFILE

- Carpet area of each unit: 23.97 sqm
- Built up area of each unit including common area: 34.10 sqm
- Each Unit consists of One living room, one bedroom, cooking space, Bath and WC

HAR SHARIF BIHAR



Project of 36 (G+2) houses used as Sports Hostel & for other Social Welfare Activities

**TECHNOLOGY** 

Structural Stay-in-Place Steel Formwork System (Coffor)

**PROJECT PROFILE** 

- Carpet area of each unit: 29.67 sqm
- Built area of each unit including common area: 45.54 sqm
- Each residential unit consists of a multi-purpose room, a bedroom, kitchen, separate bathroom and W.C





HYDERABAD TEI ANGANA

LUCKNOW JTTAR PRADESH







Project of 32 (G+3) houses used as Training Hostel

**TECHNOLOGY** 

Structural stay in place steel formwork system - (16 Dus) Light Gauge Steel Framed Structure (LGSFS) - (16 Dus)

#### PROJECT PROFILE

- Carpet area of each unit: Type A: 38.74 sqm.; Type B: 39.50 sqm
- Built up area of each unit including common area: 53.18 sqm. and 53.10 sqm
- Each Unit consists of One living room, two bedroom, kitchen and two Bath with WC

Project of 40 (G+1) houses used on rental basis for hospital Patients 8 their attendees

TECHNOLOGY

Stay in Place EPS based Double Walled Panel System (SISMO)

**PROJECT PROFILE** 

- Carpet area of each unit: 26.40 sqm
- Built up area of each unit including common area: 42.98 sqm
- Each Unit consists of One living room, one bedroom, kitchen, Bath and WC
- Special Features: LED lighting and rain water harvesting

Project of 40 (G+3) houses for Working Women's Hostel on rental basis

**TECHNOLOGY** 

Light Gauge Steel Frame (LGSF) System with Cement Fibre board on both side of walls and infill of rock wool

PROJECT PROFILE

• Carpet area of each unit: 26.57 sqm

- Built up area of each unit: 31.51 sqm
- Other Provisions: Medical Room-1, Guest Room-1, Care Taker Room-1, Daycare Centre 1, Common Room/Dining Room-1 and Laundry-1
- Special Features : Rain Water Harvesting, Solar Street Lights, fire fighting services

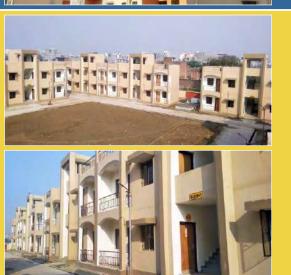
Project of 40 (G+1) houses used for Shelter for Destitute Women

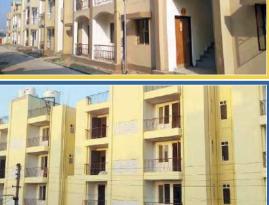
TECHNOLOGY

Stay In Place Formwork System - Structural Stay In Place Steel Formwork System (Coffor)

PROJECT PROFILE

- Carpet area of each unit: 21.86 Sq.mts.
- Built up area of each unit including common area: 1833.74 Sq.mts.
- Each unit consist of room with attached toilet and Pantry
- Other provisions: Guest Room Medical Room, Care Taker Room, Common Dining Room with Kitchen and Activity Room









# **UPCOMING DEMONSTRATION HOUSING PROJECTS (DHPs)**

#### **BHOPAL, MADHYA PRADESH**





Project of 40 (G+3) houses to be used for Sports Hostel on Rental Basis

TECHNOLOGY

(Insulated Concrete Forms (ICF) – M/s Reliable Building Solutions)

#### **GUWAHATI, ASSAM**





Project of 40 (G+3) houses to be given to Contractual Safai karamcharis of Guwahati Municipal Corporation

**TECHNOLOGY** 

Light Gauge Steel Frame Structure with V-infill concrete wall
– M/s Prompt Building Solution

#### JAMMU, J&K





Project of 40 (G+2) houses to be used for Sports Hostel on Rental Basis

**TECHNOLOGY** 

(EPS core panel using Quikbuild Panels as walling and EPS roof/slab Panel with concreting – M/s ACEPL TPEPL)

#### **AYODHYA, UTTAR PRADESH**





Project of 40 (G+2) houses to be used for Destitute Widow Ashram & Orphanage on Rental Basis

**TECHNOLOGY** 

(Light Gauge Steel Frame structure with cement fiber board and mineral wool as in-fill – M/s Step-up Construction, )

#### **TIRUPPUR, TAMIL NADU**





Project of 40 (G+3) houses to be used for Working Women Hostel & Widow Home on Rental Basis

TECHNOLOGY

(Precast Concrete Construction System – M/s Teemage Builders (P) Ltd.)

#### AHMEDABAD, GUJARAT





Project of 40 (G+3) houses to be given to PMAY(U) Beneficiaries

TECHNOLOGY

Integrated Hybrid Solution-ONE comprising of load bearing mortarless construction using interlocking blocks, planks & joists roofing system, ferrocement panels for sunshades, staircase steps, etc.- M/s Adlakha Associates Pvt. Ltd.)

Project of 40 (G+2) houses to be used for Rental Basis (Working Women Hostel)



(Flyash EPS Cement Sandwich Panels with steel structure – M/s I. Kronu & Co.)

## **INDIAN HOUSING TECHNOLOGY MELA 2021**



An exhibition on indigenous, innovative construction technologies, named as Indian Housing Technology Mela (IHTM), was organised at 'Azadi@75 - New Urban India: Transforming Urban Landscape' Conference-cum-Expo in Lucknow in October 2021. The exhibition showcased domestically developed indigenous and innovative construction technologies, materials and processes which could be useful for Beneficiary Led Construction (BLC) houses under Pradhan Mantri Awas Yojana-Urban (PMAY-U) and other low & mid-rise houses.

The exhibitors of IHTM were from across the country, from both from Private and Government sectors and represented technology providers of proven and potential technologies, manufacturers, building centres, innovators, IITs, R&D Institutes State/Local bodies, implementing agencies of PMAY(U) and agencies involved in 6 LHPs. IHTM turned out to be the biggest attraction of the Conference-cum-Expo. 83 84 technologies/materials/processes covering different aspects of construction of low to medium height houses, were displayed shortlisted during IHTM.

#### Glimpses from Hon'ble Prime Minister's visit to IHTM stalls

#### M/s Timpack Pvt. Ltd



System/Product: Bamboo mat corrugated roofing sheet & ridge cap for roofing and bamboo mat wall panels

This is a patented technology developed by Indian Plywood Industries Research & Training Institute (IPIRTI), Ministry of Environment, Forest and Climate Change & Building Materials & Technology Promotion Council (BMTPC), MoHUA. Bamboo mat corrugated sheets, ridge cap and bamboo mat board are made out of multilayer bamboo mats soaked in PU resin and pressed in hot press. It is eco-friendly, sustainable, renewable & can be made available in any part of the country.

#### M/s Mutha Industries Pvt Ltd



System/Product: Bamboo Wood

Epitome Bamboo wood is environment-friendly, natural and stronger than most hardwood in the market. The flooring is made from strand woven bamboo.

It displays higher tensile strength than many alloys of steel. It has capabilities for higher compressive strength than many mixtures of concrete. Bamboo wood flooring is an eco-friendly product. It offers durability and luxurious finish of hardwood, but without ecological damage.

**Auroville Earth Institute** 



System/product: Compressed Stabilised Earth Blocks (CSEB)

CSEB are produced from local soil mixed, stabilised with small amount of cement or lime. The mix is pressed in a mould using press machine. They are affordable, suitable for all climatic conditions and reduce carbon emissions significantly less than ordinary burnt clay bricks. The press can produce about 75 different types of blocks.

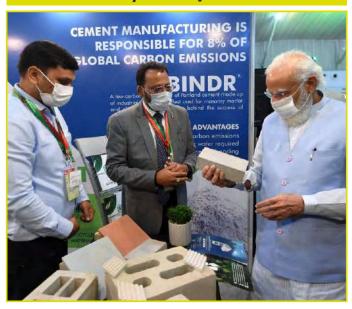
## M/s Apana Ghar



System/Product: Structural Terracotta Blocks

Structural Terracotta Blocks are made of silt and industrial wastes, green building product which may be used in building construction. This system saves time, is resource-efficient, cost effective & ideal for scattered or up to G+3 storied building.

## M/s Green Jams



System/Product: Agrocrete®, BINDR™ as Building Materials System/Product: Prefab Structural Components

Agrocrete® - made from crop residues like paddy straw, cotton stalk, bagasse, etc., & industrial by-products like slags, ashes & lime sludge. BINDR™- made using slags from various steel and ferro alloy manufacturing processes.

Agrocrete® is stronger than conventional fly ash bricks, burnt clay bricks, highly suitable for low-rise as well as high-rise constructions. BINDR™ requires less water for curing.

## M/s EPACK Polymers Pvt Ltd.



Pre-Engineered Steel Building system, LGSF System and Insulated Sandwich Panels. Steel structures have lower maintenance cost & last for years (average life of 50-100 years). Use of standard components reduce the engineering, production, and installation time, with overall saving in money and time. Prefabricated buildings produce less waste during the building construction process. Prefabricated Building Construction reduce total construction time on a project by more than 50%.

## M/s Eco Vision Industries

#### **System/Product: Green Building Technology**

Made out of 50% fly-ash, mixture of cement, water and preformed foam. The blocks replace conventional bricks/blocks. It doesn't require sand-cement mortar. A precast concrete flooring/roofing system for single and multi-storey buildings. The system is energy efficient, recyclable, environment-friendly, costeffective and time saving. Pre-fabrication in factory leads to better quality control.



## M/s Samudyam Projects Pvt Ltd

#### System/Product: Glass Fibre Reinforced Concrete (GFRC)

GFRC is one of the most versatile building materials available to architects and engineers. It is making a significant contribution to the economics, technology, and aesthetics of modern construction worldwide for over 50 years.

It is weather-resistant, suitable in earthquake prone areas, environment-friendly, easy to handle, can be installed rapidly and transported easily. The plant can be installed near the project site if the quantum of product requirement is high.

#### **Glimpses of IHTM stalls**













# **Compendium of Indigenous Innovative Building Materials and Construction Technologies**





# **CLIMATE SMART BUILDINGS**

The Government of India and The Federal Republic of Germany, under the Indo-German Technical Cooperation, agreed to iointly promote the "Indo-German Energy Programme" (IGEN) with the aim to foster sustainability in built environment in order to use sustainable materials for Thermal comfort and in turn improve the environment and climate conditions. IGEN's programme, Climate Smart Buildings (CSB) is providing technical assistance to the Ministry for the following:

- Developing Thermal Comfort Action plan for climate resilience building for mass scale application in selected states for Affordable Housing
- Implementation of Global Housing Technology Challenge-India (GHTC-India)

# **WORKING TOWARDS THERMAL COMFORT**

## **Climate responsive building design**



Reduce the demand for air-conditioning by 30-40%



Improve the health and wellbeing of people



**Curtail 30 metric** tonnes of CO2



**Support the commitment** of GOI towards reducing the **CO2** emissions

## **OUTPUTS OF CLIMATE SMART BUILDING PROGRAMME**



Technical assistance in developing Thermal comfort action plan and Training Module for mass scale application

Easy to comply with

Easy to verify



Technical support in Implementation of Global **Housing Technology** Challenge-India (GHTC-India)



## IMPACT

- Increase Thermal Comfort by **35%**
- Capacity Building of 2500 trained professionals & Officers
- 1000 Designs variants of Thermally comfortable Housing

#### **INSTRUMENTS**

- 1. Innovative passive design
- 2. Local sustainable building material
- 3. Best available technologies in affordable housing
- 4. Capacity Building, Training Modules and knowledge products





# **Climate Smart Buildings Programme**

#### **Thermal Comfort Standard** & Action Plan





#### Replicable Design Catalogue

1000 Replicable designs for each climatic zone for mainstreaming thermal comfort in affordable housing

#### **Demonstration Projects**

Technical assistance for 25 Housing Projects on achieving thermal comfort through low- cost passive strategies.





#### LHPs performance

Monitoring, evaluation and documentation of LHP projects located in 6 cities

#### **International collaboration**

**International Universities to Support** incubators & main-stream thermal comfort into educational system





#### **Training Modules**

Training Modules for states on Thermal Comfort in 5 climatic zones

## **Capacity Building**

1400 Trained Government officials and **Professionals on Thermal Comfort** 





#### **Awareness Workshops**

Develop capacities through vocational training, material testing and awareness generation





























# **RACHNA**



RESILIENT, AFFORDABLE AND COMFORTABLE HOUSING THROUGH NATIONAL ACTION

# Trainings on Innovative Construction Technologies & Thermal Comfort for Affordable Housing

#### Context



#### **Rising global temperatures**

A frightening reality in times of extreme weather events like heat waves.



#### India's energy commitment

Housing for all mission needs to fulfill housing needs without any compromise on environmental concerns.



#### Thermal comfort for all

Habitants need housing that is thermally comfortable to live in – reducing the need for active cooling means like AC/Desert coolers.



#### **Rising electricity demand**

Seven-fold increase in electricity consumption between 2012-2032.

So far 36 RACHNA trainings across 14 States have been conducted with 15000+ participants













The Ministry of Housing & Urban Affairs in partnership with GIZ's Climate Smart Buildings Project & BMTPC is conducting 75 trainings and events across the country to raise awareness on

Thermal comfort in

affordable housing under

Azadi ka Amrit Mahotsava

# **AFFORDABLE RENTAL HOUSING COMPLEXES**

# Affordable Rental Housing Complexes ARHGS

**Ease of living for Urban Migrants/Poor** 

A sub-scheme under Pradhan Mantri Awas Yojana (Urban) to provide Affordable Rental Housing to Urban migrants/poor close to their workplace



#### Model 1

Utilizing existing Government funded vacant houses to convert into ARHCs through Public Private Partnership or by Public Agencies

## Model 2-

Construction, Operation and Maintenance of ARHCs by Public/ Private Entities on their own available vacant land

# Who can benefit from ARHCs?

Labour





Urban Poor (Street Vendors, Riskshaw Pullers)



Migrants working in Market and Trade Associations



Hospitality Sector/Students



Industrial workers



**Long term** 

ors







# **Model 1**Existing Government funded vacant houses to be converted to ARHCs

## **UT OF CHANDIGARH**



2,195 vacant houses converted into ARHCs

**GUJARAT** 



2,467 vacant houses converted into ARHCs

## **RAJASTHAN**



**480 vacant houses converted into ARHCs** 

## **UT OF JAMMU & KASHMIR**



336 vacant houses converted into ARHCs

# Model 2

80,273 Units sanctioned for construction by public/private entities.









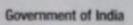
**Construction of 22,689 new ARHC units are in progress** 







सत्यमेव जय





# PMAY(U) MANAGEMENT INFORMATION SYSTEM



# PMAY(U) Management Information System

# **FEATURES AND FUNCTIONALITIES**



Demand Survey Capturing & Validation



Project DPR Entry



Beneficiary Attachment with Aadhaar



Monthly Progress Report (MPR) (Physical & Financial)



Sanction & Release Module



Project Closure & Release of 3rd Instalment



Work Order, RERA- AHP/ISSR



Geo-tagging of Houses/Project



Data Compliance



DBT Expenditure Information



Utilisation Certificate + ATR



E-finance Module

+ PFMS

# **Citizen Centric IT Solutions**





pmayumis.gov.in





ghtc-india.gov.in





pmay-urban.gov.in



arhc.mohua.gov.in



pmayuclap.gov.in

# **INFORMATION EDUCATION COMMUNICATION (IEC)**



# angikaar Healthy, Wealthy & Wise



On International Women's Day, ANGIKAAR brought together women beneficiaries of PMAY(U) on a common platform to celebrate womanhood. It created a forum for sharing, peer learning and interaction.



on best practices in water & energy conservation, health, hygiene and sanitation



mplement best practices



ANGIKAAR focuses on adopting best practices such as water & energy conservation, health, hygiene & sanitation, effective Waste Management, COVID-19 safety protocols, nutrition, food safety & financial literacy. Overall, it aims to encourage stakeholder engagement and social mobilisation.



#### FIT India

Citizens, PMAY(U) beneficiaries, SLTC/CLTC specialists, surveyors and officials of States/UTs/ULBs to individually run/walk in his/her chosen route, time, and pace.

Cumulative distance covered to be uploaded in the Fit India Module in PMAY(U) mobile application

FAME Financial Awareness Messages

Reaching out to PMAY(U) beneficiaries of all four verticals through financial literacy by PLIs in coordination with Central Nodal Agencies, as per extant norms of Ministry of Finance and Reserve Bank of India.

#### **Eat Right India**

- Addressing food adulteration through simple home tests.
- Healthy choices through awareness on food fortification. • Sustainable initiatives through awareness of Jaivik Bharat.
- $^{\bullet} \, \text{Enabling PMAY}(\text{U}) \, \text{beneficiaries to identify authentic organic}$
- Promoting surplus food donation under 'Safe food Share food'
- ANGIKAAR Rice ATMs (rice, cereals, oil, etc) in million plus 56













# **ACTIVITIES AND CAMPAIGNS**





Pradhan Mantri Awas Yojan<mark>a - Urban</mark> has impacted millions of lives in India.

In a bid to capture these transfo<mark>rming e</mark>xperiences,

# KHUSHIYON KA AASHIYANA SHORT FILM CONTEST

was organized for beneficiaries, students, institutions, individuals & groups.

# PMAY(U) PODCAST



PMAY(U) Podcast was a series of talk show hosted to give viewers an insight into PMAY(U), the largest housing scheme of the country, and other initiatives undertaken by the Mission to work towards the goal of 'Housing for All'.



# Pradhan Mantri Awas Yojana (Urban) adding impetus to vision of 'Housing for All'











Virtual inspection of PMAY(U) houses

Expedite construction of houses

Monitor the progress of projects

To achieve target of 'Housing for All'



To create platform for cross learning & to initiate policy dialogue based on national best practices, design a strategy to fulfil the vision of Slum free India and increase availability of dignified affordable dwelling units for urban poor























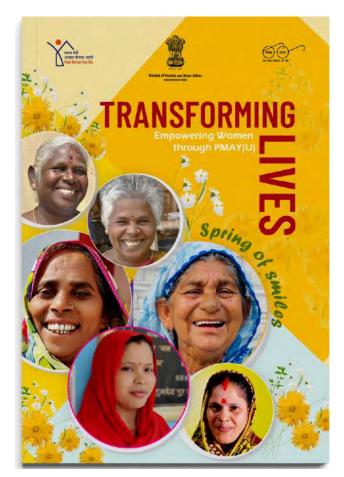


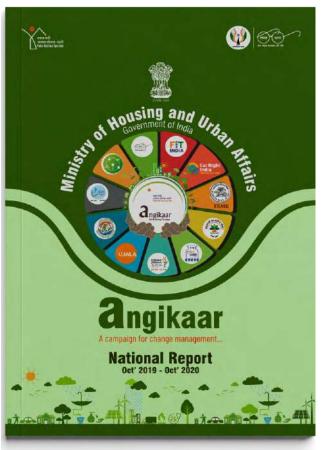


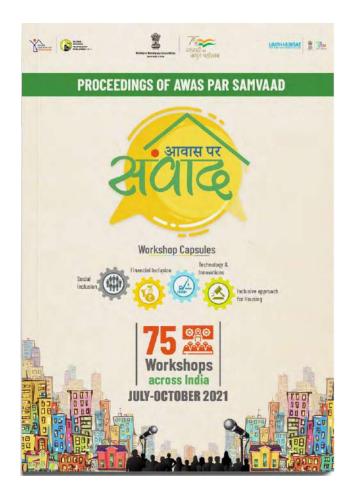


# **PUBLICATIONS**

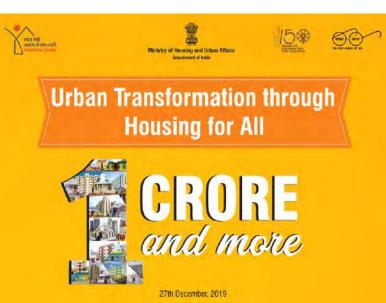
# **LAUNCHED**

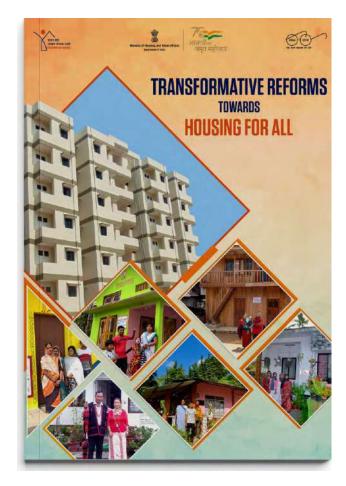










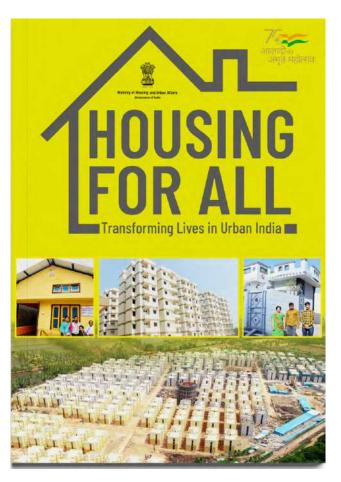


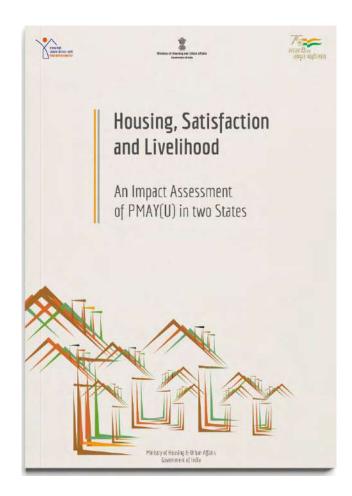


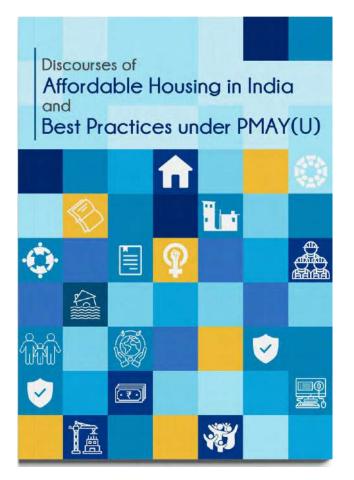


# **UPCOMING**

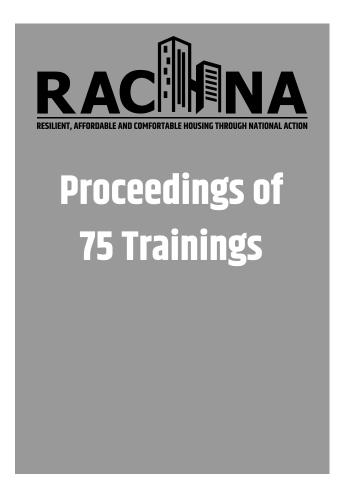






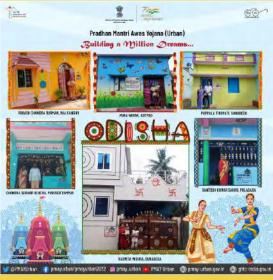






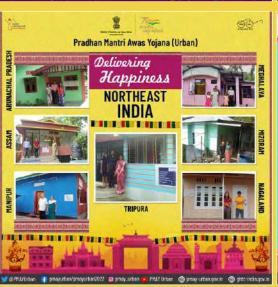
# **SOCIAL MEDIA CAMPAIGNS**

















































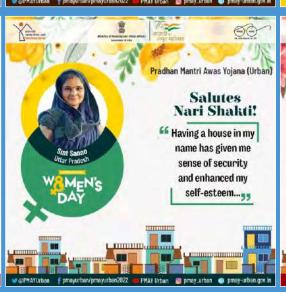


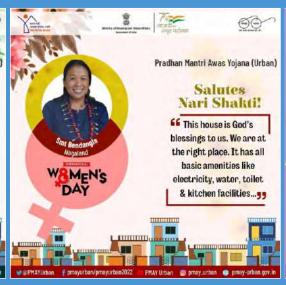












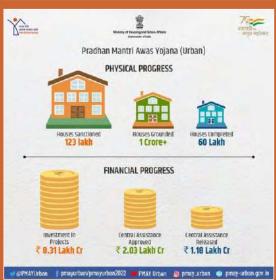




















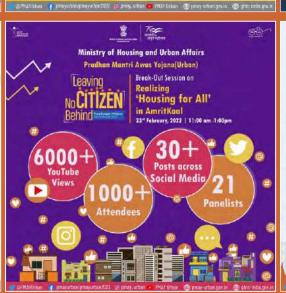


EASY ACCESSIBILITY TO PUBLIC TRANSPORT, HEALTH, EDUCATION & LIVELIHOOD FACILITIES





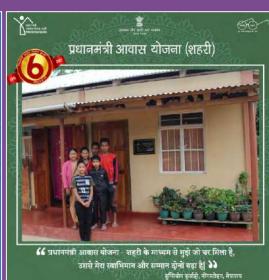


















प्रधानमंत्री आवास योजना (शहरी)

पूरी हुई आस, क्यूंकि मिल गया है हमे अपना आवास

प्रधानमंत्री आवास योजना क्या है? नानिये इस योजना ने कैसे लोगों के जीवन में बदलाव लाया है

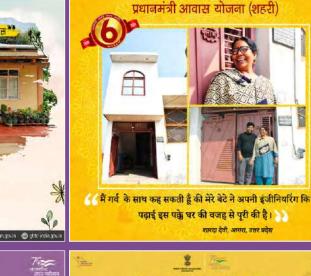
#SabkaVikasMahaQuiz

में भाग में और जीतें नकद पुरस्कार

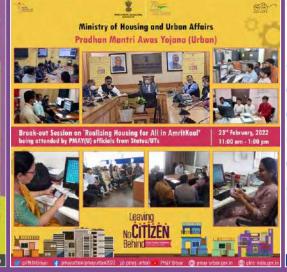
GOV























# **MAJOR EVENTS AND INTERACTIONS**

Hon'ble Prime Minister interaction with PMAY(U) beneficiaries through Video Conferencing (5th June 2018)





# Transforming Urban Landscape – 3<sup>rd</sup> Anniversary of PMAY(U) at Lucknow, Uttar Pradesh (27<sup>th</sup> & 28<sup>th</sup> July 2018)











# Inauguration of Expo-cum-Conference 'Construction Technology India 2019' in New Delhi by Hon'ble Prime Minister (2<sup>nd</sup> & 3<sup>rd</sup> March 2019)











# Laying of foundation Stone of 6 Light House Projects (LHPs) under GHTC-India by Hon'ble Prime Minister (1st January 2021)













# **MAJOR EVENTS AND INTERACTIONS**

Inauguration of 'Azadi@75 - New Urban India' Conference cum Expo in Lucknow by Hon'ble Prime Minister (5<sup>th</sup> to 7<sup>th</sup> October 2021)













# Inauguration of All India Mayors' Conference in Varanasi by Hon'ble Prime Minister (17<sup>th</sup> December 2021)











# Inauguration of Light House Project Chennai, Tamil Nadu by Hon'ble Prime Minister (26<sup>th</sup> May 2022)

















# Pradhan Mantri Awas Yojana (Urban)



# **Ministry of Housing and Urban Affairs Government of India**

Nirman Bhawan Maulana Azad Marg, New Delhi-110011 www.mohua.gov.in



