

OEWG-H Intersessional Thematic Meeting on Housing Environmental Sustainability and Resilience

OEWG-H process

The Open-Ended Intergovernmental Expert Working Group on Adequate Housing for All (OEWG-H) was established pursuant to resolution 2/7 on Adequate Housing for All, adopted by the UN-Habitat Assembly in 2023. Accordingly, the first and second sessions of the OEWG-H were held at the headquarters of UN-Habitat in Nairobi on 9-11 December 2024 and 22-23 October 2025 respectively. The elected co-chairs, Azerbaijan and Somalia, developed a road map for 2026, which includes intersessional meetings to pursue the work on the identified priority thematic areas, and a third meeting of the Working Group (OEWG-H3) to be held on 26 and 27 November 2026.

On 16 September 2025, a virtual Intersessional Thematic Meeting was held for the topic “Housing Environmental Sustainability”, during which Member States made observations and recommendations on the theme. An additional Intersessional Thematic Meeting will take place in May 2026, to continue the discussion on the environmental sustainability of housing and especially to expand the discussion on aspects related with climate resilience.

The session will take place in hybrid mode, at the venue of the World Urban Forum (WUF) 13 in Baku, Azerbaijan, and online, on 19 May from 13:30 to 15:30 (UTC +04:00). Interpretation in all UN languages will be available for both in-person and online participants.

The recommendations on housing environmental sustainability and resilience from this and the previous Intersessional Thematic Meeting will be presented at the third session of the OEWG-H in 2026. Similar processes are taking place for other thematic areas, and a comprehensive set of housing policy recommendations will be presented at the third session of the Habitat Assembly in 2029. Such recommendations will already guide policy reform at the country level before 2029 and will inform other key multilateral processes.

Objectives of the meeting

The meeting intends to review and provide input to the information contained in the attached paper, particularly:

1. Describe the key challenges, trends, and opportunities related to the environmental sustainability and resilience of housing, and
2. Review draft recommendations for actions for the environmental sustainability and resilience of the housing sector.

Housing Environmental Sustainability and Resilience

Adequate housing, recognized as a human right under international law, must meet seven key criteria beyond mere shelter: security of tenure; availability of basic services; affordability; habitability; accessibility; location; and cultural adequacy. Environmental sustainability is increasingly understood as an essential complement to these criteria and a cross-cutting dimension deeply intertwined with each of them. Achieving environmentally sustainable and resilient housing requires rethinking the entire life cycle of buildings, transitioning from housing systems that degrade natural environments, exacerbate inequalities, and undermine biological and cultural diversity toward systems that benefit communities and ecosystems, enhancing equity, inclusivity, and shared prosperity.

The impacts of housing systems on the natural environment

Housing contributes significantly to the triple planetary crisis of climate change, pollution, and biodiversity loss. Its impacts are distributed along the entire value chain, from material extraction and production to construction, use, and end of life, including housing-related planning practices. The built environment accounts for 31 per cent of global material use, 15 per cent of global freshwater use, 32 per cent of global energy demand, 21 per cent of global greenhouse gas emissions, and 34 per cent of global CO₂ emissions. Housing demand is a major driver of urban expansion, which is currently advancing at approximately 1.5 per cent annually, leading to increased land consumption, ecosystem fragmentation, and the loss of natural habitats. Housing-related activities also affect air and water quality, while construction and demolition activities produce approximately 2 billion tonnes of waste every year.

Yet, sustainable housing practices hold significant potential to benefit the environment and contribute to ecosystem regeneration. The widespread adoption of circular construction principles could increase the share of construction and demolition waste that is recycled from 22 to 91 per cent. Bioclimatic design and energy-efficiency measures can substantially reduce energy demand and greenhouse gas emissions; housing can also serve as a decentralized source of clean and renewable energy. Through on-site wastewater treatment, water reuse systems, and blue infrastructure, housing can help reduce water pollution and decrease pressure on freshwater resources. The use of bio-based building materials, such as sustainably sourced timber and bamboo, can contribute to carbon storage, while nature-based solutions can ameliorate air quality, moderate urban temperatures, enhance carbon sequestration, and support biodiversity.

The impacts of the natural environment on housing systems

The triple planetary crisis poses a severe threat to adequate housing globally. Between 3.3 and 3.6 billion people live in areas vulnerable to climate hazards, including floods, cyclones, storm surges, landslides, wildfires, and slow onset events such as desertification and sea level rise. From 2015 to 2024, weather-related disasters triggered 248 million internal displacements, surpassing conflict-driven displacement. Extreme heat threatens 4 billion people and kills an estimated 153,000 annually, while household air pollution claims another 3.2 million lives each year. The use of hazardous building materials and widespread water pollution pose additional health risks.

A range of measures can reduce these impacts: flood-resistant and cyclone-proof construction, drainage systems, durable and climate-resilient materials, nature-based solutions, and redundant systems for energy and water all strengthen housing resilience. Secure land tenure enables households to invest in protective upgrades. At the city scale, integrating climate risk into land use planning prevents development in hazard-prone areas, while green and blue infrastructure improves flood management

and heat mitigation. Passive cooling strategies, clean cooking technologies, improved ventilation, and the phase-out of toxic materials further enhance indoor safety and habitability.

A healthy and balanced natural environment, in turn, actively supports adequate housing. Vegetation and biodiversity around homes improve physical and mental health. Urban green spaces foster social interaction and community cohesion. Rainwater harvesting and rooftop solar strengthen household water and energy security. More broadly, reconnecting the built and natural environments reinforces residents' sense of place, cultural identity, and community ties.

Regional insights

Housing sustainability patterns vary sharply by region, shaped by climate, income levels, urbanization dynamics, and industrial capacity. In high-growth, low-income regions, the focus is on ensuring new construction meets sustainable standards from the start, alongside urgent upgrading of informal settlements that articulates social and ecological aspects. In slower-growth, higher-income regions, the priority shifts to large-scale retrofitting of existing stock and more efficient use of urban land and assets. Across all regions, both mitigation and adaptation are necessary, but their emphasis differs. Low-income regions, despite contributing least to global emissions, face the most severe climate hazards with the least capacity to recover, making adaptation the more pressing priority. Higher-income regions, as the largest historical emitters, bear greater responsibility for mitigation, while also needing to bolster resilience as climate risks grow.

Key challenges

The transition to sustainable and resilient housing faces the following interconnected challenges:

- **Informal settlements and incremental housing.** Informal settlements represent a critical challenge for achieving sustainable and resilient housing. These areas face extreme environmental vulnerability stemming from precarious locations, lack of basic infrastructure, low-quality materials, and incremental construction logic without technical oversight. Furthermore, despite being on the frontline of climate vulnerability, informal settlements communities receive a negligible share of global climate finance. This reflects a deeper pattern of systemic exclusion rooted in insecure tenure, unclear administrative authority, and the sidelining of community-led plans that fall outside formal frameworks.
- **Disproportionate impacts on marginalized groups.** Climate change deepens pre-existing housing inequalities, with low-income households more likely to live in at-risk areas and substandard dwellings, and least able to absorb or recover from losses. Vulnerability is further shaped by gender, age, disability, migration status, and racial or ethnic background. These groups are too often excluded from adaptation strategies and reconstruction efforts.
- **Policy and governance challenges.** Fragmented institutions, outdated regulations, weak enforcement, and poor intersectoral coordination hinder integrated decision-making. Many governance systems remain structurally biased toward new construction, marginalizing retrofitting, upgrading, and the mobilization of vacant stock.
- **Sustainability-affordability gap.** Affordable housing policies frequently encounter difficulties in integrated environmental sustainability and resilience components. Specifically, rapidly urbanizing low and middle-income countries face significant pressure to address the quantitative housing deficit. However, prioritizing speed and low cost tend to exacerbate environmental degradation and climate vulnerability.

- **Financial barriers.** The growing financialization of housing creates powerful incentives favouring speed and low upfront costs over quality and life cycle performance. Access to affordable finance is limited, particularly in developing countries, and institutional actors often lack the tools to assess sustainable housing value. Rental market dynamics, multi-owner building governance challenges, and the retreat of insurers from high-risk areas compound these barriers.
- **Systemic disincentives to retrofitting.** Retrofitting is too often the exception rather than the norm, because regulatory frameworks and market incentives make demolition and redevelopment more attractive. This frequently results in larger environmental footprints, loss of culturally significant buildings, and the displacement of low-income residents.
- **Post-disaster and post-conflict reconstruction.** Urgency and institutional disruption in crisis contexts create strong incentives to prioritize speed over long-term sustainability, resulting in environmentally harmful practices, loss of reusable materials, and reconstruction in hazard-prone areas. Informal settlement residents are often excluded from assistance entirely.
- **Adverse impacts of sustainability policies.** Poorly designed environmental measures can inadvertently undermine the right to adequate housing, concentrating benefits among wealthier households while raising costs or triggering displacement for low-income communities. Climate mitigation measures, including renewable energy projects and conservation initiatives, can themselves drive displacement, particularly where customary land tenure lacks formal recognition.
- **Awareness, knowledge, and capacity constraints.** Public understanding of sustainable housing remains shallow, with limited awareness of health, well-being, and cost advantages for residents. Behavioural biases favour short-term savings and high-carbon materials associated with status. Technical knowledge is uneven and disproportionately shaped by high-income country experience, resulting in benchmarks and certifications that are often unsuitable for developing contexts. Infrastructure gaps, weak supply chains, and shortages of skilled labour further constrain uptake.

Emerging efforts toward environmentally sustainable and resilient housing

International momentum is building. The *Paris Agreement*, the *Buildings Breakthrough*, the *Déclaration de Chaillot*, and the *Belém Call for Action* reflect growing recognition of the importance of environmentally sustainable and resilient housing. Key emerging approaches include:

- **Climate-responsive upgrading of informal settlements.** Housing in informal settlements is extremely vulnerable to climate change effects and environmental degradation. To address this challenge, several promising initiatives have merged traditional upgrading strategies with climate action. These interventions empower residents to improve their living conditions while simultaneously reducing their vulnerability to environmental and climate risks. Crucially, emerging frameworks, such the care-centric upgrading approach allow to improve the lives of those living in informal settlements from a gender-sensitive perspective, while actively regenerating the environment.
- **Supporting safe and sustainable incremental housing.** Incremental, self-built housing represents a predominant mode of residential development in many cities across the globe. While this approach allows individuals to progressively adapt and expand their homes according to their resources and needs, it often entails significant risks associated with hazardous

locations, substandard materials quality, and inadequate construction techniques. To mitigate these vulnerabilities and actively support incremental housing, innovative initiatives have emerged to support housing improvements and the incorporation of green and sustainable practices.

- **Advancing sustainability and resilience in affordable housing.** Because affordable housing constitutes a significant share of new construction and urban expansion, improving its design and construction standards is critical. Recognizing this opportunity, several governments have implemented environmental standards across both the supply and demand sides of the affordable housing market, targeting energy efficiency, water conservation, and emissions reduction.
- **Holistic sustainability frameworks.** There is growing consensus that housing sustainability cannot be achieved through fragmented or sector-specific approaches, and that environmental, social, cultural, and economic dimensions must be integrated into a single coherent framework. Green building certification systems have expanded significantly and play a valuable role but tend to overweight energy performance while giving insufficient attention to resilience, affordability, and socio-cultural factors, and are primarily designed for formal, higher-income markets. A range of complementary assessment methodologies is also advancing, but these tools remain fragmented and rarely succeed in integrating all relevant dimensions into a single coherent framework.
- **Decarbonization of the buildings and construction sector.** Building energy codes are among the most powerful available policy tools, now adopted by 85 countries for residential buildings, though more than half of the world's new construction remains uncovered. Attention to embodied carbon and life cycle approaches is growing. However, the sector remains significantly off track: CO₂ emissions have increased by 5 per cent since 2015, against a required 28 per cent reduction by 2030, and explicit housing commitments remain limited in NDCs.
- **Energy efficiency retrofit.** Improving the energy performance of existing buildings is essential given that most of the global housing stock will remain in use for decades. A growing number of countries are demonstrating how retrofit programmes can be scaled effectively and equitably; however, global annual retrofit rates remain below 1 per cent, far short of the 2.5 per cent required by 2030.
- **Climate adaptation and resilient housing.** As climate impacts intensify, adapting existing housing stock has become as important as mitigating emissions, with adaptation measures for the built environment now appearing in 53 per cent of NDCs. However, references to housing are often superficial, rarely grounded in the full scope of adequate housing rights, and seldom accompanied by measurable targets or adequate financing.
- **Circular construction.** Shifting from linear to circular approaches – designing for longevity, enabling disassembly, maximizing material reuse and recycling, and prioritizing the retrofitting of existing buildings – can substantially reduce resource extraction and waste across the building life cycle. Circular construction is gaining traction, and 75 countries have adopted circular economy strategies, with the built environment being the most frequently targeted sector. However, most strategies lack integrated approaches and quantified targets, and the practice remains at an early stage globally.

- **Community-led approaches.** Community-led housing and cooperatives are increasingly recognized as capable of achieving equal or higher levels of environmental performance and resilience compared with conventional approaches, while improving living conditions, reducing costs, and strengthening social cohesion and cultural identity.
- **Recognition of traditional, vernacular, and Indigenous architecture.** There is growing recognition that traditional, vernacular, and Indigenous building practices embody centuries of accumulated knowledge about bioclimatic design, locally sourced materials, disaster resilience, and community stewardship of natural resources. Recognizing, valuing, and adapting this knowledge to contemporary needs offers significant potential to advance both environmental and cultural sustainability.
- **Green housing finance.** Mobilizing adequate finance is essential to scaling sustainable, resilient, and equitable housing, yet current investment flows fall far short across mitigation, adaptation, and circular construction. A growing range of instruments – green bonds, sustainability-linked lending, energy performance contracts, blended finance, and microfinance – is emerging, and private financial institutions are increasingly integrating climate risk into lending portfolios. Deployment of green finance instruments remains highly uneven, with developing and emerging economies receiving a disproportionately small share.

Summary of proposed recommendations

A. Key enablers for environmentally sustainable and resilient housing systems

1. Integrate a rights-based approach into environmental policies and housing strategies to ensure the right to adequate housing and the right to a clean, healthy, and sustainable environment are advanced in a coherent and mutually reinforcing manner.
2. Strengthen governance frameworks for sustainable housing systems by enhancing institutional capacity, integrating housing and environmental imperatives, fostering horizontal and vertical coordination, embedding participatory decision-making, and improving enforcement, monitoring, and accountability mechanisms, thereby ensuring coherent, long-term and cross-sectoral policy implementation.
3. Mobilize and align diverse financing sources to scale sustainable, resilient, and equitable housing systems, prioritizing affordability and long-term financial viability, and enabling low-income households, informal settlement residents, marginalized groups, and community-based organizations to access public, private, and international finance.
4. Strengthen knowledge ecosystems for sustainable housing, particularly in developing countries, by enhancing data generation, disaggregation, and analytical capacity to inform policy, finance, and planning decisions, and by advancing holistic, context-responsive certification systems and evaluation frameworks.
5. Advance societal awareness and behavioural transformation to support the transition toward environmentally sustainable and resilient housing, emphasizing its co-benefits for health, well-being, affordability, and safety, and promoting a holistic understanding of sustainability across education, professional practice, and public discourse.

B. Spatial and urban planning

6. Reduce environmental and housing pressures stemming from rapid and uncoordinated urban expansion through integrated and sustainable territorial development strategies based on the

social and ecological function of land, promoting polycentric growth, reducing disparities between regions, and reinforcing urban-rural linkages.

7. Enable the delivery of environmentally sustainable and resilient housing through inclusive and participatory urban planning that aligns housing and environmental objectives, promotes compact, mixed-use, and transit-oriented development, incorporates risk-informed and ecosystem-based approaches, and scales up nature-based solutions.
8. Optimize the use of existing urban assets to strengthen housing supply, by advancing brownfield and grey field regeneration, mobilizing vacant and underutilized building stock, and discouraging unnecessary demolition of structurally sound buildings and culturally significant architecture.

C. Incremental housing, informal settlements, and collective solutions

9. Establish comprehensive support frameworks for incremental, self-built housing to mitigate structural vulnerabilities and integrate climate-resilient and sustainable construction practices.
10. Integrate climate resilience principles into upgrading strategies, bridging sustainable development priorities with climate action. This requires deploying participatory, multiscale and multisectoral interventions that merge mitigation and adaptation strategies combining diverse approaches, including nature-based solutions.
11. Recognize and support collective housing solutions, including community-led housing, and housing cooperatives as integral components of sustainable housing systems, acknowledging their role in advancing environmental sustainability, resilience, social cohesion, and cultural vitality, and embedding them within national policy, financing, and planning frameworks.

D. Housing construction and retrofitting

12. Establish comprehensive environmental standards and climate-sensitive frameworks for affordable housing across both the supply and demand sides of the market.
13. Embed environmental sustainability and resilience standards across housing construction and retrofit by advancing context-responsive building codes that adopt whole life cycle approaches, integrating climate change mitigation and adaptation, circular construction principles, and healthy indoor environments, and by coupling regulatory frameworks with fiscal incentives, capacity development, and enforcement and monitoring systems.
14. Accelerate the large-scale, equitable, and inclusive retrofitting of existing housing stock, enhancing energy and water efficiency, climate and disaster resilience, and healthy indoor environments, while embedding safeguards for affordability, social inclusion, and tenure security.
15. Embed circular economy principles across housing and construction systems by promoting design for longevity, adaptability, and disassembly, scaling up reuse and recycling practices, and fostering business models that minimize resource extraction, waste generation, and negative environmental externalities across the building life cycle.

E. Climate-resilient housing and disaster risk reduction

16. Shift from reactive crisis response to proactive climate risk governance by institutionalizing disaster risk reduction across housing systems and urban planning, and establishing early warning and preparedness frameworks.

17. Ensure that post-disaster and post-conflict housing reconstruction advances environmental sustainability, climate resilience, and tenure security, treating emergency shelter and long-term rebuilding as interconnected phases of an inclusive, rights-based recovery process rather than separate humanitarian and development interventions.
18. Support rights-based planned relocation as a last-resort climate adaptation measure for communities in areas where climate risks cannot be adequately mitigated in situ, ensuring that relocation processes are voluntary, participatory, inclusive, and grounded in human rights principles, and that they safeguard livelihoods, cultural ties, and tenure security rather than compounding existing vulnerabilities.

F. Housing supply chains and markets transformation

19. Build resilient and inclusive local value chains for environmentally sustainable housing by advancing skills development, infrastructure investment, innovation ecosystems, and quality assurance for sustainable technologies and materials, including low-carbon, bio-based, and recycled materials, and fostering low- and high-technology approaches as well as hybrid solutions that align with local climates, cultures, and economic realities.
20. Create enabling regulatory and market frameworks to scale the adoption of environmentally sustainable construction materials, advancing green labelling and certification schemes, performance standards, fiscal and financial incentives, and strategic public procurement.