

Citi Foundation

rizq

Housing Innovation Lab

Designing for Dignity

Scaling affordable, climate-resilient housing for flood-exposed communities in Pakistan.

PROJECT REPORT
2024 - 2026

Contents

THE PROGRAMME

Executive Summary 03

What Stands Out 04

About Rizq 05

The Problem 06

The 2022 Floods and Why HIL Exists 08

Our Solution: The Innovation Lab 09

Project Objectives 10

Deliverables at a Glance 11

THE SIX DELIVERABLES

1 Scaling Existing Emergency Housing 12

2 Sustainable Housing Financing Pathways 14

3 Development of New Housing Models 15

4 Pilot Implementation 17

5 Digital Fundraising Platform 18

6 Strengthening Community Capacity 19

RESULTS

Livelihoods, Finance and Measurement 20

BEYOND THE PROJECT

A Global Knowledge Base 22

Training and Workshops 23

Beneficiary Stories 24

Challenges and Learnings 25

Partners 26

Project Team 27

Contact 28

A winner of the Citi Foundation Global Innovation Challenge

In 2024, the Rizq Housing Innovation Lab (HIL) was selected as a winner of the Citi Foundation Global Innovation Challenge on Addressing Homelessness, joining a global consortium of 25 enterprises. The two-year grant supports HIL to scale affordable, climate-resilient housing for communities in Pakistan that face recurring floods, displacement and structural poverty.

This report covers Year 1 of the grant and what has been delivered so far in Year 2.

HOUSING INNOVATION lab

PROJECT NUMBERS AT A GLANCE

840
houses developed for low-income people across different housing models

04
new housing models developed across different ecological zones

300
no of people trained in climate resilient house construction

5000+
no. of individuals impacted by the project till date





WHAT STANDS OUT

Results we are proud of

750

Climate-resilient BASA bamboo homes completed across four villages in Mirpur Khas — our largest emergency-housing scale-up to date. These models are made for locally sourced and eco-friendly materials.

4

Distinct low-cost models developed and entering pilot — bamboo eco house, elevated bamboo, CSEB earth-block and baked brick. We aim to scale this housing models beyond the grant period.

Global repository of low cost housing models developed

We researched and documented **113 housing** models from across the globe into a open-source knowledge base, positioning HIL as a reference point for climate-resilient housing in Pakistan and across the reigion.

Sustaining human life, fulfilling its true potential

Rizq is a people-powered movement building sustainable interventions, innovative programs and social businesses that transform food, livelihood and community systems into models of dignity, climate resilience and just ecosystems.

Founded in 2015, Rizq works across the food value chain through five divisions: Food and Nutrition; Sustainable Agriculture and Livestock; Food Community Support Operations; Advocacy and Volunteerism; and Water-Energy-Food Research and Advancement.

Since 2022, Rizq's work on food security has expanded to include access to low-cost, climate-resilient housing, delivered through the Housing Innovation Lab.

2.1M

individuals served across Pakistan over the last year

20 M

Meals Fed till date

$12 M

Worth of projects successfully executed















THE PROBLEM

Water comes back every year

Sindh and Balochistan carry the heaviest losses; for households in the flood plain, rebuilding is not an event but a cycle.

A repeating cycle of displacement, loss and rebuilding

Recurring climate-related disasters in Pakistan have exposed how vulnerable low-income housing is to a changing climate. Floods, extreme rainfall and heatwaves fall hardest on communities living in unsafe, poorly planned or inadequate homes.

When homes are damaged or destroyed, families rarely have the resources to rebuild safely, which leaves them exposed to the next disaster. What these communities need is housing that is not only affordable, but also climate-resilient, sustainable and suited to local realities.

Despite contributing only 0.9% to global GHG emissions, Pakistan lies at the forefront of extreme weather events and accelerating natural disasters induced by climate change. In what ranks as the world's fifth-most climate vulnerable country, the number of people directly affected by flooding is projected to exponentially increase, with a likely increase of around 5 million people exposed to extreme river floods by 2035-2044. The deeply impoverished country lacks sufficient disaster-preparedness, and is already host to over 20 million individuals experiencing some form of housing insecurity.

There is, therefore, an extremely time-sensitive need for housing solutions that **(a)** offer a safety net against the onslaught of climate change, and **(b)** are readily affordable by the communities that are at the highest risk of devastation.

0.9%

of global GHG emissions come from Pakistan[1]

5th

most climate-vulnerable country in the world[2]

5M

more people exposed to extreme river floods by 2035-2044[2]

20M+

individuals already experiencing some form of housing insecurity[3]

[1] "Pakistan Updated NDC", UNFCCC (2021)

[2] "Climate-Risk Country Profile – Pakistan", Asian Development Bank (2021)

[3] "Pakistan Homelessness Statistics", MuslimAid (2023)

[4] "Pakistan 2022 Floods Report", Center for Disaster Philanthropy (2023)

The 2022 floods, and why the Housing Innovation Lab exists

Rizq's Housing Innovation Lab emerged in 2022, in response to the catastrophic floods that ravaged two of Pakistan's largest provinces, destroying a staggering 2.2 million homes, compelling aid organisations to reduce shelter offerings below international standards to be able to meet emergency needs.[4]

According to the NDMA, around 33 million Pakistanis — that is, one in seven — were affected by the floods, including nearly 8 million people displaced.[5] While conducting emergency relief operations, the Rizq team realised the importance of helping affected families 'build back better': through low-cost, high-quality, sturdy homes that can withstand future disasters.

2.2M
homes destroyed in the 2022 floods

33M
Pakistanis affected — one in seven

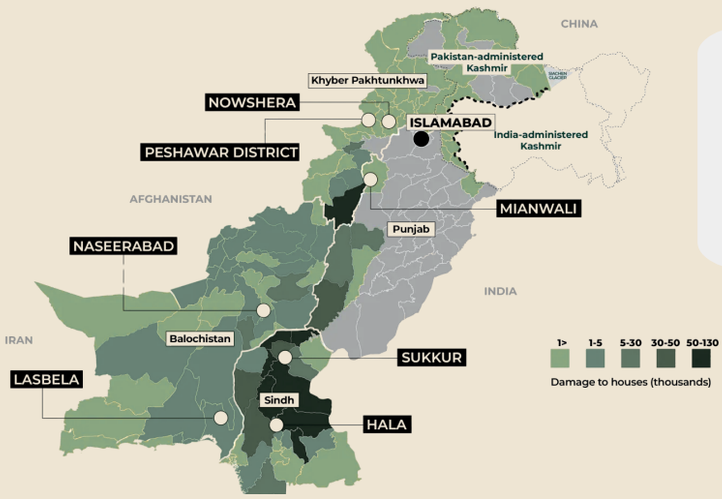
8M
people displaced

THE ECO-HOUSING PROGRAM

Corporate stakeholders, housing innovators and individual donors were engaged across the globe to help equip these communities. **150 disaster-resilient, low-cost houses** have so far been provided to **4 impoverished village communities** in rural Sindh, in collaboration with The Heritage Foundation.

BAREFOOT SOCIAL ARCHITECTURE (BASA)

1. BASA involves low-tech, low-impact housing structures using green skills and sustainable, locally sourced materials.
2. It includes a thorough transfer of training and knowledge to enable communities to take care of themselves.



The damage is concentrated but widespread: Sindh and Balochistan carry the heaviest losses, with significant damage also recorded in Punjab and Khyber Pakhtunkhwa, from Sukkur and Hala in the south to Nowshera and Mianwali in the north.

[5] "Pakistan Floods 2022 — Post-Disaster Needs Assessment", PDNA (2023). Separately, more than 1 million homes were destroyed in recent flooding, according to the NDMA Disaster Report 2025.



OUR SOLUTION

The Rizq Housing Innovation Lab

The Housing Innovation Lab is a research, design and implementation platform that develops affordable, climate-resilient and community-led housing solutions for populations exposed to recurring climatic shocks, displacement and structural poverty.

By moving beyond temporary relief, HIL builds durable, locally adaptable housing systems that strengthen long-term security and resilience. Rather than delivering a single fixed house design, HIL treats housing as a problem to be researched, tested and refined with the communities it serves.

HIL is a winner of the Citi Foundation Global Innovation Challenge and part of a global consortium of **25 enterprises**, led by the Citi Foundation, working to address homelessness and housing insecurity worldwide.







Housing facilitators and community developers, at a greater scale

Following the success of HIL's low-cost housing pilot in Sindh, Rizq is scaling the program to a greater number of communities: exploring and developing more housing models tailored to individual community needs, and empowering a greater number of housing entrepreneurs through capacity-building trainings and construction machinery.

In partnership with the Citi Foundation, the Housing Innovation Lab will allow Rizq to act as low-cost housing facilitators and community developers at a greater scale. Six objectives define that work; the six grant deliverables that follow are how they are being met.

1. Conducting **research and development** to identify, evaluate, develop and implement a greater variety of low-cost, climate-resilient housing models that can then be implemented within housing-insecure communities in disaster-prone Sindh.

2. **Scale and implement** the shortlisted models through machinery and materials provision, capacity-building training workshops, and financing.

3. Create communities that are **self-reliant with regards to housing** via a 'train-the-trainer' model, ensuring (A) each village hosts the requisite expertise to continue constructing and financing low-cost, climate-resilient houses as needed, and (B) housing and micro-entrepreneurs are created to ensure the creation of sustainable livelihoods.

4. Build **community capacity for securing funds** for their housing needs by connecting them with financers looking to support climate-resilience and low-cost housing initiatives; a blend of major corporate grants, microfinance institutions, philanthropists and community crowdfunding.

5. Over time, to **reduce dependency on donor funding**, target villages will also be provided with community-building trainings regarding entrepreneurship, financial literacy, and small business management.

6. To better connect target communities to willing financers, Rizq will develop an **HIL tech platform** allowing donors to contribute to the creation of these low-cost houses. Rizq will then act as community development facilitators, ensuring seamless implementation of the required housing development, while building community capacity and allowing for a smooth communal transition to the new housing structures.

Project Deliverables

To establish the Housing Innovation Lab as a research, design and implementation platform that develops and scales affordable, sustainable and climate-resilient housing for vulnerable communities. By bringing together research, design innovation, local knowledge and field implementation, HIL addresses the interconnected challenges of poverty, displacement, inadequate housing and rising climate risk, while building models that can be adapted and scaled across Pakistan.

#	Deliverable	Target	Status
1	Scaling existing emergency housing models	1,000 houses	On going (750 / 1,000)
2	Create sustainable housing financing pathways	1 financing mechanism blending finance, philanthropy, microfinance and community contribution	Completed
3	Development of new housing models	3	Completed (4 developed)
4	Pilot implementation of new housing models	135 new model houses	Ongoing (70 / 135)
5	Digital fundraising platform	1 platform launched	Website built and launched
6	Strengthen community capacity	300 people trained	Completed

01 DELIVERABLE ONE

Scaling existing emergency housing models

HIL builds on housing models already tested in disaster-affected communities, with a focus on improving and scaling solutions that are affordable, locally appropriate and resilient to climate risk. In Mirpur Khas, the BASA bamboo housing model was implemented as a sustainable, adaptable response to post-flood housing needs. In Jhang, the CSEB block housing model demonstrated the use of compressed stabilised earth blocks as a locally suitable alternative. Together these projects provide field experience and tested models that can be refined, replicated and scaled to other climate-vulnerable communities across Pakistan.

Mirpur Khas – BASA Bamboo Houses

VILLAGE	HOMES	STATUS
Morho Kohli	100	Completed
Khemon Colony	150	Completed
Ghoth Ravio Bheel	100	Completed
Shankar Kohli	250	Compelted
Total	**700**	**700 of 1,000 grant target**

750

of 1,000 complete

75 % OF GRANT TARGET

Geopolitical tensions in the Middle East have increase housing constructions costs considerably since the start of the grant period. Further development depends upon securing additional funding from multiple partners.



Four villages, over seven hundred homes



Morho Kohli



Khemon Colony



Ghoth Ravio Bheel



Shankar Kohli

02 DELIVERABLE TWO · COMPLETED

Creating sustainable housing financing pathways

HIL explored and developed sustainable financing pathways to make safe, affordable housing more accessible to low-income households. Recognising that construction cost and limited access to formal housing finance are the major barriers, the work brought together four financing approaches: blended finance, philanthropic support, microfinance and community contributions.

By combining these mechanisms, HIL set out to reduce the upfront financial burden on households while creating models that are financially viable. These pathways also create a foundation for partnerships with financial institutions, donors and other stakeholders, so that access to housing can extend beyond one-time emergency interventions.

- Blended finance
- Philanthropy
- Microfinance
- Community contribution

What was delivered

- A completed **financing framework** setting out how blended finance, philanthropy, microfinance and community contribution combine per household.
- A **soft-mortgage and crowdfunded-subsidy model** designed for the emergency shelter programme.
- **Financing tiers** mapped to the different low-cost housing models, so that households can be matched to an affordable pathway.

03 DELIVERABLE THREE · COMPLETED

Development of new housing models

Drawing on insights from the shortlisted global case studies, HIL developed new housing prototypes to explore different approaches to affordable and climate-resilient housing. Each prototype examines a distinct construction strategy, material set and design approach, while responding to the practical needs of low-income and climate-vulnerable communities. The models balance affordability, structural resilience, local suitability, ease of construction and potential for replication.

4/3

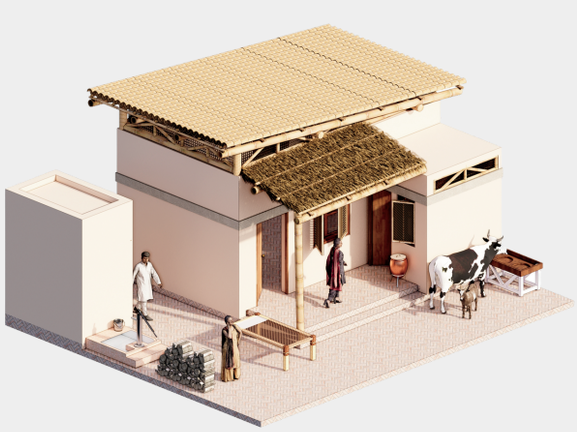
Grant target: 3 additional housing models. Delivered: 4. HIL developed a fourth model – elevated bamboo – in response to field conditions in flood-prone areas, exceeding the original commitment.



MODEL A

BASA Bamboo Eco House

- Lightweight, rapidly deployable
- Flood-resilient structure
- Renewable material

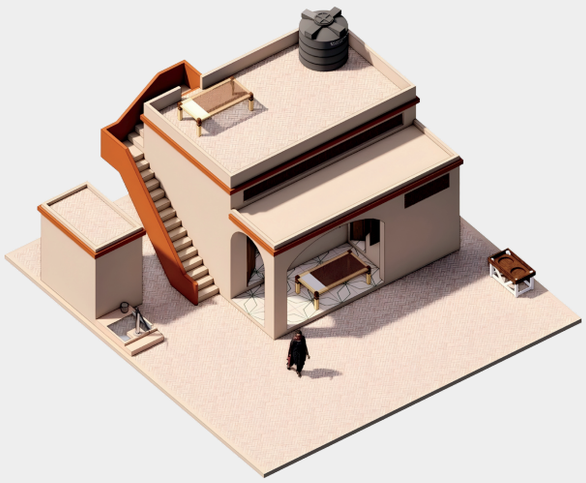


MODEL B

CSEB Housing Model

- Locally produced earth blocks
- Durable and low cost
- Scalable rural housing

Two further models, tested against the hardest sites



MODEL C

Brick Housing Model

Locally available baked bricks · Community-build friendly · Rural reconstruction



MODEL D · BEYOND TARGET

BASA Elevated Bamboo

Standing-water sites · Rapidly deployable · Living space above flood level







04 DELIVERABLE FOUR · ONGOING

Pilot implementation of new housing models

The newly developed models were taken from prototype stage to real-world implementation across climate-affected communities in Mirpur Khas and Jhang. In Mirpur Khas, the BASA bamboo housing model was piloted across multiple villages, testing bamboo-based construction as an affordable, locally appropriate and climate-resilient solution at scale. In Jhang, the CSEB block housing model tested an alternative approach using compressed stabilised earth blocks.

These pilots let HIL evaluate the practical application of each model, including construction processes, material suitability, affordability and adaptability to local conditions, while generating insight for future replication and scale.

Pilot progress

MODEL	PILOT HOUSES (TARGET)	BUILT TO DATE
Model A – Bamboo Eco House	110	45
Model B – CSEB	22	20
Model C – Brick	3	5
Total	**135**	**70**

70

of 135 pilot houses built

Geopolitical tensions in the Middle East have increase housing constructions costs considerably since the start of the grant period. Further development depends upon securing additional funding from multiple partners.



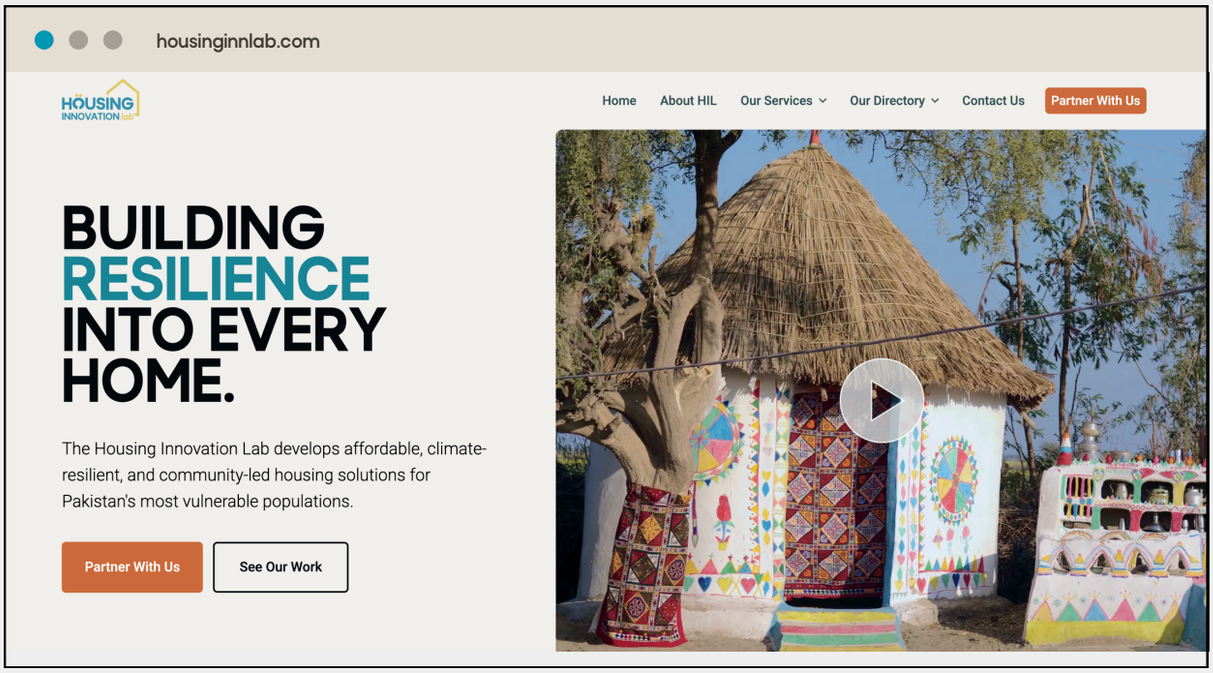




05 DELIVERABLE FIVE · BUILT, LAUNCH PENDING

A digital fundraising platform

HIL developed a dedicated digital platform to strengthen fundraising and widen access to its housing work. The website provides a central space to showcase HIL's research, housing models, ongoing projects and impact, and lets individuals, organisations and potential partners learn about and support the work. Through dedicated fundraising pathways, the platform is designed to mobilise financial contributions towards affordable, climate-resilient housing.



Live

Website built and live

Presenting HIL's mission, services and directory at housinginnlab.com.

Designed

Fundraising pathways

Connecting the financing framework from Deliverable 2 to donors and lenders.

06 DELIVERABLE SIX · ONGOING

Strengthening community capacity

HIL focused on building local capacity so communities can actively take part in constructing and maintaining climate-resilient homes. Through hands-on training and knowledge-sharing, community members were equipped with practical skills in sustainable and eco-house construction, including bamboo structures, roof thatching and fuel-efficient stoves.

A **Master Trainer** model was introduced, in which selected community members are trained and certified to pass skills on to others. This train-the-trainer approach lets families build and maintain their homes more independently and seeds local livelihoods in masonry, carpentry and construction supervision.

300
People Trained

8
Trainings Conducted

10
Master Trainers Trained







Livelihoods, financial capability and how we measure

Employment and livelihoods

The train-the-trainer programme creates livelihoods through skill acquisition in masonry, carpentry and construction. Trained workers can refine or add secondary construction skills, and a team of community representatives is engaged to support community mobilisation.

The programme also creates rare openings for both senior and novice architects to design and implement low-cost, climate-resilient housing.

Financial capability

Households are supported to adopt positive financial behaviours through financing pathways, community contribution models and, in Year 2, financial-literacy training. This positions families to sustain and finance their own housing needs over time.

How results are measured

- **Baseline and endline community surveys** tracking receptivity to low-cost models, housing costs, and perceptions of safety and disaster risk.
- **Poverty scorecards** verifying that beneficiaries are low-income — 100 percent of beneficiaries are low-income by local standards.
- **Focus groups** at key intervals to assess training effectiveness and community response.
- **Site visits and invoices**, where available, to evaluate the comparative cost impact of each housing model.

100% of beneficiaries are low-income by local standards







GOING ABOVE WHAT'S REQUIRED

Beyond The Project

Research, Advocacy and Outreadh efforts to promote climate resilient housing across Pakistan and the region.

Housing models directory: A global knowledge base

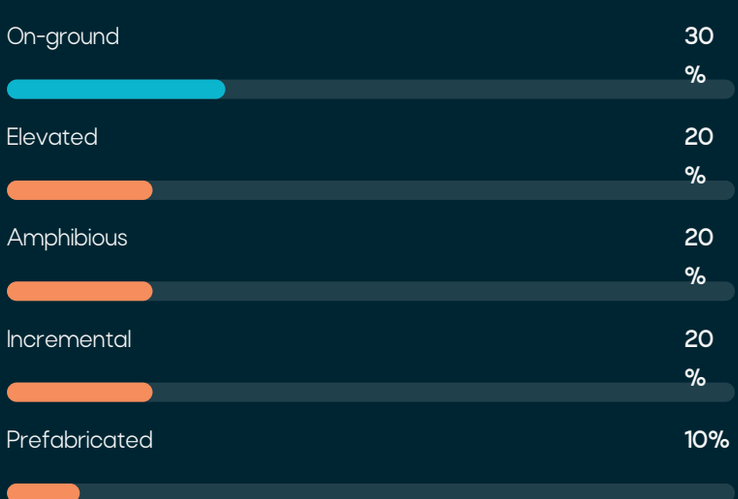
There was no single resource bringing together low-cost, sustainable and climate-responsive housing models from around the world. HIL addressed this gap by researching, documenting and analysing **113 housing typologies** across diverse ecological contexts.

Each model was assessed for cost-effectiveness, use of sustainable and locally available materials, ease of construction and scalability, and suitability for disaster and post-disaster settings. HIL is developing an online repository of these case studies as a knowledge resource for practitioners, researchers and organisations working in housing and infrastructure.

113

housing typologies researched, documented and analysed across diverse ecological contexts

TYPOLOGIES IDENTIFIED DURING RESEARCH



Scan to see the housing model repository

BEYOND THE PROJECT

Training and workshops

HIL ran trainings and workshops to build practical knowledge around sustainable, climate-resilient housing and construction. Through community trainings, master trainer programmes and collaborative design workshops with academic institutions, participants gained relevant skills and exposure to new approaches to resilient housing. These efforts strengthened local capacity and supported greater community participation in housing design and construction.

2
university courses offered

50
students involved

10
housing models prototypes made







Scan to watch more details on our training programs

Behind every completed home is a family that no longer rebuilds from nothing

The stories below put a human face to the Year 1 numbers.



NAHEED - COMMUNITY LEADER

“

I led a community of multiple women and together we built a community that feels like home. It was such an exciting experience.

Naheed a local from Morho Kohli, Mirpur Khas was nominated as our community leader, entrusted with mobilising more women and training them with different building techniques. Together, these women played a significant role in building and decorating their houses as per their liking.

SACHIN - BENEFICIARY

“

We were left with nothing after the floods. Today, I have a home to call my own, where my children can live safely.

Shankar Kohli: Sachin, a father of 3, was rendered homeless after the floods of 2022. Through the Housing Innovation Lab (HIL) initiative, he was able to rebuild his own house, bringing back a safe shelter for his family along with a safe community where his family lives now.



Reporting honestly on what proved difficult

Reporting honestly on what proved difficult is part of building a credible, scalable model. The main learnings from Year 1:

Sequencing	Construction was front-loaded in Year 1, which means the training and platform-launch targets weigh more heavily on Year 2. The Year 2 plan rescheduled these deliberately rather than leaving them to slip.
Model fit varies by site	Flood-prone, standing-water locations pushed HIL to develop the elevated bamboo model (Model D), an unplanned but valuable addition to the original three.
Increase in construction costs	Geopolitical tensions in the Middle East have increase housing constructions costs considerably since the start of the grant period. Further development depends upon securing additional funding from multiple partners.

HOUSING INNOVATION LAB PARTNERS

A network behind the work

HIL works with a diverse network of academic institutions, development organisations, technical experts, private-sector partners and communities to advance affordable, climate-resilient housing. These partnerships bring together knowledge, expertise, resources and on-ground experience to support research, design, training and implementation.

FOUNDATIONAL PARTNER	Citi Foundation
DONOR PARTNERS	Center for Disaster Philanthropy (CDP) · TikTok · DRF
KNOWLEDGE PARTNERS	Indus Valles School of Architecture (IVS), Heritage Foundation.
TECHNICAL AND IMPLEMENTATION	Mimar Design Studyo (MDS) · Creative Studio ReLab · Heritage Foundation Pakistan

PROJECT TEAM

The people delivering the work

HIL brings together a multidisciplinary team with expertise across housing research, architecture, design, construction, community engagement and project management. The team translates research and ideas into practical, affordable, climate-resilient housing, working closely with communities and partners throughout.



Ar. Asad Anwar

TECHNICAL CONSULTANT

A multidisciplinary architect and project manager leading Mimar Design Studyo, a Lahore-based practice known for innovative, client-centred architecture and interior design. He brings a deep commitment to sustainable, context-driven housing.

Edit



Bakhtyar Haider

PROJECT INCHARGE

An experienced development-sector professional with more than eight years in project management, social and behavioural change, social marketing, community mobilisation and capacity building across NGOs and INGOs.



Ar. Amal Azam

ASSOCIATE ARCHITECT

An architect and researcher advancing climate-responsive and affordable housing. Through her work with HIL she focuses on research-led design, prototype development and initiatives that bridge academic inquiry with on-ground implementation.

Edit



Naheem Shah

COMMUNITY MANAGER

Brings over a decade of experience in community-driven construction and disaster-resilient architecture. At the Heritage Foundation he leads implementation on eco-housing projects, ensuring effective community mobilisation and sustainable, low-tech construction.



Contact Us

380 B Faisal Town, Lahore, Pakistan
www.housinginnlab.com

+92 42 35195521

Scan to watch our project video