IMPLEMENTING THE NEW URBAN AGENDA

ADEQUATE & SUSTAINABLE HOUSING

UN HABITAT
FOR A BETTER URBAN FUTURE

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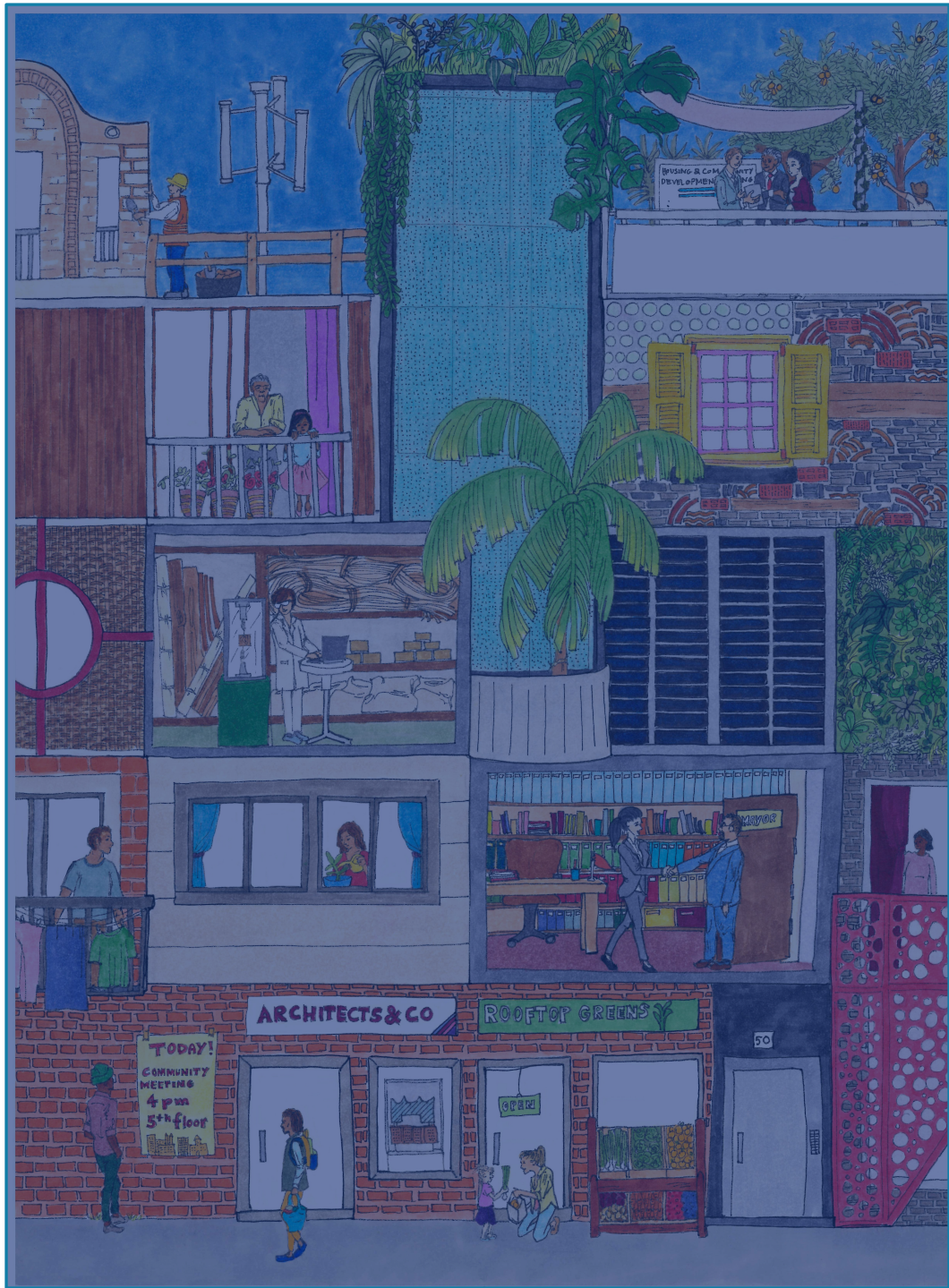

1. HOUSING CHALLENGES

Housing challenges

Meeting the housing needs in countries and cities across the globe remains one the greatest challenges faced by governments in the 21st century. Today, around one quarter of the world's urban population continues to live in slums, namely 880 million people, and since 1990, 213 million more slum dwellers have been added to the global population.

The global community has, in the last 20 years, witnessed the emergence of urbanization as a key development trend. While cities face some of the greatest challenges of our time:

- informal settlements and slums
- rapid rural-urban migration
- unaffordable housing
- urban poverty
- social exclusion
- pollution
- vulnerabilities to climate change and disaster

In many countries distorted housing markets have excluded large parts of the population; with housing remaining inaccessible for those with low incomes in the **absence of adequate and affordable housing options and financing**. Housing affordability has become a global crisis with strong negative impact on the well-being of people and on the exacerbation of urban inequality.

Housing challenges

Over the next 30 years, more than half of the expected building stock will be constructed, most of them in rapidly growing cities in developing countries in Asia and Africa. On average, 55 to 70% of the built areas will be devoted to housing.

Cities are powerhouses of economic growth and catalysts for inclusion and innovation.

The way housing is being produced and consumed has shaped urban growth, regretfully, in many cases, by producing cities that are fragmented, unequal and dysfunctional. Therefore, the sustainable future of cities and the yields of urbanization will strongly depend on the way housing problems are tackled.

2. INTERNATIONAL AGENDAS & UN-HABITAT'S MANDATE

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International agendas & UN-Habitat's mandate

Sustainable Development Goals:
The agreement on a standalone goal in SDGs on cities and human settlements was monumental and reflects the increased attention on "urban" as a development theme at the global level.

Addressing housing challenges is critical for achieving the Sustainable Development Goal 11 (SDG11) of the 2030 Agenda for Sustainable Development . One of the targets of SDG11 aims at ensuring access for all to adequate, safe and affordable housing and basic services and upgrade slums.

Goal 11 is not the only goal in the 2030 Agenda where urban issues are being addressed. Human settlements issues are addressed in other Goals such as Goal 1 (poverty and security of tenure), Goal 3 (Health), Goal 6 (water and sanitation), Goal 7 (Clean energy), etc.

The New Urban Agenda:
It embodies a new vision of the role of urbanization in sustainable development. In this vision, the progressive realization of the right to adequate housing is one of the transformative forces which can potentially lead the world to overcome challenges related to sustainability, climate change, poverty, exclusion and inequality.

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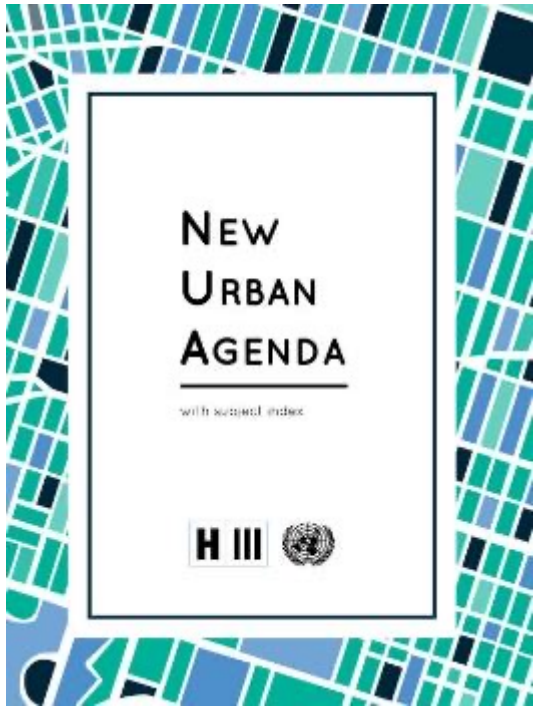
International agendas & UN-Habitat's mandate



The New Urban Agenda

*"**Leave no one behind**, by ending poverty in all its forms and dimensions… by ensuring equal rights and opportunities… and **providing equal access** to adequate and **affordable housing**."*

International agendas & UN-Habitat's mandate

Human rights: Article 11 International Covenant on Economic and Social Rights

"1. The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing.

UN-Habitat's Mandate:

Promote sustainable urbanization and adequate housing for all

Strategic Plan 2020-25:

Domain of Change 1: Reduced spatial inequality and poverty in communities across the urban-rural continuum.

Housing and slum upgrading play a fundamental role in economic development and poverty reduction, placing housing at the center of the sustainable urban development agenda and as an effective equalizer for shared prosperity and growth.

International agendas & UN-Habitat's mandate
UN-Habitat's Housing programme

HOUSING FOR ALL PROGRAMME

KEY PRINCIPLES:

1.BUILD HOUSES FOR PEOPLE. LEAVE NO ONE BEHIND

2. HOUSING IS A VECTOR FOR PROSPEROUS SOCIETIES AND ECONOMIES

3. BUILDING SUSTAINABLE HOUSES IS BUILDING SUSTAINABLE CITIES

HOUSING AT THE CENTRE

Inclusive Housing	Adequate & Affordable Housing	Green and Resilient Housing
MC2CM	NEPAL, LIBERIA HOUSING PROFILE, UGANDA, SENEGAL	One planet Multi-Partner Trust Fund for SDG 12
International Covenant on Economic Social and Cultural Rights	WUF10 World Urban Forum	GREEN BUILDING INTERVENTIONS FOR SOCIAL HOUSING
ALTERNATIVE SOLUTIONS TO FORCED EVICTIONS AND SLUM DEMOLITIONS	October 5 World Habitat Day 2020 Housing For All: A Better Urban Future	SHERPA for Sustainable Housing Projects
The Right to Adequate Housing		GNSH GLOBAL NETWORK FOR SUSTAINABLE HOUSING
Economic and Social Council		

Technical Cooperation

Normative Work

Advocacy & Outreach

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3. DEFINING ADEQUATE AND SUSTAINABLE HOUSING

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Quick exercise

What would be **the right term** to **define the housing sector** you would aim at achieving?

What aspects would the term entail?

Adequate Housing; International Covenant on Economic and Social Rights

Tenure security | Basic Services | Affordability | Habitability | Accessibility | Location | Cultural adequacy

Affordable housing

It refers to housing which is adequate in quality and location and does not cost so much that it prohibits its occupants from meeting other basic living costs or threatens their enjoyments of the basic human rights.

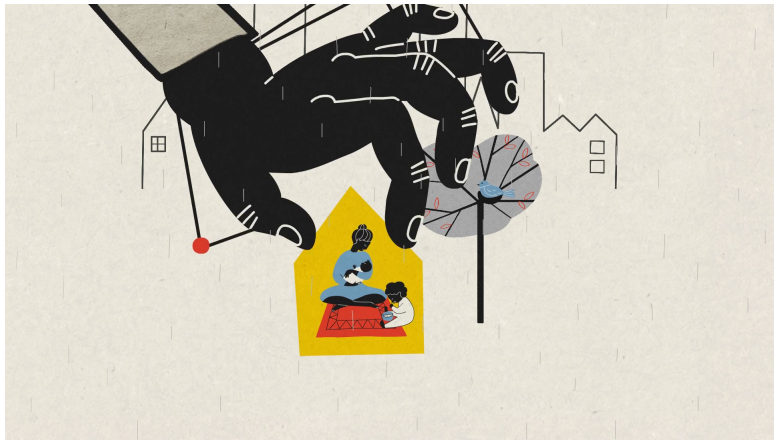
Affordability is affected by several factors:

- capital variables such as: land, infrastructure, building materials, etc.
- occupational variables: such as land leases, service costs, interest rates, etc.

Affordable housing:

Measuring affordability: housing costs and household income.

Affordable housing = when a household spends **less than 25-30%** of their monthly income on rent and housing related expenses;
Or
When the ratio of the average house price is **no more than 3 times** the annual household income.



Common causes underlying housing unaffordability

- Housing supply does not follow housing demand
- Lack of development of housing finance mechanisms especially in developing countries
- High cost of basic construction materials
- Land as a factor of unaffordable housing
- Regulatory and policy environment

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Quick exercise

- What would be the right term to define **sustainable housing**

- What criteria would the term entail?

Sustainable housing

Although sustainable housing is often considered from a predominantly “green perspective”; UN-Habitat advocates a more holistic approach, founded on 3 pillars of sustainability, which recognizes the multiple functions of housing as both a physical and socio-cultural system and which seeks to enhance and harmonize the following dimensions:

Environmental

Social-cultural

Economic

Sustainable housing

Multiple benefits of sustainable housing:

- Improved health and lower incidents of illness, fatalities and material losses, better labour productivity
- Better conditions for human development, employment, creativity and economic growth
- Improved efficiency and savings on energy, water and physical resources
- Affordable operations and utilities
- Durability and low maintenance cost
- Better environmental protection and sanitation conditions
- Protection against natural hazards
- More sustainable and socially inclusive urban growth
- Increased participation in the fabric of the city
- Social cohesion and political stability
- Contribution towards climate adaptation and mitigation

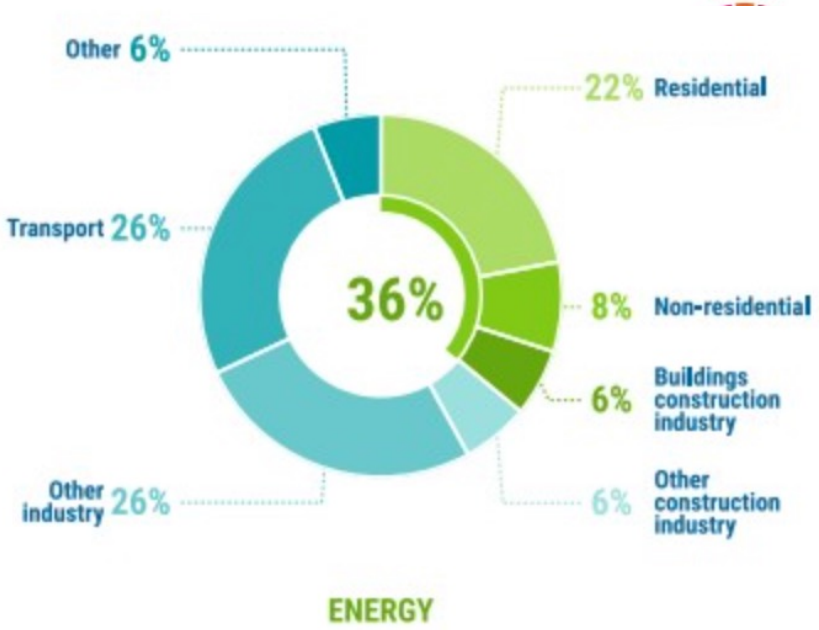
Sustainable housing

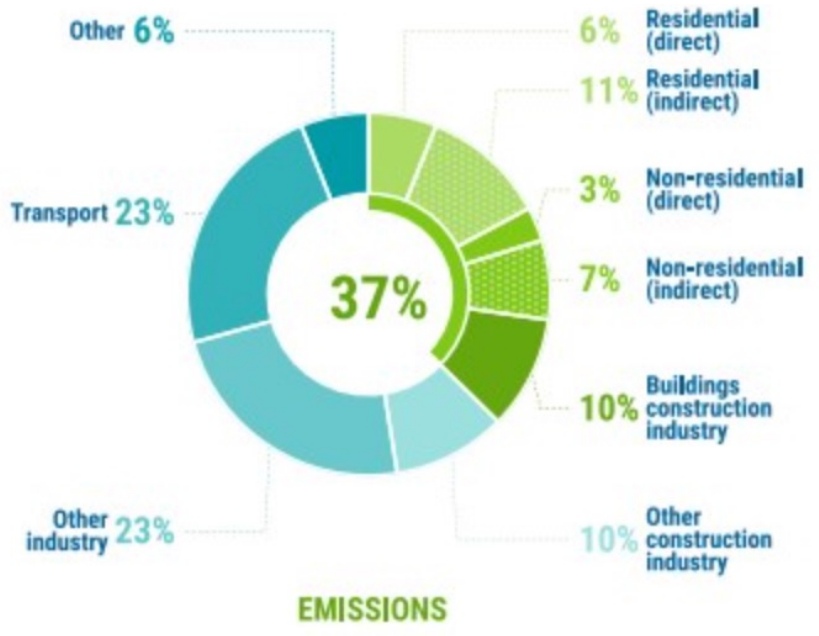
Globally:

- The housing sector consumes significant amounts of energy
- 22% of total worldwide energy consumption occurs in households
- The buildings and construction sector accounts for 37% of process-related carbon dioxide emissions
- The buildings and construction sector consumes 12% of freshwater, 30% of raw materials
- Generates 20% of water effluents and 40% of landfill

Main impacts of not addressing the housing sector from the dimensions of sustainability:

- Housing industry and environmental degradation
- Housing and public health; access to basic services
- Economic sustainability
- Vulnerability to disasters
- Access to other human rights and opportunities
- Access to participation and inclusion in decision making
- Urban sprawl





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5. CASE STUDIES

GLOBAL SOLUTIONS DIVISION - LAND, HOUSING AND SHELTER SECTION

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5. CASE STUDIES

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Case study 1

Context:

Aftermath of an emergency situation following a disaster.
Government with little to no capacities to respond

Target group:

3,500 families currently housed in temporary shelter
One third of all households led by women as men are working abroad.
Target group lacks knowledge of construction sector

Challenges:

Conventional materials are CO2 heavy
Building material supply chain is not always reliable
Climate conditions require good thermal insulation

Objective: create a structure to bring people residing in temporary shelter back to adequate and sustainable housing

- What stakeholder groups can you identify? What roles and level of importance would they have.
- What institutional structures could you create in order to fulfil the objective?
- What sort of resources would you need and from where?

Case study board

What stakeholder groups can you identify? What roles would they have

Stakeholder 1 Role?

2mins

What institutional structures could you create in order to fulfil the objective?

Project management representatives

2mins

What sort of resources would you need and from where?

XXX

2mins

Other ideas or requirements?

Include household beneficiaries in the final design

Think about the replicability of the model

2mins

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Case study 2

Context:

Households acquiring or paying a mortgage.
Increased costs of utility bills due to hikes in electricity, water, garbage collection, etc.
Problems with keeping up on mortgage repayments.
Dire need to reduce utility bills to increase likelihood of ability to repay mortgage.

Target group:

Low-income population
Partially middle-income population

Challenges:

How to ensure that a shift towards sustainability can also be cost-efficient?
How can we make housing more affordable with innovations?
How to promote transversal sustainability for different income levels?
How to promote diverse solutions adequate to different climates?

Objective: propose ideas that would promote the use of sustainable solutions and would not increase housing related costs

- What innovations can you think of?
- What strategy would you apply to respond to different income levels?
- What sort of solutions would aim at reducing utility bills and promote resource efficiency?

xxx

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Case study board

What stakeholder groups can you identify?
What roles would they have

Stakeholder 1
Role?

2mins

How can you promote greener solutions for low-income or mid-income households?

XXX

2mins

What are potential sources of financing?

XXX

2mins

What technologies or solutions would you include to reduce CO2 and utility bills in a house?

XXX

2mins

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Feedback session

GROUP
MEXICO

GROUP
NEPAL

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ECO-BRICK TECHNOLOGY AND ENTERPRISES TRANSFORMING COMMUNITIES IN NEPAL

2019

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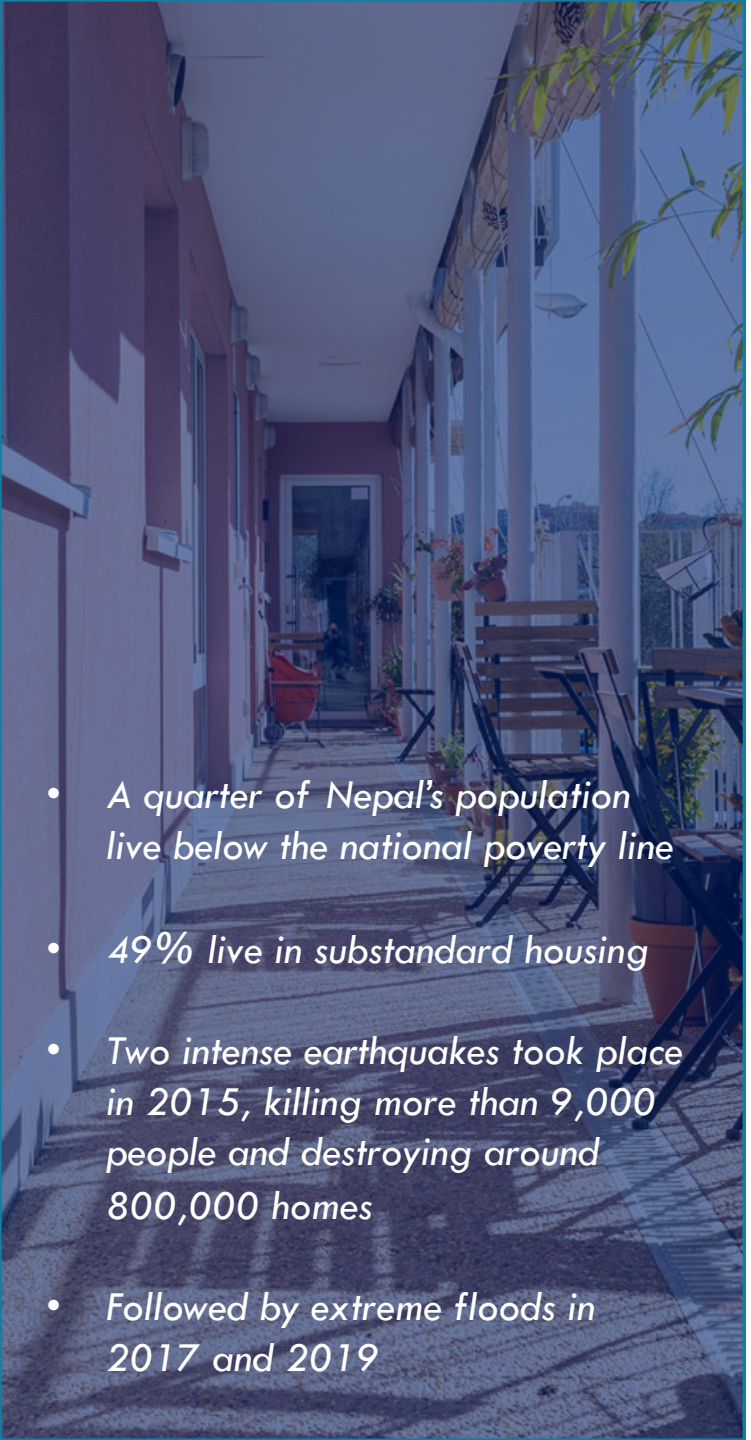

- *A quarter of Nepal's population live below the national poverty line*
- *49% live in substandard housing*
- *Two intense earthquakes took place in 2015, killing more than 9,000 people and destroying around 800,000 homes*
- *Followed by extreme floods in 2017 and 2019*

Eco-brick technology and enterprises transforming communities in Nepal (2019)

Compressed Earth Bricks and Community Enterprises to enable local entrepreneurs to rebuild homes in communities affected by disasters, while also creating sustainable micro-enterprises.

- Local entrepreneurs **rebuild homes** in communities affected by disasters, while also creating sustainable micro-enterprises
- **Manually-operated machines** to allow rural communities and micro-entrepreneurs to produce compressed earth bricks (**compressed stabilised earth blocks – CSEB**) mainly with local materials.
- **3,500 houses** have been built in 31 districts, mainly remote rural areas of Nepal, housing 17,500 people, while 200 micro-enterprises have been established and **2,200 jobs created.**
- Contribution to **gender and social inclusion.** Half of all masons trained in the construction of CSEB homes are from disadvantaged groups and almost a third are women.

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Eco-brick technology and enterprises transforming communities in Nepal (2019)

Community Impact Nepal (CIN) was founded in 2015 in response to earthquake-related devastation to empower local people to build homes using local materials. Supporting the creation of micro-enterprises and providing compressed earth brick machines and training to make and use compressed earth interlocking bricks. Ensuring local ownership and a strong incentive to build, sustain and grow over the long-term.

Challenges

- Low income families
- Seismic prone areas need resistant materials
- Not practical transport factory materials
- Conventional fired clay bricks is environmentally damaging
- High levels of CO2 emissions and pollutants.

31 districts	**3,500 houses**
17,500 people,	**2,200 jobs created.**
200 micro-enterprises	**Machinery investment $3,300 - $5,400**
1.6 times less CO2 (than traditional brick)	**1 house 1-2 days construction time**

KPIS

- Local materials
- CO2 reductions
- Capacity building
- Savings building costs
- Climate Resilient
- Impact on building life-span
- Gender inclusive
- Microloans
- Government engagement

xxx

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Eco-brick technology and enterprises transforming communities in Nepal (2019)

Initial investment

From micro-entrepreneurs between US $3,300 and $5,400, which pays for the machine, training, production set-up and raw materials. Normally from community savings or microloans.
Investment in between 6-12 months.

The project is funded with grants and co-investments

Government engagement

In partnership with DFID Nepal and Practical Action, CIN has trained more than 250 government engineers so they are aware of CSEB brick houses and have the capacity to inspect them, helping to improve housing quality.

CSEB - Compressed stabilised earth blocks

- Mixture of sand, soil and cement in a mechanical press machine and compressed.
- Locally made by communities and microentrepreneurs, rather than being mass produced and transported to site.
- Easy skill transfer and capacity building thanks to regular bricks and easy to install
- A whole house can be produced by 1 machine in 1-2 days. Improving cost efficiency.

Material properties

- Uniform bricks with interlocking features.
- Strong and quick win walls with less mortar.
- Steel reinforcing bars for earthquake resistance.
- Similar properties to conventional fired bricks in water, good degree of flood resilience.

2-year goal scale the model and establish CSEB across Nepal and abroad.
Now 6-7 new micro-enterprises/ month
Aiming 600 micro-enterprises in 5 years with a specific focus on women, young people and vulnerable groups.
= 7,200 long-term jobs, 16,000 new homes, and a potential reduction of 72,000 tons of CO2.

GREEN MORTAGE PROGRAMME, MEXICO

2007-on going.

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Stakeholders

- *LAC Network for Sustainable Housing*
- *Institute for the National Workers' Housing Fund (Infonavit)*
- *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH*
- *The Building and Social Housing Foundation (BSHF)*

Green mortgage programme (2007- on-going)

Objective: to improve the quality of life of Mexican workers, by reducing household spending on utility bills whilst at the same time contributing to the efficient use of natural resources and the reduction of Green-House Gas Emissions

Additional funds to mortgages for the acquisition of a house with efficient eco-technologies which decrease the consumption of energy and water

- **Technological innovation:** a platform for the development and implementation of new technologies to promote the efficient use of energy and water in households.
- **Comfort:** promoting wellbeing of beneficiaries in their houses.
- **Cultural:** towards sustainability and a respect for the environment by the household.

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Green mortgage programme (2007- on-going)

From 2007 to 2010, the programme focused on low income workers with an income of up to four times minimum wage. 2014: he programme was updated and changed from fixed eco-technology packages to a flexible selection of technologies, today the programme continues updating criteria and incorporating other eco-technologies for example in appliances. Currently there is an Eco-Technologies simulator.

Challenges

- incorporate a flexible combination of eco-technologies as specified in the Programme's Explanatory Manual
- The eco-technologies validated according to savings measured by an independent and recognised body
- The eco-technologies must guarantee progressive savings in relation to the income level of the worker (measured in TMW)

Eco-technologies must comply with quality, safety and efficiency standards which ensure their lifespan in relation to their performance. Also complying with Mexican regulations through certificates produced by the Standardisation and Certificatory Bodies.

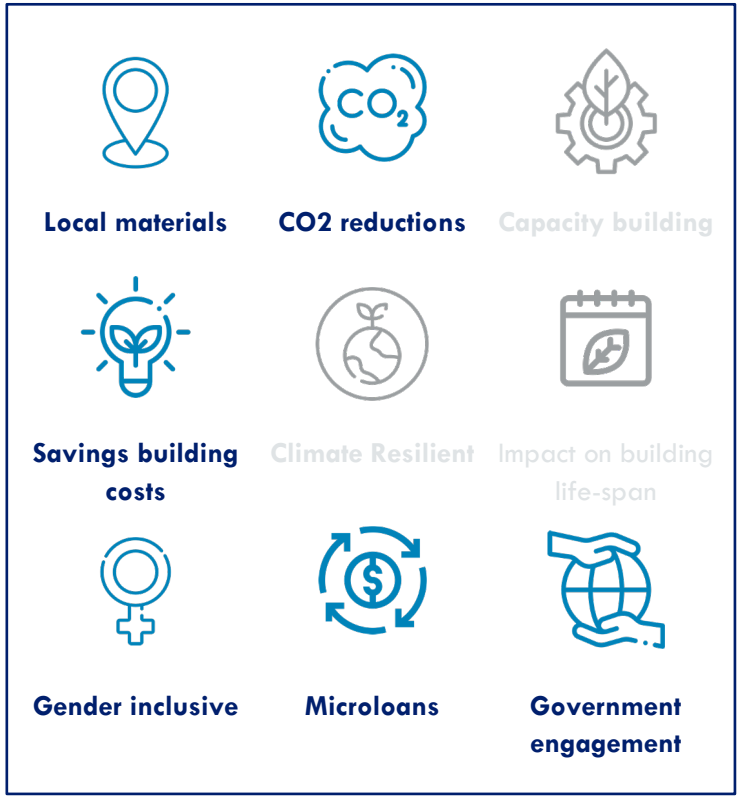
From 2007 to 2014

1,799,652 mortgages	**saving per family of US$ 16 per month**
savings from electricity and gas are 71,227 million kWh	**24,38 million m³, (=9,750 Olympic pools)**
mitigation of 257,474 tons of CO2 (766,750 trees)	

Table 1. Minimum savings amounts required to acquire a Green Mortgage

Income: Times Minimum Wage (TMW)	Minimum monthly savings amount required	Green Mortgage Amount in TMW	
1.00 - 1.59	US$ 7.4	Up to 2	US$ 302.5
1.60 - 3.99	US$ 15.9	Up to 10	US$ 1,512.3
4.99 - 6.99	US$ 18.5	Up to 10	US$ 1,512.3
7.00 - 11.00	US$ 21.4	Up to 15	US$ 2,268.5
From 11.00	US$ 29.6	Up to 20	US$ 3,024.6

KPIS



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Green mortgage programme (2007- on-going)

Initial investment

- a change in the existing model within the housing construction industry, by designing homes that incorporate materials according to the different climatic zones of the country
- the programme contributes to the National Mitigation and Climate Change Policy and the achievement of national goals

Social sustainability

- High penetration amongst low income families.
- Raising awareness throguh communication and information website to make people aware of the use and benefits of eco-technologies

Financial sustainability

- Accessible credit solutions through interest rates which vary according to householders' income levels
- The additional amount required for the acquisition of Green Mortgage eco-technologies comes from the National Housing Fund

Eco-Technologies

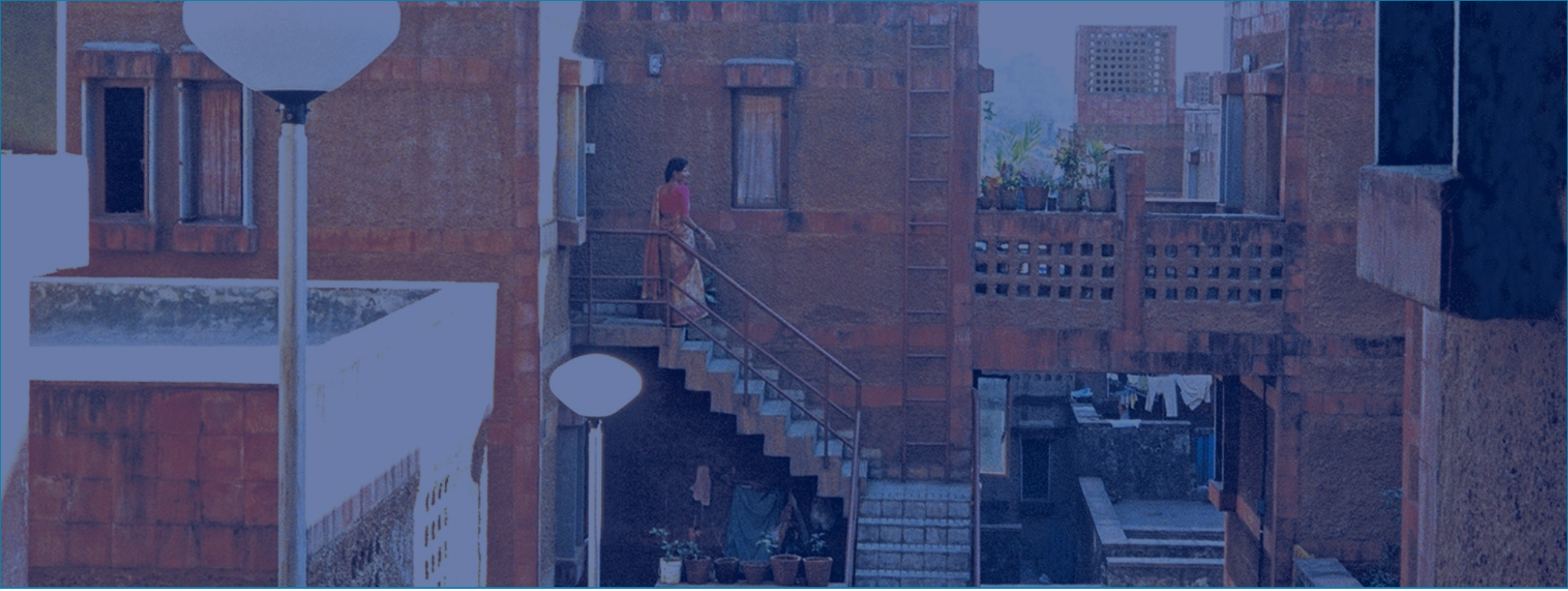
The eco-technologies which are currently included in the Green Mortgage Programme are:

- Energy saving
- Energy-saving lamps
- LED lamps
- Air conditioning
- Roof and wall thermal insulation
- Roof and wall reflective coating
- Double glazed windows
- Voltage optimisation devices
- Solar heaters
- Energy efficient boilers
- Fast recovery water heaters Water saving
- Ecological toilets
- Ecological sprinklers
- Water saving kitchen taps
- Water saving bathroom taps
- Flow control valves for water supply (kitchen and bathroom

Open discussion on the two case studies

Discussion:

- What are the main takeaways?
- How could similar ideas be implemented within your institutions?



6. KEY MESSAGES

Key messages

- Investing in an energy and resource-efficient housing sector will pave the way for a sustainable city.

- Making sustainable building practices the norm for social housing should allow household utility costs to decrease in the long-term, making housing affordable.

- The impact of the housing sector on our environment and vice-versa should be considered in order to make cities resilient to climate change and disaster.

- More sustainable housing will collaborate to climate change mitigation and disaster risk reduction strategies.

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Key messages

- Put people at the centre: building houses is about building homes for people, and we should leave no one behind.

- When developing, formulating and implementing our tools, policies and programmes, we should place people at the centre of our thinking and action.

- Special attention should be to the housing needs of the poorest and most vulnerable, those who live in on the street, in temporary shelters, and housing with inadequate conditions, including women, youth, older persons, and migrants.

Key messages

The future of sustainable urbanisation depends on how policy makers and practitioners position housing as a priority in the public debate around sustainable development. A well-functioning housing sector and access to affordable and sustainable housing can indeed make a real difference in the lives of our people and the prosperity of our countries and cities in light of climate change.

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